



# **Annual** Energy-Statistics 2023



# Annual / Energy-Statistics 2023

## About this statistical data book

This publication has been prepared by the Economic Research Department of Repsol with the aim to provide a tool that will aid objective analysis, discussion, and debate on energy markets. In this regard, the Energy Statistical Yearbook is available for access, both in Spanish and English, on the official Repsol website ([repsol.com](https://www.repsol.com)), and where it can also be downloaded in PDF and Excel formats. Further, this space provides interactive charts that may be viewed using Power BI.

The Energy Statistical Yearbook is an energy database with special emphasis on both the oil and natural gas sectors, as well as on electricity generation and sustainability indicators. It contains historical data relating to 50 countries and 10 geographical regions between 2005<sup>1</sup> and 2021 (the latest estimations). It represents the situation of the world energy sector covering more than 90% of global energy consumption.

Regarding the content and structure of this publication, firstly, it presents a brief analysis of the highlights of recent developments in the energy markets, including oil, natural gas and electricity, as well as CO<sub>2</sub> emissions at international level, as well as a special analysis of the energy sector in Spain.

The second section presents a statistical annex with detailed information on the following areas:

- Oil: proven reserves, production, consumption, and prices.
- Natural Gas: proven reserves, production, consumption, and prices.
- Electricity: gross generation and renewables share.
- CO<sub>2</sub> Emissions: emissions from fossil fuel combustion, intensity to GDP and emissions per capita.
- Primary Energy Intensity to GDP.

Finally, the Yearbook contains a dashboard for each region and country within the main magnitudes. Here you can find data on primary and final energy demand by both sources and sectors; total power generation and breakdown of sources; hydrocarbon consumption and foreign trade; and sustainability indicators.

In terms of methodology, estimations have been carried out using the most recent available data from various official sources (e.g., governmental, energy reference agencies, JODI and Bloomberg among others) following the same methodology as used by the International Energy Agency (IEA).

Data compilation, aggregation and validation has been made in collaboration with the consultancy firm ENERDATA ([www.enerdata.net](http://www.enerdata.net)).

<sup>1</sup> For visualization purposes, this document only represents the years from 2013 onwards. You can find the whole period in the downloadable Excel file (<https://www.repsol.com/en/energy-and-innovation/energy-yearbook/index.cshtml>).

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# Energy demand recent development

**In 2022, high energy prices and rising food prices led to an increase in inflation levels not seen in decades. Prices had already been climbing due to the economic rebound after the pandemic, as well as disruptions in supply chains caused by lockdowns. However, inflation skyrocketed worldwide following the Russian invasion of Ukraine and the resulting war.**

The increase in prices caused a reduction in purchasing power, which harmed consumers throughout 2022. Additionally, that same year, central banks around the world began a policy of raising interest rates to curb inflation and anchor inflation expectations in their economies. Thus, the tightening of monetary policy, the adjustment of household real income, and the decline in confidence led to slower economic growth during 2022, at 3.5% compared to the 6.3% recorded in 2021, according to data from the International Monetary Fund.

This economic context resulted in a global slowdown in energy consumption, reaching 2% in 2022 after growing by 5% in 2021. This trend, which can be considered a significant adjustment following the strong demand surge experienced in 2021 associated with the end of strict lockdowns and the deployment of vaccines, is still a notable growth in relative terms. The average annual growth of global energy consumption during the pre-pandemic period of 2015-2019 was 1.7%, three tenths below the growth recorded in 2022. In other words, in 2022, the growth in global energy demand was more dynamic than before the pandemic, despite the context of war and sustained increase in energy prices. To give an idea of this last point, in the case of oil, the average price in 2022 was almost double the average during the pre-pandemic period of 2015-2019.

The 2% of growth in 2022 led to total primary energy demand reaching 14,951 million tonnes of oil equivalent (toe). Oil contributed 30% of the primary energy consumed globally, followed by coal at 27% and natural gas at 23%. Renewable energies continued their expansion in 2022. If we exclude hydroelectric and biomass, the rest of the renewables saw a 17% increase, although they accounted for only 2% of the total primary energy consumed globally.

By regions, in 2022, the OECD contracted its demand for primary energy by 0.6%, after having increased by almost 5% in 2021, with consumption falling for all energy sources except for oil, biomass, and other renewables. Meanwhile, in non-OECD countries, demand expanded by 3.4%, with consumption only declining for natural gas and nuclear. It is worth noting the decline in natural gas consumption in both regions, due to the sharp increase in prices: both in Europe and Asia, the average gas price in 2022 was twice that of oil.

In terms of sectors, transportation once again experienced solid growth, with a 5% increase in energy demand. Meanwhile, the residential/commercial and industrial sectors saw more modest increases, at 1.9% and 1.1% respectively. Energy intensity (i.e., the energy needed to produce one unit of gross domestic product) continued its positive trend -a reduction in intensity- globally in 2022, largely because the expansion of primary demand was lower than the expansion of the economy. Over the past 10 years, global energy intensity has been reduced by nearly 15%. Similar trends have been followed by both the OECD and non-OECD economies.

# CO<sub>2</sub> emissions recent development

### **CO<sub>2</sub> emissions increased by just over 2.6% to reach a new record high in 2022.**

For the second consecutive year, the growth of emissions was of the same order of magnitude as global economic growth, something that had not happened in the past decade, when economic development always outpaced the growth of emissions, responding to efforts to decarbonize economies.

The high price of natural gas in 2022 forced many countries to shift their consumption towards coal, which led to a decline in emissions from gas consumption, something that had only been seen in years of economic crises in recent years. Similarly, emissions from coal combustion experienced one of the highest annual growth rates in recent years, reaching a new historical peak, surpassing the levels of 2014.

The behavior of different countries and regions has been very different, and while emissions in the European Union have fallen in response to a slowdown in industrial activity, in the United States, the increased consumption of natural gas offset the reduced use of coal and resulted in an increase in emissions. In the case of Spain, the trend has been opposite to that of its neighboring countries, and emissions have increased due to higher consumption of oil and coal.

India and Indonesia saw the largest increases in emissions, both due to the growth of the industry based on coal-fired power generation, while China remains the country with the highest emissions (accounting for 33% of global emissions).

The situation is very different when analyzing other indicators such as per capita emissions, where Gulf countries continue to top the list. For example, each Qatari generates seven times more CO<sub>2</sub> than the global average. In Spain, the increase in emissions during 2022 has been slightly above the global average, so per capita emissions continue to be slightly higher than the global average (5.3 tons per person compared to the global average of 4.9 tons per person).

Regarding emissions intensity (emissions per unit of GDP), European countries continue to be the most efficient with their emissions, well below the majority of major emitters. Since the EU economy grew in 2022 while emissions decreased, this indicator has improved compared to the previous year, and now emissions per dollar of GDP in the EU are 44% below the global average.

# Oil market recent development

**The price of the global benchmark Brent crude reached an average of \$101 per barrel (\$/bbl) in 2022, the highest annual average price since 2013. This represents an increase of over 40% compared to the 2021 average of \$71/bbl.**

The high prices were primarily observed in the first half of the year, initially in response to a recovering demand as economies reopened after the impact of COVID-19, and due to production restrictions imposed by major oil producers. However, it was after Russia's invasion of Ukraine that market uncertainty intensified, with the focus shifting to supply availability, leading Brent to reach a peak of \$128/bbl in early March 2022. Prices remained at a high level until mid-year, when they gradually declined as concerns about a recession weighed on the market. Brent averaged just over \$82/bbl in December 2022, similar to the January 2022 average of \$85/bbl.

In 2022, global demand for petroleum products increased by slightly over 2 million barrels per day (mb/d) to nearly 100 mb/d, approaching the pre-pandemic level of 100.8 mb/d in 2019. The demand growth was largely driven by aviation fuel, supported by the recovery in air transportation following the pandemic. Growth in other product segments continued in 2022, albeit at a slower pace. Global diesel consumption growth declined from 1.5 mb/d in 2021 to 0.66 mb/d in 2022, reflecting weakened economic activities. Naphtha, after a strong growth year in 2021, decreased by 0.13 mb/d due to weakness in the petrochemical sector.

Regionally, growth was largely driven by non-OECD markets, particularly the Middle East and India. Chinese demand decreased by around 0.4 mb/d as closures in the country impacted demand. Among OECD markets, European growth was particularly weak. While high gas prices prompted a shift from gas to oil, this was largely offset by weakness in the petrochemical sector, which had to cope with high energy costs.

World oil production increased to 100 million b/d in 2022, up by 4.6 mb/d compared to 2021. The production increase was concentrated in Saudi Arabia and the United States. Saudi Arabia supplied 1.4 mb/d more than in 2021, approximately half of OPEC's supply growth. Outside of OPEC, the U.S. added 1.2 mb/d, accounting for around 60% of non-OPEC growth. During the third quarter, doubts arose about whether OPEC would increase production at the pace of demand recovery, as several member countries were producing below their quotas. In November, OPEC reintroduced production cuts of 2 mb/d in anticipation of a potential surplus in case of worsening economic conditions.

The Russian invasion of Ukraine has significant implications for global crude and petroleum product supply. Prior to the invasion, Russian production was expected to increase by over 0.8 mb/d in 2022, according to the International Energy Agency (IEA). However, actual production growth was only around 0.2 mb/d due to OECD market sanctions. The global trade flow of crude and products also shifted as Russian production sought destinations in non-OECD countries.

The market in 2023 has been influenced by supply constraints and the risk of recession in OECD economies, particularly in Europe. China's reopening to focus on economic growth is providing support to global oil demand. The main supply-side uncertainty is Russian ability to overcome an embargo<sup>1</sup> on its crude and petroleum products, since OPEC, led by Saudi Arabia, seems highly committed with production cuts.

<sup>1</sup> The EU embargo and the G7 price caps on Russian crude came into effect in early December 2022. The embargo and limitations on prices for Russian petroleum products did it in February 2023.

# Natural gas market recent development

**The global natural gas market suffered a shock in 2022, when Russia substantially cut pipeline supplies to Europe, adding unprecedented pressure on gas markets, and triggering a global energy crisis.**

Despite this, Europe was able to offset the lack of Russian supply and gas storage infrastructures could be filled well above historical averages. The main reasons were, on the one hand, mild temperatures, and on the other hand, a combination of policy measures, a record inflow of liquefied natural gas (LNG) and a sharp drop in demand, especially in highly energy-intensive industries.

The reduction in Russian supply also had implications for other consuming regions beyond Europe, leading to an environment of exorbitant prices, supply tensions and a significant reduction in demand.

Global gas consumption fell 1.5% year-on-year in 2022, a similar drop to that experienced in 2020 after the first wave of COVID-19 lockdowns. Most of the reduction in demand was concentrated in the main European and Asian import markets. The sharp increase in gas prices supported the dynamics of the switch from gas-to-coal in the power sector and depressed the use of gas in energy-intensive industries. The measures to improve energy efficiency and the continuous deployment of renewable energies, reduced the demand for gas in a structural way.

The war in Ukraine highlighted the fragility of the global gas balance and the need to prioritize security of supply. Gas import markets remained exposed to a tight supply environment and the impact of possible further cuts in Russian supply. This was a concern for much of the year.

Governments in Europe and other importing markets took policy steps to increase their energy resilience and reduce reliance on natural gas. This gave a strong boost to the business and commercialization of LNG.

LNG demand was dominated by a sharp increase in LNG imports received in Europe, which was balanced by a sharp drop in the rest of the world, particularly Asia. While the US supplied about two-thirds of the LNG to Europe, other “alternative suppliers” redirected significant volumes to the European market: Qatar, Egypt, Norway, Angola, Russia, and Trinidad and Tobago, which provided most of the remaining third.

Regarding to the Asian basin, the year was marked by strong competition with Europe to attract gas, which raised prices substantially. But once the comfort point was reached in order to face the winter, a gradual rebalancing process began in the market which has been maintained in the first months of 2023.

As a result of this, the prices of the main global gas markers (Northeast Asia, North America, and Europe) fell by close to 70% between mid-December and the end of 1Q23, while the levels of stored gas ended the heating season well above their five-year averages.

In the short term, the accessibility of gas, healthy gas storage levels and the persistence of weak demand, are reasons for cautious optimism regarding the security of supply. However, this confluence of factors should not distract us from taking the additional measures needed to mitigate potential risks that could quickly reignite market tensions and price volatility.

# Power generation recent development

**In 2022, worldwide electricity generation increased with the improvement of the economy, reaching an annual growth in line with the average of the last decade [2.3%] and marking a new historical high.**

The installation of new wind and solar generation capacity resulted in an increase in the percentage of renewable generation in the electricity generation mix, reaching almost 30% of global generation in 2022, surpassing the previous year's figure by 1.5 percentage points. Currently, wind and solar generation represent only 7% and 4% of electricity production, but they have nearly doubled their production in just 5 years. Among renewable sources, hydroelectric power remains the most important, maintaining a generation share of around 16%, in line with previous years.

Conventional thermal generation also achieved several milestones. Electricity generated from coal reached a historical high, as did gas-generated electricity, despite the high price of raw materials. Oil-based generation, which is much lower in volume compared to other fossil fuels and has historically been decreasing, reached its highest level in the last 5 years and has seen two consecutive years of increase.

Distinguishing by regions, emerging countries are installing more renewable capacity. However, since they are also installing thermal generation capacity, the percentage of renewable generation in the generation mix of OECD countries is growing faster than in emerging ones.

The European Union has managed to increase its renewable generation, reaching a maximum of nearly 40% in the generation mix, a figure much higher than the OECD average.

It is worth noting the case of China, where the largest renewable capacity is being installed by far. For the first time, China has surpassed a 30% share of renewable generation.

# Spanish energy market recent development

**Spanish economic recovery in 2022 led to an 8% increase in oil consumption. However, it remains far from recovering the levels seen before the pandemic.**

This increase in petroleum product consumption has been driven by the transportation sector, which has shown the highest growth (8%), while other sectors have exhibited more modest increases, especially the industry and agriculture.

Aviation fuel stands out among petroleum products, with demand increasing by 75% compared to 2021. However, it has not yet reached the level of 2019, as neither the number of flights nor the number of passengers transported have recovered either.

The trend in land transportation fuels remains consistent with recent years, with gasoline continuing to gain importance over diesel. In 2022, gasoline consumption increased by 10%, reaching the highest level since 2010, while diesel growth was only 2% and its level remains below that of 2019. Despite this gasoline growth, diesel still accounts for 79% of automotive fuel consumption. On a much smaller scale, automotive LPG increased by 24%, surpassing all previous records.

Natural gas consumption in Spain varied significantly depending on the consumer. Gas for conventional uses responded to the skyrocketing prices by falling more than 20% compared to the previous year, reaching minimum levels since 2007. Within this sector, industrial consumption experienced a much greater decline than domestic consumers and small and medium-sized enterprises. On the other hand, gas used for electricity generation increased by over 50% due to regulatory changes that allowed it to remain largely unaffected by prices (the Consumer Adjustment Mechanism, which operated during the second half of the year).

This temporary regulation of the electricity market led combined-cycle plants to generate 50% more energy than the previous year, making Spain a net electricity exporter through its exchanges with France (which was also experiencing issues with its nuclear generation).

The electricity generation system continues to add new renewable generation capacity. Installed solar photovoltaic power increased by 30% and solar power by 5%, while generation capacity with coal was phased out.

Despite this new renewable capacity, the increased use of gas resulted in an increase in emissions from the electricity system, as the percentage of generation from non-CO<sub>2</sub> emitting sources decreased to 63% (down from 68% the previous year).



# Statistical annex



Oil

| <b>Oil Proved Reserves</b><br>(Thousand million barrels) | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           |
|----------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>North America</b>                                     | <b>245.1</b>   | <b>247.6</b>   | <b>219.6</b>   | <b>243.8</b>   | <b>243.9</b>   | <b>252.3</b>   | <b>253.9</b>   | <b>255.8</b>   | <b>246.4</b>   | <b>265.0</b>   |
| Canada                                                   | 199.3          | 197.6          | 169.4          | 196.2          | 194.3          | 192.5          | 194.1          | 193.8          | 193.9          | 189.0          |
| Mexico                                                   | 10.9           | 9.8            | 9.6            | 9.6            | 8.5            | 8.0            | 5.9            | 5.9            | 5.6            | 5.5            |
| United States                                            | 45.8           | 50.1           | 50.2           | 47.6           | 49.6           | 59.8           | 59.8           | 62.0           | 52.5           | 70.5           |
| <b>South and Central America</b>                         | <b>237.3</b>   | <b>237.0</b>   | <b>233.8</b>   | <b>382.5</b>   | <b>381.3</b>   | <b>381.4</b>   | <b>378.4</b>   | <b>378.0</b>   | <b>379.0</b>   | <b>381.1</b>   |
| Argentina                                                | 2.3            | 2.3            | 2.4            | 2.4            | 2.1            | 2.0            | 2.0            | 2.5            | 2.5            | 2.9            |
| Brazil                                                   | 15.5           | 16.1           | 12.9           | 12.5           | 12.7           | 13.5           | 12.6           | 11.8           | 13.2           | 14.7           |
| Chile                                                    | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            |
| Colombia                                                 | 2.4            | 2.3            | 2.0            | 1.6            | 1.6            | 1.8            | 1.9            | 2.0            | 1.8            | 2.0            |
| Peru                                                     | 1.5            | 1.3            | 1.4            | 1.2            | 1.2            | 1.0            | 0.9            | 0.6            | 0.8            | 0.9            |
| Trinidad & Tobago                                        | 0.8            | 0.8            | 0.7            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            |
| Venezuela                                                | 194.5          | 195.7          | 195.8          | 345.9          | 345.9          | 345.9          | 345.9          | 345.9          | 345.9          | 345.8          |
| Other                                                    | 20.1           | 18.4           | 18.4           | 18.4           | 17.3           | 16.8           | 14.7           | 14.7           | 14.4           | 14.4           |
| <b>Europe</b>                                            | <b>16.7</b>    | <b>16.3</b>    | <b>15.8</b>    | <b>15.1</b>    | <b>15.9</b>    | <b>16.5</b>    | <b>16.2</b>    | <b>14.4</b>    | <b>13.6</b>    | <b>13.2</b>    |
| France                                                   | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            |
| Germany                                                  | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.1            | 0.1            | 0.1            |
| Italy                                                    | 0.6            | 0.6            | 0.6            | 0.5            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            |
| Netherlands                                              | 0.3            | 0.2            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            |
| Norway                                                   | 6.5            | 6.4            | 7.2            | 7.0            | 7.9            | 8.6            | 8.5            | 7.7            | 7.5            | 7.3            |
| Poland                                                   | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            |
| Romania                                                  | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            |
| Spain                                                    | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            |
| Turkey                                                   | 0.3            | 0.3            | 0.4            | 0.4            | 0.4            | 0.3            | 0.4            | 0.4            | 0.4            | 0.4            |
| United Kingdom                                           | 5.4            | 5.2            | 4.1            | 3.8            | 3.7            | 3.7            | 3.5            | 2.5            | 2.0            | 1.8            |
| EU                                                       | 4.2            | 4.1            | 3.9            | 3.7            | 3.7            | 3.6            | 3.6            | 3.6            | 3.6            | 3.6            |
| Other                                                    | 2.4            | 2.3            | 2.3            | 2.2            | 2.2            | 2.1            | 2.1            | 2.1            | 2.1            | 2.1            |
| <b>Former Soviet Union</b>                               | <b>131.8</b>   | <b>135.6</b>   | <b>136.3</b>   | <b>147.4</b>   | <b>144.1</b>   | <b>144.1</b>   | <b>145.1</b>   | <b>146.4</b>   | <b>146.4</b>   | <b>146.4</b>   |
| Azerbaijan                                               | 6.9            | 6.9            | 6.9            | 6.9            | 6.9            | 6.9            | 6.9            | 6.9            | 6.9            | 6.9            |
| Kazakhstan                                               | 29.8           | 29.8           | 29.8           | 29.8           | 29.8           | 29.8           | 29.8           | 29.8           | 29.8           | 29.8           |
| Russia                                                   | 92.4           | 96.3           | 97.7           | 108.8          | 105.5          | 105.5          | 106.5          | 107.8          | 107.8          | 107.8          |
| Ukraine                                                  | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            |
| Uzbekistan                                               | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            |
| Other                                                    | 1.7            | 1.6            | 0.9            | 0.9            | 0.9            | 0.9            | 0.9            | 0.9            | 0.9            | 0.9            |
| <b>Middle East</b>                                       | <b>791.8</b>   | <b>790.9</b>   | <b>799.9</b>   | <b>796.1</b>   | <b>817.2</b>   | <b>816.4</b>   | <b>816.7</b>   | <b>825.4</b>   | <b>833.0</b>   | <b>843.2</b>   |
| Iran                                                     | 156.7          | 156.5          | 157.3          | 156.1          | 154.5          | 154.5          | 154.5          | 158.2          | 158.2          | 158.2          |
| Iraq                                                     | 143.2          | 142.1          | 141.5          | 147.8          | 146.2          | 144.0          | 144.0          | 144.0          | 144.0          | 144.0          |
| Kuwait                                                   | 100.8          | 100.8          | 100.8          | 100.8          | 100.8          | 100.8          | 100.8          | 100.8          | 100.8          | 100.8          |
| Qatar                                                    | 25.1           | 25.1           | 25.1           | 25.1           | 25.1           | 25.1           | 25.1           | 25.1           | 25.1           | 25.1           |
| Saudi Arabia                                             | 258.4          | 259.3          | 267.3          | 258.3          | 282.5          | 283.9          | 284.2          | 289.2          | 283.7          | 289.7          |
| United Arab Emirates                                     | 97.1           | 97.1           | 97.1           | 97.1           | 97.1           | 97.1           | 97.1           | 97.1           | 110.2          | 114.4          |
| Other                                                    | 10.4           | 10.0           | 10.8           | 10.8           | 10.9           | 11.0           | 10.9           | 10.9           | 11.0           | 11.0           |
| <b>Africa</b>                                            | <b>134.5</b>   | <b>129.1</b>   | <b>128.1</b>   | <b>127.5</b>   | <b>125.5</b>   | <b>124.1</b>   | <b>125.4</b>   | <b>124.7</b>   | <b>122.9</b>   | <b>123.1</b>   |
| Algeria                                                  | 12.1           | 12.1           | 12.1           | 12.1           | 12.1           | 12.1           | 12.1           | 12.1           | 11.4           | 11.4           |
| Angola                                                   | 12.6           | 12.6           | 12.5           | 11.5           | 9.5            | 8.3            | 8.1            | 7.7            | 7.7            | 7.7            |
| Egypt                                                    | 4.4            | 4.4            | 4.4            | 4.4            | 4.4            | 3.1            | 3.3            | 3.1            | 3.0            | 3.0            |
| Libya                                                    | 48.0           | 48.0           | 48.0           | 48.0           | 48.0           | 48.0           | 48.0           | 48.0           | 48.0           | 48.0           |
| Nigeria                                                  | 36.8           | 36.8           | 36.8           | 37.2           | 37.2           | 36.7           | 36.6           | 36.6           | 36.8           | 36.9           |
| Other                                                    | 20.6           | 15.1           | 14.3           | 14.3           | 14.3           | 15.9           | 17.2           | 17.1           | 16.0           | 16.0           |
| <b>Asia-Pacific</b>                                      | <b>42.1</b>    | <b>42.1</b>    | <b>41.6</b>    | <b>47.9</b>    | <b>47.7</b>    | <b>46.4</b>    | <b>46.1</b>    | <b>45.2</b>    | <b>44.8</b>    | <b>44.9</b>    |
| Australia                                                | 3.9            | 4.0            | 4.0            | 4.0            | 4.0            | 2.5            | 2.5            | 1.8            | 1.6            | 1.6            |
| China                                                    | 18.0           | 18.4           | 18.4           | 25.5           | 25.5           | 25.8           | 26.0           | 25.9           | 25.8           | 26.3           |
| India                                                    | 5.5            | 5.4            | 4.6            | 4.5            | 4.4            | 4.3            | 4.5            | 4.5            | 4.5            | 4.4            |
| Indonesia                                                | 3.6            | 3.7            | 3.6            | 3.2            | 3.1            | 3.1            | 2.5            | 2.4            | 2.2            | 2.1            |
| Malaysia                                                 | 4.0            | 3.6            | 3.7            | 3.6            | 3.6            | 3.6            | 3.6            | 3.6            | 3.6            | 3.6            |
| New Zealand                                              | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.0            | 0.1            | 0.1            |
| Thailand                                                 | 0.4            | 0.4            | 0.7            | 0.4            | 0.3            | 0.3            | 0.3            | 0.1            | 0.2            | 0.1            |
| Vietnam                                                  | 4.4            | 4.4            | 4.3            | 4.3            | 4.4            | 4.4            | 4.4            | 4.3            | 4.3            | 4.3            |
| Other                                                    | 2.2            | 2.2            | 2.2            | 2.3            | 2.3            | 2.3            | 2.3            | 2.5            | 2.5            | 2.5            |
| <b>OECD</b>                                              | <b>278.4</b>   | <b>279.4</b>   | <b>250.4</b>   | <b>273.5</b>   | <b>273.3</b>   | <b>280.4</b>   | <b>279.7</b>   | <b>279.3</b>   | <b>268.4</b>   | <b>281.2</b>   |
| <b>Non-OECD</b>                                          | <b>1,320.9</b> | <b>1,319.3</b> | <b>1,324.9</b> | <b>1,486.7</b> | <b>1,502.3</b> | <b>1,500.8</b> | <b>1,502.1</b> | <b>1,510.6</b> | <b>1,517.8</b> | <b>1,535.7</b> |
| <b>OPEC</b>                                              | <b>1,096.3</b> | <b>1,096.4</b> | <b>1,104.7</b> | <b>1,250.2</b> | <b>1,269.2</b> | <b>1,266.8</b> | <b>1,266.9</b> | <b>1,275.1</b> | <b>1,282.1</b> | <b>1,292.4</b> |
| <b>Non-OPEC</b>                                          | <b>503.0</b>   | <b>502.3</b>   | <b>470.7</b>   | <b>510.0</b>   | <b>506.4</b>   | <b>514.4</b>   | <b>514.9</b>   | <b>514.9</b>   | <b>504.1</b>   | <b>524.6</b>   |
| <b>World</b>                                             | <b>1,599.3</b> | <b>1,598.6</b> | <b>1,575.3</b> | <b>1,760.2</b> | <b>1,775.7</b> | <b>1,781.2</b> | <b>1,781.8</b> | <b>1,789.9</b> | <b>1,786.3</b> | <b>1,817.0</b> |

Note: Proved reserves of crude and liquids on 31/12. Canadian reserves include oil sands while Venezuelan reserves include extra-heavy oil.

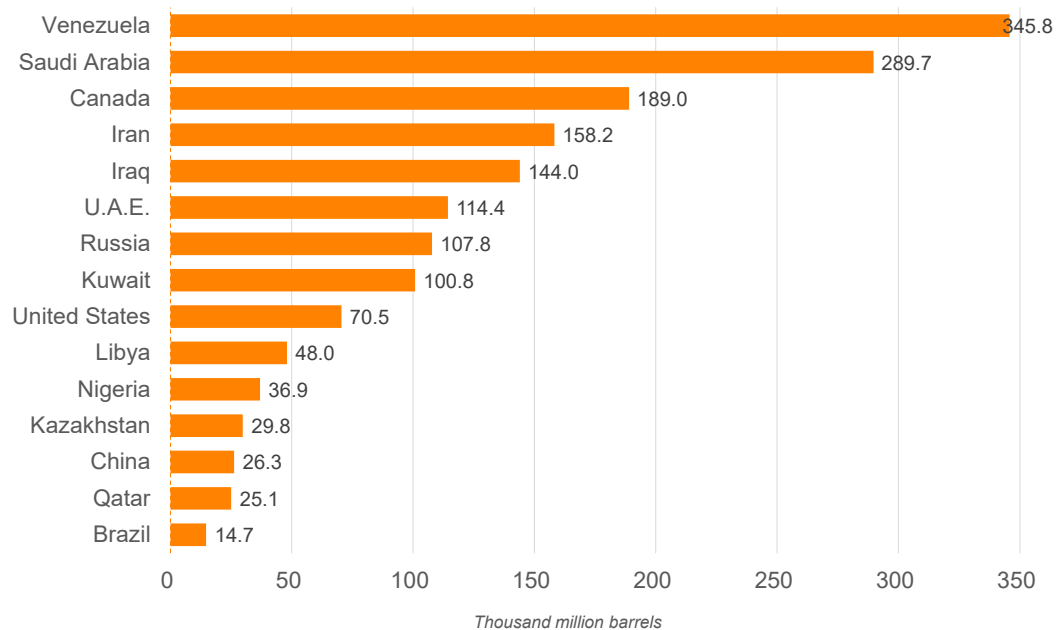
| Oil Production<br>(Thousand barrels per day) |  | 2013          | 2014          | 2015          | 2016          | 2017          | 2018           | 2019           | 2020          | 2021          | 2022           |
|----------------------------------------------|--|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| <b>North America</b>                         |  | <b>17,202</b> | <b>19,087</b> | <b>19,982</b> | <b>19,507</b> | <b>20,433</b> | <b>22,882</b>  | <b>24,761</b>  | <b>23,852</b> | <b>24,320</b> | <b>25,643</b>  |
| Canada                                       |  | 4,145         | 4,425         | 4,536         | 4,615         | 4,990         | 5,408          | 5,610          | 5,349         | 5,593         | 5,757          |
| Mexico                                       |  | 2,890         | 2,799         | 2,597         | 2,463         | 2,229         | 2,073          | 1,928          | 1,932         | 1,954         | 2,006          |
| United States                                |  | 10,167        | 11,863        | 12,849        | 12,429        | 13,214        | 15,401         | 17,223         | 16,571        | 16,773        | 17,880         |
| <b>South and Central America</b>             |  | <b>7,489</b>  | <b>7,710</b>  | <b>7,846</b>  | <b>7,530</b>  | <b>7,269</b>  | <b>6,638</b>   | <b>6,326</b>   | <b>5,925</b>  | <b>5,974</b>  | <b>6,416</b>   |
| Argentina                                    |  | 649           | 659           | 650           | 625           | 595           | 621            | 647            | 609           | 643           | 712            |
| Brazil                                       |  | 2,133         | 2,367         | 2,547         | 2,628         | 2,755         | 2,713          | 2,897          | 3,044         | 3,002         | 3,119          |
| Chile                                        |  | 11            | 9             | 6             | 5             | 6             | 9              | 12             | 9             | 9             | 9              |
| Colombia                                     |  | 1,016         | 997           | 1,014         | 906           | 862           | 873            | 893            | 788           | 744           | 761            |
| Peru                                         |  | 166           | 173           | 150           | 134           | 133           | 133            | 140            | 125           | 121           | 118            |
| Trinidad & Tobago                            |  | 117           | 114           | 109           | 97            | 99            | 87             | 82             | 76            | 77            | 76             |
| Venezuela                                    |  | 2,722         | 2,672         | 2,665         | 2,429         | 2,133         | 1,534          | 982            | 587           | 661           | 762            |
| Other                                        |  | 675           | 719           | 705           | 706           | 686           | 668            | 673            | 687           | 717           | 859            |
| <b>Europe</b>                                |  | <b>3,456</b>  | <b>3,467</b>  | <b>3,620</b>  | <b>3,650</b>  | <b>3,609</b>  | <b>3,587</b>   | <b>3,486</b>   | <b>3,703</b>  | <b>3,503</b>  | <b>3,268</b>   |
| Czech Republic                               |  | 5             | 7             | 7             | 5             | 7             | 6              | 5              | 6             | 6             | 5              |
| France                                       |  | 28            | 26            | 23            | 31            | 33            | 21             | 28             | 28            | 35            | 39             |
| Germany                                      |  | 74            | 60            | 66            | 68            | 67            | 67             | 58             | 73            | 62            | 59             |
| Italy                                        |  | 134           | 128           | 131           | 95            | 97            | 109            | 89             | 112           | 110           | 94             |
| Netherlands                                  |  | 31            | 38            | 36            | 24            | 24            | 23             | 18             | 20            | 18            | 11             |
| Norway                                       |  | 1,838         | 1,889         | 1,948         | 1,995         | 1,969         | 1,850          | 1,758          | 2,041         | 2,050         | 1,899          |
| Poland                                       |  | 30            | 29            | 28            | 21            | 24            | 32             | 30             | 29            | 27            | 25             |
| Portugal                                     |  | 1             | 1             | 0             | 1             | 0             | 0              | 0              | 0             | 0             | 0              |
| Romania                                      |  | 84            | 82            | 82            | 78            | 74            | 73             | 73             | 71            | 68            | 64             |
| Spain                                        |  | 9             | 6             | 5             | 3             | 2             | 2              | 1              | 1             | 0             | 0              |
| Turkey                                       |  | 47            | 48            | 48            | 49            | 49            | 55             | 58             | 64            | 67            | 71             |
| United Kingdom                               |  | 887           | 873           | 972           | 1,026         | 1,009         | 1,116          | 1,150          | 1,076         | 884           | 833            |
| EU                                           |  | 3,352         | 3,362         | 3,515         | 3,549         | 3,510         | 3,485          | 3,379          | 3,593         | 3,392         | 3,156          |
| Other                                        |  | 288           | 280           | 274           | 254           | 254           | 233            | 218            | 182           | 176           | 168            |
| <b>Former Soviet Union</b>                   |  | <b>13,833</b> | <b>13,896</b> | <b>14,036</b> | <b>14,205</b> | <b>14,314</b> | <b>14,573</b>  | <b>14,643</b>  | <b>13,498</b> | <b>13,767</b> | <b>13,896</b>  |
| Azerbaijan                                   |  | 885           | 862           | 849           | 829           | 784           | 793            | 765            | 699           | 704           | 672            |
| Kazakhstan                                   |  | 1,733         | 1,728         | 1,694         | 1,669         | 1,848         | 1,937          | 1,942          | 1,836         | 1,846         | 1,820          |
| Russia                                       |  | 10,793        | 10,892        | 11,084        | 11,328        | 11,321        | 11,494         | 11,582         | 10,607        | 10,867        | 11,088         |
| Ukraine                                      |  | 69            | 61            | 54            | 50            | 49            | 51             | 55             | 54            | 54            | 11             |
| Uzbekistan                                   |  | 60            | 56            | 52            | 48            | 46            | 43             | 40             | 38            | 36            | 51             |
| Other                                        |  | 293           | 297           | 303           | 281           | 266           | 255            | 259            | 264           | 260           | 254            |
| <b>Middle East</b>                           |  | <b>27,953</b> | <b>28,371</b> | <b>29,701</b> | <b>31,426</b> | <b>30,999</b> | <b>31,575</b>  | <b>30,149</b>  | <b>27,775</b> | <b>28,054</b> | <b>31,066</b>  |
| Iran                                         |  | 3,289         | 3,429         | 3,573         | 4,402         | 4,742         | 4,582          | 3,347          | 3,038         | 3,504         | 3,667          |
| Iraq                                         |  | 3,146         | 3,435         | 4,108         | 4,533         | 4,603         | 4,703          | 4,852          | 4,188         | 4,172         | 4,598          |
| Kuwait                                       |  | 3,109         | 3,090         | 3,097         | 3,194         | 3,014         | 3,050          | 2,987          | 2,717         | 2,719         | 3,013          |
| Qatar                                        |  | 2,002         | 1,916         | 1,856         | 1,839         | 1,767         | 1,780          | 1,714          | 1,760         | 1,801         | 1,801          |
| Saudi Arabia                                 |  | 11,513        | 11,605        | 12,045        | 12,344        | 11,876        | 12,345         | 11,914         | 11,094        | 10,974        | 12,416         |
| United Arab Emirates                         |  | 3,478         | 3,552         | 3,762         | 3,848         | 3,740         | 3,831          | 4,049          | 3,737         | 3,621         | 4,210          |
| Other                                        |  | 1,416         | 1,344         | 1,260         | 1,266         | 1,257         | 1,284          | 1,286          | 1,241         | 1,263         | 1,361          |
| <b>Africa</b>                                |  | <b>8,820</b>  | <b>8,390</b>  | <b>8,324</b>  | <b>7,796</b>  | <b>8,205</b>  | <b>8,292</b>   | <b>8,447</b>   | <b>7,027</b>  | <b>7,386</b>  | <b>7,107</b>   |
| Algeria                                      |  | 1,573         | 1,585         | 1,590         | 1,604         | 1,530         | 1,512          | 1,490          | 1,346         | 1,362         | 1,470          |
| Angola                                       |  | 1,772         | 1,696         | 1,796         | 1,743         | 1,701         | 1,543          | 1,449          | 1,328         | 1,178         | 1,192          |
| Egypt                                        |  | 696           | 709           | 696           | 664           | 639           | 649            | 633            | 619           | 593           | 600            |
| Libya                                        |  | 953           | 497           | 437           | 426           | 877           | 1,029          | 1,159          | 384           | 1,225         | 1,079          |
| Nigeria                                      |  | 2,293         | 2,330         | 2,246         | 1,928         | 1,986         | 2,030          | 2,123          | 1,879         | 1,681         | 1,485          |
| South Africa                                 |  | 120           | 103           | 106           | 103           | 106           | 102            | 104            | 88            | 91            | 83             |
| Other                                        |  | 1,413         | 1,470         | 1,453         | 1,328         | 1,366         | 1,427          | 1,489          | 1,383         | 1,256         | 1,198          |
| <b>Asia-Pacific</b>                          |  | <b>8,138</b>  | <b>8,174</b>  | <b>8,316</b>  | <b>7,997</b>  | <b>7,779</b>  | <b>7,648</b>   | <b>7,700</b>   | <b>7,510</b>  | <b>7,425</b>  | <b>7,363</b>   |
| Australia                                    |  | 393           | 412           | 371           | 345           | 315           | 344            | 458            | 455           | 444           | 413            |
| China                                        |  | 4,144         | 4,181         | 4,271         | 3,982         | 3,892         | 3,848          | 3,921          | 3,970         | 4,060         | 4,177          |
| India                                        |  | 883           | 881           | 872           | 852           | 861           | 845            | 803            | 750           | 728           | 704            |
| Indonesia                                    |  | 861           | 835           | 817           | 866           | 824           | 798            | 772            | 734           | 683           | 632            |
| Japan                                        |  | 14            | 13            | 12            | 11            | 12            | 10             | 11             | 10            | 10            | 9              |
| Malaysia                                     |  | 624           | 653           | 701           | 737           | 729           | 723            | 670            | 604           | 566           | 563            |
| New Zealand                                  |  | 41            | 46            | 48            | 41            | 37            | 30             | 30             | 26            | 23            | 21             |
| South Korea                                  |  | 19            | 20            | 22            | 24            | 25            | 29             | 28             | 34            | 37            | 38             |
| Thailand                                     |  | 438           | 436           | 452           | 462           | 457           | 446            | 443            | 411           | 380           | 340            |
| Other                                        |  | 721           | 697           | 750           | 677           | 627           | 575            | 564            | 516           | 494           | 466            |
| <b>OPEC</b>                                  |  | <b>34,628</b> | <b>34,679</b> | <b>36,060</b> | <b>37,127</b> | <b>36,881</b> | <b>36,881</b>  | <b>35,087</b>  | <b>30,977</b> | <b>31,708</b> | <b>34,477</b>  |
| <b>Non-OPEC</b>                              |  | <b>56,558</b> | <b>58,919</b> | <b>60,336</b> | <b>59,637</b> | <b>60,519</b> | <b>63,370</b>  | <b>65,637</b>  | <b>63,093</b> | <b>63,754</b> | <b>65,539</b>  |
| <b>Global biofuels</b>                       |  | <b>2,102</b>  | <b>2,271</b>  | <b>2,285</b>  | <b>2,364</b>  | <b>2,450</b>  | <b>2,668</b>   | <b>2,840</b>   | <b>2,649</b>  | <b>2,789</b>  | <b>2,947</b>   |
| <b>Processing gains</b>                      |  | <b>2,193</b>  | <b>2,231</b>  | <b>2,286</b>  | <b>2,289</b>  | <b>2,341</b>  | <b>2,386</b>   | <b>2,373</b>   | <b>2,132</b>  | <b>2,244</b>  | <b>2,310</b>   |
| <b>World</b>                                 |  | <b>91,186</b> | <b>93,598</b> | <b>96,396</b> | <b>96,764</b> | <b>97,400</b> | <b>100,251</b> | <b>100,724</b> | <b>94,070</b> | <b>95,462</b> | <b>100,016</b> |

Note: Oil production includes production of crude, condensates and natural gas liquids (NGLs).

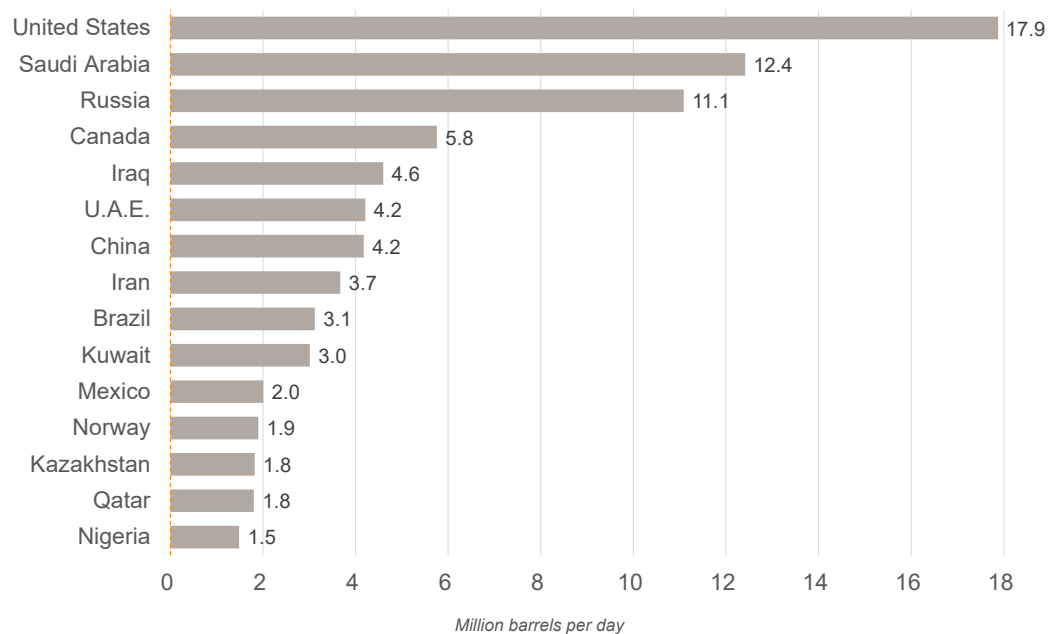
| <b>Oil Final Consumption</b><br>(Thousand barrels/day) | 2013          | 2014          | 2015          | 2016          | 2017          | 2018           | 2019           | 2020          | 2021          | 2022          |
|--------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|
| <b>North America</b>                                   | <b>23,622</b> | <b>23,689</b> | <b>24,133</b> | <b>24,345</b> | <b>24,524</b> | <b>24,993</b>  | <b>25,113</b>  | <b>22,123</b> | <b>23,959</b> | <b>24,736</b> |
| Canada                                                 | 2,418         | 2,389         | 2,440         | 2,465         | 2,463         | 2,512          | 2,546          | 2,181         | 2,257         | 2,377         |
| Mexico                                                 | 2,090         | 2,040         | 2,006         | 2,053         | 2,019         | 1,886          | 1,984          | 1,594         | 1,668         | 1,929         |
| United States                                          | 19,114        | 19,260        | 19,687        | 19,827        | 20,042        | 20,595         | 20,583         | 18,348        | 20,034        | 20,430        |
| <b>South and Central America</b>                       | <b>6,941</b>  | <b>7,053</b>  | <b>6,978</b>  | <b>6,778</b>  | <b>6,732</b>  | <b>6,616</b>   | <b>6,664</b>   | <b>5,737</b>  | <b>6,364</b>  | <b>6,578</b>  |
| Argentina                                              | 693           | 688           | 682           | 677           | 666           | 648            | 625            | 524           | 638           | 694           |
| Brazil                                                 | 3,129         | 3,248         | 3,189         | 2,999         | 3,039         | 2,975          | 3,073          | 2,856         | 3,028         | 3,089         |
| Chile                                                  | 339           | 336           | 331           | 352           | 357           | 363            | 362            | 331           | 361           | 370           |
| Colombia                                               | 319           | 326           | 338           | 372           | 346           | 349            | 373            | 323           | 357           | 374           |
| Peru                                                   | 225           | 224           | 236           | 247           | 262           | 266            | 274            | 212           | 266           | 275           |
| Trinidad & Tobago                                      | 44            | 44            | 46            | 47            | 44            | 37             | 31             | 26            | 27            | 28            |
| Venezuela                                              | 824           | 806           | 703           | 623           | 567           | 484            | 396            | 214           | 226           | 232           |
| Other                                                  | 1,368         | 1,381         | 1,453         | 1,461         | 1,451         | 1,494          | 1,530          | 1,251         | 1,461         | 1,516         |
| <b>Europe</b>                                          | <b>14,362</b> | <b>14,272</b> | <b>14,602</b> | <b>14,792</b> | <b>15,186</b> | <b>15,073</b>  | <b>15,093</b>  | <b>13,137</b> | <b>13,964</b> | <b>14,302</b> |
| Belgium                                                | 616           | 608           | 625           | 634           | 639           | 685            | 644            | 562           | 623           | 608           |
| Czech Republic                                         | 188           | 202           | 196           | 180           | 214           | 217            | 219            | 192           | 212           | 216           |
| Finland                                                | 209           | 205           | 205           | 208           | 208           | 208            | 209            | 189           | 184           | 190           |
| France                                                 | 1,766         | 1,746         | 1,747         | 1,709         | 1,737         | 1,686          | 1,689          | 1,428         | 1,541         | 1,541         |
| Germany                                                | 2,435         | 2,374         | 2,368         | 2,383         | 2,450         | 2,327          | 2,355          | 2,148         | 2,235         | 2,186         |
| Italy                                                  | 1,260         | 1,266         | 1,274         | 1,237         | 1,244         | 1,272          | 1,255          | 1,032         | 1,162         | 1,195         |
| Netherlands                                            | 940           | 931           | 928           | 931           | 940           | 924            | 900            | 857           | 853           | 862           |
| Norway                                                 | 231           | 231           | 240           | 230           | 237           | 243            | 248            | 218           | 235           | 218           |
| Poland                                                 | 505           | 504           | 541           | 582           | 658           | 680            | 698            | 661           | 697           | 715           |
| Portugal                                               | 234           | 233           | 237           | 237           | 242           | 231            | 249            | 203           | 212           | 233           |
| Romania                                                | 187           | 190           | 194           | 204           | 217           | 214            | 228            | 219           | 228           | 230           |
| Spain                                                  | 1,208         | 1,200         | 1,247         | 1,290         | 1,297         | 1,332          | 1,328          | 1,089         | 1,192         | 1,289         |
| Sweden                                                 | 305           | 304           | 301           | 316           | 321           | 290            | 295            | 268           | 300           | 289           |
| Turkey                                                 | 747           | 763           | 881           | 942           | 991           | 958            | 987            | 921           | 974           | 1,019         |
| United Kingdom                                         | 1,512         | 1,518         | 1,560         | 1,599         | 1,619         | 1,605          | 1,562          | 1,211         | 1,252         | 1,384         |
| EU                                                     | 11,229        | 11,143        | 11,285        | 11,362        | 11,665        | 11,597         | 11,620         | 10,218        | 10,900        | 11,054        |
| Other                                                  | 2,019         | 1,997         | 2,058         | 2,110         | 2,172         | 2,201          | 2,227          | 1,939         | 2,064         | 2,127         |
| <b>Former Soviet Union</b>                             | <b>4,337</b>  | <b>4,622</b>  | <b>4,594</b>  | <b>4,491</b>  | <b>4,657</b>  | <b>4,688</b>   | <b>4,728</b>   | <b>4,590</b>  | <b>4,891</b>  | <b>4,942</b>  |
| Azerbaijan                                             | 97            | 96            | 96            | 97            | 103           | 104            | 112            | 102           | 106           | 110           |
| Kazakhstan                                             | 348           | 258           | 322           | 349           | 334           | 326            | 290            | 314           | 325           | 333           |
| Russia                                                 | 3,151         | 3,529         | 3,472         | 3,308         | 3,496         | 3,494          | 3,568          | 3,449         | 3,685         | 3,782         |
| Ukraine                                                | 274           | 238           | 220           | 244           | 236           | 243            | 244            | 215           | 239           | 174           |
| Uzbekistan                                             | 79            | 85            | 85            | 89            | 89            | 96             | 96             | 100           | 109           | 114           |
| Other                                                  | 388           | 416           | 399           | 404           | 399           | 425            | 418            | 410           | 427           | 429           |
| <b>Middle East</b>                                     | <b>8,777</b>  | <b>9,110</b>  | <b>9,077</b>  | <b>8,996</b>  | <b>9,115</b>  | <b>9,041</b>   | <b>8,997</b>   | <b>8,256</b>  | <b>8,641</b>  | <b>9,199</b>  |
| Iran                                                   | 2,046         | 2,028         | 2,003         | 1,839         | 1,884         | 1,958          | 1,907          | 1,731         | 1,804         | 1,831         |
| Iraq                                                   | 700           | 653           | 606           | 655           | 680           | 705            | 745            | 615           | 703           | 825           |
| Kuwait                                                 | 446           | 451           | 451           | 432           | 438           | 441            | 425            | 401           | 434           | 444           |
| Qatar                                                  | 291           | 287           | 287           | 305           | 311           | 311            | 319            | 281           | 279           | 305           |
| Saudi Arabia                                           | 3,483         | 3,795         | 3,895         | 3,870         | 3,804         | 3,608          | 3,632          | 3,459         | 3,506         | 3,729         |
| United Arab Emirates                                   | 790           | 874           | 880           | 962           | 1,020         | 992            | 979            | 915           | 968           | 1,066         |
| Other                                                  | 1,021         | 1,022         | 955           | 933           | 978           | 1,026          | 990            | 854           | 947           | 999           |
| <b>Africa</b>                                          | <b>3,955</b>  | <b>4,099</b>  | <b>4,134</b>  | <b>4,095</b>  | <b>4,136</b>  | <b>4,152</b>   | <b>4,163</b>   | <b>3,789</b>  | <b>4,079</b>  | <b>4,311</b>  |
| Algeria                                                | 417           | 435           | 447           | 430           | 425           | 437            | 446            | 436           | 451           | 480           |
| Angola                                                 | 153           | 164           | 163           | 146           | 141           | 139            | 153            | 111           | 150           | 154           |
| Egypt                                                  | 788           | 840           | 858           | 829           | 773           | 716            | 652            | 631           | 709           | 818           |
| Libya                                                  | 252           | 258           | 218           | 199           | 204           | 210            | 208            | 175           | 223           | 234           |
| Nigeria                                                | 415           | 455           | 415           | 427           | 431           | 456            | 488            | 427           | 476           | 493           |
| South Africa                                           | 630           | 614           | 637           | 607           | 663           | 648            | 621            | 533           | 563           | 568           |
| Other                                                  | 1,300         | 1,333         | 1,396         | 1,457         | 1,499         | 1,546          | 1,595          | 1,476         | 1,507         | 1,564         |
| <b>Asia-Pacific</b>                                    | <b>30,372</b> | <b>30,926</b> | <b>32,328</b> | <b>33,138</b> | <b>34,352</b> | <b>35,575</b>  | <b>36,008</b>  | <b>34,211</b> | <b>35,755</b> | <b>35,874</b> |
| Australia                                              | 1,139         | 1,120         | 1,106         | 1,098         | 1,150         | 1,168          | 1,150          | 991           | 1,018         | 1,076         |
| China                                                  | 10,373        | 10,798        | 11,639        | 12,013        | 12,574        | 13,624         | 14,146         | 14,283        | 15,088        | 14,664        |
| India                                                  | 3,725         | 3,905         | 4,288         | 4,493         | 4,762         | 4,927          | 4,963          | 4,590         | 4,896         | 5,276         |
| Indonesia                                              | 1,735         | 1,761         | 1,683         | 1,594         | 1,703         | 1,858          | 1,833          | 1,659         | 1,729         | 1,774         |
| Japan                                                  | 4,521         | 4,286         | 4,167         | 4,043         | 3,954         | 3,861          | 3,766          | 3,366         | 3,411         | 3,376         |
| Malaysia                                               | 714           | 731           | 688           | 709           | 731           | 712            | 752            | 670           | 710           | 791           |
| New Zealand                                            | 155           | 157           | 161           | 168           | 177           | 180            | 185            | 149           | 146           | 151           |
| South Korea                                            | 2,328         | 2,348         | 2,473         | 2,603         | 2,627         | 2,564          | 2,596          | 2,448         | 2,556         | 2,547         |
| Taiwan                                                 | 1,104         | 1,136         | 1,162         | 1,168         | 1,152         | 1,157          | 1,097          | 1,051         | 1,095         | 1,017         |
| Thailand                                               | 1,326         | 1,338         | 1,363         | 1,407         | 1,434         | 1,472          | 1,477          | 1,358         | 1,341         | 1,418         |
| Other                                                  | 3,252         | 3,346         | 3,598         | 3,842         | 4,088         | 4,052          | 4,043          | 3,646         | 3,765         | 3,784         |
| <b>OECD</b>                                            | <b>46,399</b> | <b>46,129</b> | <b>46,888</b> | <b>47,308</b> | <b>47,856</b> | <b>48,086</b>  | <b>48,149</b>  | <b>42,402</b> | <b>45,265</b> | <b>46,434</b> |
| <b>Non-OECD</b>                                        | <b>45,966</b> | <b>47,642</b> | <b>48,958</b> | <b>49,308</b> | <b>50,846</b> | <b>52,050</b>  | <b>52,616</b>  | <b>49,442</b> | <b>52,390</b> | <b>53,507</b> |
| <b>World</b>                                           | <b>92,365</b> | <b>93,771</b> | <b>95,846</b> | <b>96,616</b> | <b>98,702</b> | <b>100,136</b> | <b>100,765</b> | <b>91,844</b> | <b>97,655</b> | <b>99,941</b> |

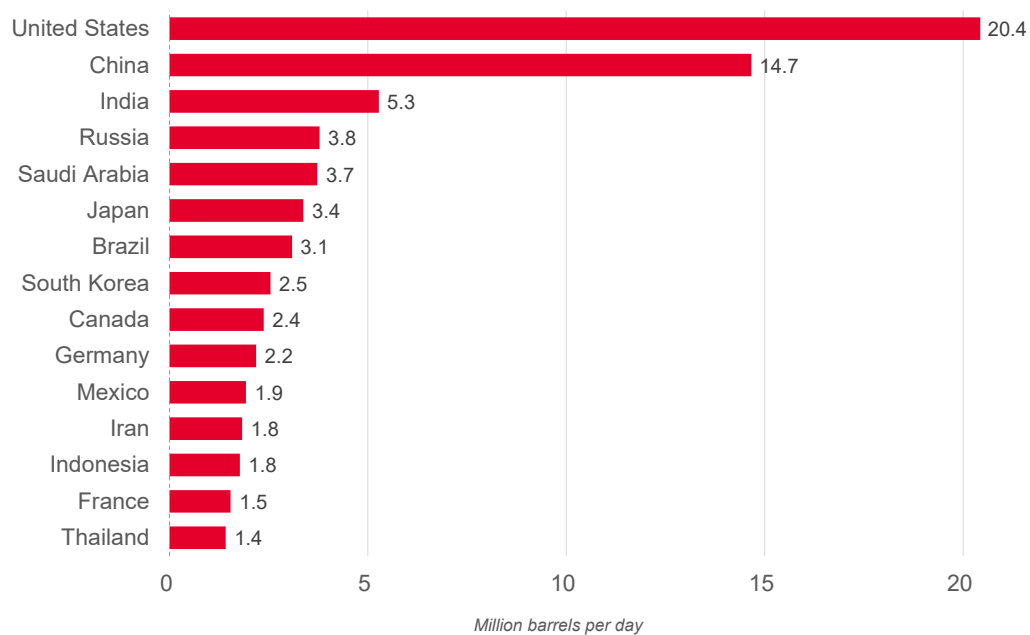
Note: Liquids final consumption including bunker fuel.

### Top 15 Countries - Oil Proved Reserves, 2022



### Top 15 Countries - Oil Production, 2022



**Top 15 Countries - Oil Final Consumption, 2022**



Natural Gas

| <b>Natural Gas Proved Reserves</b><br>(Tcm) | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>North America</b>                        | <b>11.9</b>  | <b>12.7</b>  | <b>11.1</b>  | <b>11.4</b>  | <b>14.6</b>  | <b>15.7</b>  | <b>15.8</b>  | <b>15.8</b>  | <b>15.8</b>  | <b>19.8</b>  |
| Canada                                      | 2.0          | 2.0          | 2.1          | 2.1          | 2.0          | 2.1          | 2.5          | 2.5          | 2.5          | 2.5          |
| Mexico                                      | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          |
| United States                               | 9.6          | 10.4         | 8.7          | 9.1          | 12.4         | 13.4         | 13.2         | 13.2         | 13.2         | 17.1         |
| <b>South and Central America</b>            | <b>7.6</b>   | <b>7.6</b>   | <b>7.6</b>   | <b>7.7</b>   | <b>7.5</b>   | <b>7.4</b>   | <b>7.4</b>   | <b>7.4</b>   | <b>7.4</b>   | <b>7.4</b>   |
| Argentina                                   | 0.3          | 0.3          | 0.4          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          |
| Brazil                                      | 0.5          | 0.5          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          |
| Chile                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Colombia                                    | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Peru                                        | 0.4          | 0.4          | 0.4          | 0.5          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          |
| Trinidad & Tobago                           | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          |
| Venezuela                                   | 5.6          | 5.6          | 5.7          | 5.7          | 5.7          | 5.7          | 5.7          | 5.7          | 5.7          | 5.7          |
| Other                                       | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          |
| <b>Europa</b>                               | <b>4.6</b>   | <b>4.3</b>   | <b>4.1</b>   | <b>3.8</b>   | <b>3.7</b>   | <b>3.1</b>   | <b>3.0</b>   | <b>2.8</b>   | <b>2.8</b>   | <b>3.5</b>   |
| France                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Germany                                     | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Italy                                       | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Netherlands                                 | 1.0          | 0.9          | 0.8          | 0.7          | 0.7          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          |
| Norway                                      | 2.7          | 2.5          | 2.5          | 2.4          | 2.3          | 2.2          | 2.2          | 2.1          | 2.1          | 2.1          |
| Poland                                      | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Romania                                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Turkey                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| United Kingdom                              | 0.5          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.3          |
| EU                                          | 1.4          | 1.3          | 1.3          | 1.2          | 1.2          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          |
| Other                                       | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| <b>Former Soviet Union</b>                  | <b>67.5</b>  | <b>68.1</b>  | <b>68.8</b>  | <b>56.6</b>  | <b>69.4</b>  | <b>68.8</b>  | <b>68.8</b>  | <b>67.5</b>  | <b>67.5</b>  | <b>67.5</b>  |
| Azerbaijan                                  | 0.7          | 0.7          | 0.7          | 0.7          | 1.1          | 1.4          | 1.9          | 1.9          | 1.9          | 1.9          |
| Kazakhstan                                  | 1.4          | 1.4          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          |
| Russia                                      | 49.3         | 49.9         | 50.2         | 50.7         | 50.6         | 49.6         | 49.1         | 47.8         | 47.8         | 47.8         |
| Turkmenistan                                | 14.0         | 14.0         | 14.0         | 1.4          | 14.0         | 14.0         | 14.0         | 14.0         | 14.0         | 14.0         |
| Ukraine                                     | 1.1          | 1.1          | 1.1          | 1.1          | 1.0          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          |
| Uzbekistan                                  | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          |
| Other                                       | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| <b>Middle East</b>                          | <b>79.9</b>  | <b>79.9</b>  | <b>79.3</b>  | <b>80.3</b>  | <b>80.0</b>  | <b>80.4</b>  | <b>80.8</b>  | <b>80.7</b>  | <b>80.7</b>  | <b>81.0</b>  |
| Iran                                        | 34.0         | 34.0         | 33.5         | 33.7         | 33.8         | 33.9         | 34.0         | 34.0         | 34.0         | 33.9         |
| Iraq                                        | 3.2          | 3.2          | 3.2          | 3.8          | 3.7          | 3.7          | 3.7          | 3.7          | 3.7          | 3.7          |
| Kuwait                                      | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          | 1.8          |
| Qatar                                       | 24.7         | 24.5         | 24.3         | 24.1         | 23.9         | 23.8         | 23.8         | 23.8         | 23.8         | 23.8         |
| Saudi Arabia                                | 8.3          | 8.5          | 8.6          | 8.6          | 8.7          | 9.1          | 9.4          | 9.4          | 9.4          | 9.5          |
| United Arab Emirates                        | 6.1          | 6.1          | 6.1          | 6.1          | 6.1          | 6.1          | 6.1          | 6.1          | 6.1          | 6.5          |
| Other                                       | 1.9          | 1.9          | 1.8          | 2.2          | 2.0          | 1.9          | 2.0          | 1.8          | 1.8          | 1.8          |
| <b>Africa</b>                               | <b>14.4</b>  | <b>14.4</b>  | <b>14.6</b>  | <b>15.1</b>  | <b>15.3</b>  | <b>15.4</b>  | <b>15.9</b>  | <b>15.9</b>  | <b>15.9</b>  | <b>16.0</b>  |
| Algeria                                     | 4.5          | 4.5          | 4.5          | 4.5          | 4.5          | 4.5          | 4.5          | 4.5          | 4.5          | 4.5          |
| Angola                                      | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          |
| Egypt                                       | 2.2          | 2.2          | 2.1          | 2.2          | 2.2          | 2.2          | 2.2          | 2.2          | 2.2          | 2.2          |
| Libya                                       | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          |
| Nigeria                                     | 5.1          | 5.1          | 5.3          | 5.5          | 5.6          | 5.7          | 5.8          | 5.8          | 5.8          | 5.9          |
| South Africa                                | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Other                                       | 0.8          | 0.7          | 0.9          | 0.9          | 1.1          | 1.1          | 1.6          | 1.6          | 1.6          | 1.6          |
| <b>Asia-Pacific</b>                         | <b>15.7</b>  | <b>15.3</b>  | <b>15.5</b>  | <b>15.0</b>  | <b>14.6</b>  | <b>13.2</b>  | <b>12.6</b>  | <b>12.3</b>  | <b>12.3</b>  | <b>12.4</b>  |
| Australia                                   | 3.8          | 3.2          | 3.2          | 3.2          | 3.2          | 3.2          | 2.8          | 2.7          | 2.7          | 2.7          |
| China                                       | 2.4          | 2.6          | 2.8          | 2.8          | 2.8          | 2.8          | 2.8          | 2.9          | 2.9          | 3.0          |
| India                                       | 1.4          | 1.5          | 1.3          | 1.3          | 1.3          | 1.3          | 1.4          | 1.4          | 1.4          | 1.4          |
| Indonesia                                   | 2.9          | 2.8          | 2.9          | 2.8          | 2.7          | 1.4          | 1.2          | 1.2          | 1.2          | 1.1          |
| Japan                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Malaysia                                    | 2.6          | 2.7          | 2.8          | 2.5          | 2.3          | 2.3          | 2.2          | 2.2          | 2.2          | 2.2          |
| New Zealand                                 | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Thailand                                    | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          |
| Other                                       | 2.4          | 2.3          | 2.2          | 2.1          | 2.0          | 2.0          | 1.8          | 1.8          | 1.8          | 1.8          |
| <b>OECD</b>                                 | <b>20.5</b>  | <b>20.4</b>  | <b>18.5</b>  | <b>18.9</b>  | <b>21.9</b>  | <b>22.5</b>  | <b>22.2</b>  | <b>21.9</b>  | <b>21.9</b>  | <b>26.9</b>  |
| <b>Non-OECD</b>                             | <b>181.3</b> | <b>181.9</b> | <b>182.4</b> | <b>170.9</b> | <b>183.2</b> | <b>181.6</b> | <b>182.1</b> | <b>180.5</b> | <b>180.5</b> | <b>180.8</b> |
| <b>World</b>                                | <b>201.7</b> | <b>202.4</b> | <b>200.9</b> | <b>189.8</b> | <b>205.1</b> | <b>204.1</b> | <b>204.3</b> | <b>202.5</b> | <b>202.5</b> | <b>207.7</b> |

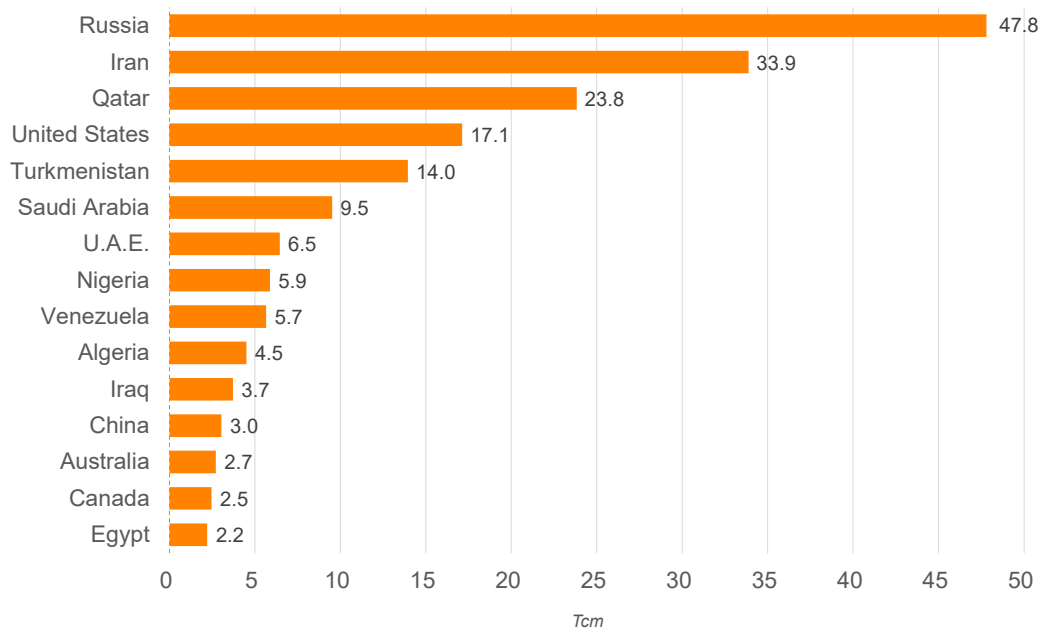
Note: Proved reserves of natural gas on 31/12.

| Natural Gas Production<br>(Bcm)  | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>North America</b>             | <b>891.8</b>   | <b>945.4</b>   | <b>976.0</b>   | <b>978.6</b>   | <b>998.2</b>   | <b>1,102.6</b> | <b>1,184.2</b> | <b>1,165.8</b> | <b>1,206.2</b> | <b>1,264.9</b> |
| Canada                           | 157.5          | 164.1          | 165.0          | 183.8          | 190.6          | 195.5          | 188.0          | 183.5          | 190.6          | 204.6          |
| Mexico                           | 48.6           | 47.8           | 44.5           | 39.5           | 34.2           | 35.4           | 34.0           | 33.8           | 30.9           | 33.5           |
| United States                    | 685.7          | 733.4          | 766.5          | 755.3          | 773.3          | 871.7          | 962.2          | 948.5          | 984.7          | 1,026.8        |
| <b>South and Central America</b> | <b>159.6</b>   | <b>160.4</b>   | <b>159.8</b>   | <b>158.3</b>   | <b>160.5</b>   | <b>161.0</b>   | <b>161.2</b>   | <b>142.1</b>   | <b>137.5</b>   | <b>141.8</b>   |
| Argentina                        | 38.8           | 37.9           | 39.9           | 41.0           | 41.7           | 42.7           | 44.5           | 40.8           | 40.6           | 43.7           |
| Brazil                           | 22.4           | 24.0           | 24.8           | 25.0           | 28.3           | 25.5           | 26.7           | 24.8           | 24.9           | 23.3           |
| Chile                            | 1.0            | 0.8            | 1.0            | 1.2            | 1.2            | 1.3            | 1.5            | 1.2            | 1.2            | 1.3            |
| Colombia                         | 15.3           | 14.8           | 14.0           | 12.9           | 13.2           | 13.8           | 13.6           | 13.3           | 12.4           | 12.2           |
| Peru                             | 12.9           | 13.6           | 13.1           | 14.6           | 12.9           | 12.7           | 13.4           | 12.1           | 11.4           | 11.7           |
| Trinidad & Tobago                | 41.2           | 41.0           | 38.2           | 33.3           | 33.4           | 36.0           | 36.5           | 30.6           | 25.9           | 28.3           |
| Venezuela                        | 22.5           | 22.6           | 23.0           | 24.5           | 24.0           | 23.7           | 19.6           | 14.6           | 16.3           | 16.8           |
| Other                            | 5.6            | 5.7            | 5.9            | 5.9            | 5.8            | 5.5            | 5.3            | 4.7            | 4.7            | 4.6            |
| <b>Europa</b>                    | <b>289.6</b>   | <b>272.2</b>   | <b>263.6</b>   | <b>262.4</b>   | <b>263.4</b>   | <b>249.5</b>   | <b>231.1</b>   | <b>213.9</b>   | <b>205.6</b>   | <b>216.7</b>   |
| Czech Republic                   | 0.3            | 0.3            | 0.3            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            |
| France                           | 0.3            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            |
| Germany                          | 12.2           | 9.5            | 8.7            | 9.0            | 8.3            | 6.5            | 6.0            | 5.9            | 5.4            | 5.1            |
| Italy                            | 7.7            | 7.2            | 6.8            | 5.8            | 5.5            | 5.5            | 4.8            | 4.0            | 3.2            | 3.2            |
| Netherlands                      | 86.9           | 72.5           | 55.0           | 53.1           | 45.5           | 39.0           | 33.3           | 24.1           | 21.7           | 18.4           |
| Norway                           | 113.1          | 112.8          | 121.4          | 120.6          | 128.7          | 126.2          | 119.0          | 115.9          | 119.0          | 128.1          |
| Poland                           | 6.2            | 6.1            | 6.1            | 5.8            | 5.8            | 5.7            | 5.7            | 5.6            | 5.6            | 5.5            |
| Romania                          | 10.9           | 11.1           | 11.1           | 9.8            | 10.6           | 10.3           | 10.0           | 8.9            | 8.9            | 9.2            |
| Spain                            | 0.1            | 0.0            | 0.1            | 0.1            | 0.0            | 0.1            | 0.1            | 0.1            | 0.0            | 0.0            |
| Turkey                           | 0.5            | 0.5            | 0.4            | 0.4            | 0.4            | 0.4            | 0.5            | 0.4            | 0.4            | 0.4            |
| United Kingdom                   | 37.4           | 38.8           | 40.5           | 41.7           | 42.1           | 40.8           | 39.3           | 39.3           | 32.5           | 37.7           |
| EU                               | 135.2          | 116.5          | 97.8           | 96.3           | 89.1           | 79.0           | 69.7           | 55.7           | 51.1           | 47.2           |
| Other                            | 14.1           | 13.6           | 13.3           | 15.8           | 16.4           | 14.8           | 12.2           | 9.4            | 8.7            | 9.0            |
| <b>Former Soviet Union</b>       | <b>880.5</b>   | <b>851.1</b>   | <b>841.7</b>   | <b>846.9</b>   | <b>903.0</b>   | <b>965.2</b>   | <b>992.9</b>   | <b>932.8</b>   | <b>1,013.3</b> | <b>902.0</b>   |
| Azerbaijan                       | 18.3           | 19.3           | 19.2           | 18.7           | 18.2           | 19.2           | 24.5           | 26.5           | 32.6           | 29.5           |
| Kazakhstan                       | 33.0           | 33.6           | 29.1           | 31.1           | 35.6           | 38.7           | 32.7           | 29.9           | 26.0           | 22.0           |
| Russia                           | 674.5          | 646.6          | 638.0          | 644.2          | 695.1          | 738.2          | 766.1          | 722.0          | 792.8          | 699.0          |
| Turkmenistan                     | 78.4           | 80.1           | 83.7           | 79.8           | 80.5           | 84.4           | 86.7           | 82.7           | 87.7           | 80.2           |
| Ukraine                          | 21.0           | 19.7           | 19.5           | 19.7           | 20.0           | 20.5           | 20.1           | 19.8           | 18.2           | 16.8           |
| Uzbekistan                       | 52.3           | 48.6           | 49.0           | 50.4           | 50.8           | 61.6           | 60.5           | 49.6           | 53.7           | 51.5           |
| Other                            | 3.1            | 3.2            | 3.2            | 3.0            | 2.9            | 2.6            | 2.3            | 2.2            | 2.3            | 2.9            |
| <b>Middle East</b>               | <b>556.9</b>   | <b>573.1</b>   | <b>590.5</b>   | <b>612.6</b>   | <b>629.7</b>   | <b>639.6</b>   | <b>658.2</b>   | <b>662.7</b>   | <b>683.1</b>   | <b>704.9</b>   |
| Iran                             | 156.8          | 174.6          | 184.1          | 199.8          | 218.2          | 227.9          | 232.7          | 232.7          | 239.6          | 243.6          |
| Iraq                             | 7.0            | 6.8            | 7.0            | 7.6            | 10.1           | 10.6           | 11.2           | 10.9           | 14.1           | 14.5           |
| Kuwait                           | 16.3           | 15.0           | 16.9           | 17.1           | 16.9           | 17.9           | 19.6           | 21.5           | 21.2           | 22.4           |
| Qatar                            | 164.2          | 161.6          | 165.0          | 167.1          | 166.5          | 165.6          | 167.6          | 166.7          | 168.2          | 169.6          |
| Saudi Arabia                     | 82.0           | 85.1           | 87.3           | 90.8           | 95.5           | 96.8           | 98.2           | 98.8           | 100.1          | 104.9          |
| United Arab Emirates             | 54.6           | 54.2           | 60.2           | 61.9           | 54.1           | 48.0           | 55.1           | 55.1           | 54.5           | 53.2           |
| Other                            | 76.1           | 75.7           | 70.1           | 68.3           | 68.4           | 72.8           | 74.0           | 77.1           | 85.3           | 96.7           |
| <b>Africa</b>                    | <b>207.8</b>   | <b>209.2</b>   | <b>206.6</b>   | <b>221.2</b>   | <b>239.2</b>   | <b>250.4</b>   | <b>251.3</b>   | <b>239.5</b>   | <b>270.8</b>   | <b>257.9</b>   |
| Algeria                          | 0.9            | 0.7            | 0.8            | 1.7            | 5.8            | 6.5            | 6.8            | 7.6            | 6.1            | 6.8            |
| Angola                           | 81.0           | 82.6           | 84.0           | 94.7           | 96.2           | 97.2           | 90.0           | 84.8           | 105.3          | 101.7          |
| Egypt                            | 48.1           | 43.1           | 38.3           | 42.6           | 53.0           | 62.1           | 68.9           | 61.8           | 71.6           | 68.2           |
| Libya                            | 17.0           | 16.6           | 15.5           | 15.6           | 14.3           | 13.9           | 14.2           | 13.0           | 15.1           | 14.0           |
| Nigeria                          | 37.2           | 42.4           | 43.7           | 42.2           | 45.1           | 45.7           | 46.2           | 46.5           | 44.9           | 41.4           |
| South Africa                     | 1.3            | 1.0            | 1.2            | 1.1            | 0.9            | 1.0            | 1.2            | 1.1            | 1.1            | 1.0            |
| Other                            | 22.3           | 22.8           | 23.2           | 23.3           | 24.0           | 24.0           | 24.1           | 24.8           | 26.8           | 24.8           |
| <b>Asia-Pacific</b>              | <b>508.5</b>   | <b>527.6</b>   | <b>532.9</b>   | <b>550.9</b>   | <b>584.0</b>   | <b>610.1</b>   | <b>645.3</b>   | <b>647.6</b>   | <b>661.0</b>   | <b>686.7</b>   |
| Australia                        | 63.0           | 64.8           | 68.1           | 82.9           | 105.8          | 120.9          | 145.0          | 156.5          | 151.1          | 162.1          |
| China                            | 120.9          | 130.2          | 134.6          | 136.9          | 148.0          | 160.2          | 176.2          | 192.5          | 206.6          | 219.0          |
| India                            | 34.6           | 32.7           | 31.1           | 30.9           | 31.7           | 32.1           | 30.3           | 27.8           | 33.2           | 33.7           |
| Indonesia                        | 76.5           | 75.3           | 75.0           | 74.0           | 71.6           | 71.7           | 66.6           | 58.7           | 58.4           | 56.9           |
| Japan                            | 2.9            | 2.7            | 2.7            | 2.8            | 2.9            | 2.5            | 2.5            | 2.3            | 2.3            | 2.1            |
| Malaysia                         | 69.0           | 69.7           | 68.6           | 67.8           | 74.8           | 70.1           | 72.8           | 67.3           | 71.9           | 76.4           |
| New Zealand                      | 4.8            | 5.2            | 5.0            | 5.1            | 5.0            | 4.4            | 4.6            | 4.5            | 3.9            | 3.7            |
| South Korea                      | 0.5            | 0.3            | 0.2            | 0.2            | 0.3            | 0.3            | 0.2            | 0.2            | 0.1            | 0.0            |
| Thailand                         | 36.3           | 37.1           | 33.0           | 32.3           | 30.2           | 29.2           | 30.8           | 27.7           | 26.0           | 21.5           |
| Other                            | 100.2          | 109.6          | 114.7          | 118.2          | 113.6          | 118.7          | 116.4          | 110.3          | 107.6          | 111.2          |
| <b>OECD</b>                      | <b>1,272.6</b> | <b>1,306.9</b> | <b>1,336.3</b> | <b>1,343.9</b> | <b>1,388.8</b> | <b>1,474.9</b> | <b>1,568.3</b> | <b>1,593.6</b> | <b>1,593.6</b> | <b>1,593.6</b> |
| <b>Non-OECD</b>                  | <b>2,286.3</b> | <b>2,289.8</b> | <b>2,301.2</b> | <b>2,333.2</b> | <b>2,439.1</b> | <b>2,533.4</b> | <b>2,590.7</b> | <b>2,489.6</b> | <b>2,489.6</b> | <b>2,489.6</b> |
| <b>World</b>                     | <b>3,559.0</b> | <b>3,596.6</b> | <b>3,637.5</b> | <b>3,677.1</b> | <b>3,827.9</b> | <b>4,008.3</b> | <b>4,159.0</b> | <b>4,083.2</b> | <b>4,083.2</b> | <b>4,083.2</b> |

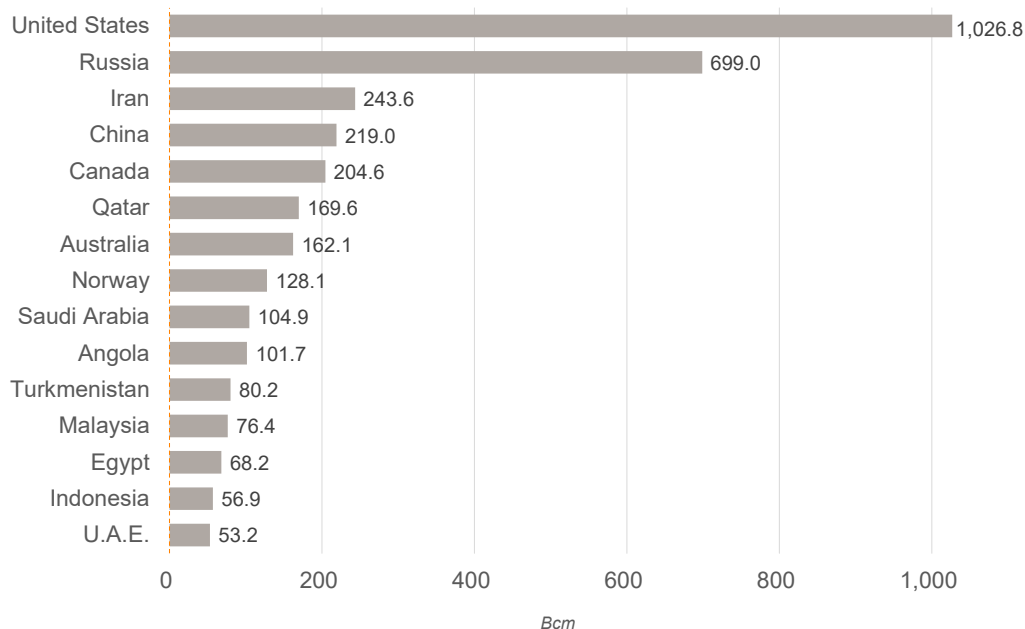
| <b>Natural Gas Demand</b><br>(Bcm) | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>North America</b>               | <b>923.6</b>   | <b>943.6</b>   | <b>962.4</b>   | <b>973.4</b>   | <b>973.3</b>   | <b>1,069.3</b> | <b>1,091.2</b> | <b>1,059.6</b> | <b>1,068.7</b> | <b>1,121.0</b> |
| Canada                             | 111.4          | 118.1          | 117.5          | 116.5          | 122.0          | 134.8          | 132.5          | 128.9          | 134.0          | 140.0          |
| Mexico                             | 72.9           | 75.0           | 77.8           | 80.3           | 81.5           | 78.5           | 74.3           | 69.6           | 70.4           | 69.0           |
| United States                      | 739.4          | 750.5          | 767.1          | 776.7          | 769.8          | 856.0          | 884.4          | 861.1          | 864.2          | 912.0          |
| <b>South and Central America</b>   | <b>161.7</b>   | <b>166.3</b>   | <b>168.0</b>   | <b>161.6</b>   | <b>162.2</b>   | <b>162.8</b>   | <b>157.7</b>   | <b>141.8</b>   | <b>153.7</b>   | <b>144.2</b>   |
| Argentina                          | 49.4           | 49.5           | 50.7           | 51.2           | 51.9           | 52.0           | 51.1           | 47.8           | 48.0           | 49.0           |
| Brazil                             | 39.8           | 43.6           | 43.2           | 36.9           | 39.3           | 36.4           | 36.6           | 34.5           | 42.2           | 32.4           |
| Chile                              | 4.9            | 4.1            | 4.4            | 4.8            | 5.0            | 5.3            | 6.3            | 5.9            | 6.5            | 7.1            |
| Colombia                           | 10.7           | 11.0           | 11.3           | 11.8           | 10.8           | 11.3           | 9.6            | 10.7           | 9.4            | 9.3            |
| Peru                               | 6.5            | 8.1            | 7.9            | 8.3            | 7.3            | 7.5            | 7.9            | 6.6            | 7.5            | 7.0            |
| Trinidad & Tobago                  | 21.0           | 20.6           | 20.3           | 18.5           | 17.9           | 18.5           | 18.9           | 16.3           | 16.8           | 16.5           |
| Venezuela                          | 22.5           | 22.3           | 23.0           | 22.7           | 22.8           | 23.8           | 18.1           | 12.0           | 13.4           | 13.8           |
| Other                              | 6.9            | 7.2            | 7.1            | 7.3            | 7.2            | 8.0            | 9.2            | 8.1            | 9.9            | 9.2            |
| <b>Europe</b>                      | <b>529.2</b>   | <b>483.3</b>   | <b>499.1</b>   | <b>527.7</b>   | <b>554.2</b>   | <b>542.5</b>   | <b>548.3</b>   | <b>533.4</b>   | <b>568.4</b>   | <b>498.2</b>   |
| Belgium                            | 18.2           | 16.0           | 17.2           | 17.4           | 17.8           | 18.4           | 18.5           | 18.4           | 18.5           | 15.8           |
| Czech Republic                     | 8.5            | 7.5            | 7.9            | 8.5            | 8.7            | 8.3            | 8.7            | 8.8            | 9.5            | 7.8            |
| Finland                            | 3.5            | 3.1            | 2.7            | 2.5            | 2.4            | 2.6            | 2.6            | 2.6            | 2.6            | 2.6            |
| France                             | 45.0           | 37.5           | 40.0           | 43.8           | 43.7           | 41.7           | 42.3           | 39.3           | 42.0           | 38.0           |
| Germany                            | 87.6           | 79.2           | 81.4           | 89.2           | 95.0           | 94.7           | 95.6           | 92.9           | 98.3           | 83.2           |
| Italy                              | 70.1           | 61.9           | 67.5           | 70.9           | 75.2           | 72.7           | 74.5           | 71.3           | 76.4           | 68.8           |
| Netherlands                        | 47.0           | 41.5           | 40.7           | 42.3           | 43.7           | 42.8           | 44.8           | 43.5           | 42.1           | 32.9           |
| Norway                             | 5.7            | 6.1            | 6.4            | 6.2            | 6.3            | 6.2            | 6.3            | 5.9            | 5.4            | 5.2            |
| Poland                             | 18.3           | 17.8           | 18.5           | 19.2           | 20.1           | 20.2           | 20.8           | 21.4           | 22.9           | 19.0           |
| Portugal                           | 4.3            | 4.1            | 4.7            | 5.1            | 6.3            | 5.7            | 6.1            | 6.0            | 5.8            | 5.5            |
| Romania                            | 12.6           | 12.0           | 11.3           | 11.3           | 11.8           | 11.8           | 11.0           | 11.4           | 12.0           | 10.2           |
| Spain                              | 29.6           | 27.2           | 28.2           | 28.8           | 31.1           | 31.0           | 35.4           | 31.9           | 33.8           | 32.5           |
| Sweden                             | 1.1            | 0.9            | 1.0            | 0.9            | 1.1            | 1.1            | 1.1            | 1.0            | 0.9            | 0.6            |
| Turkey                             | 45.9           | 48.7           | 48.1           | 46.5           | 54.0           | 49.7           | 45.3           | 48.3           | 59.6           | 51.0           |
| United Kingdom                     | 77.1           | 70.7           | 72.7           | 81.5           | 79.3           | 79.3           | 78.5           | 73.8           | 78.1           | 72.2           |
| EU                                 | 394.0          | 352.0          | 365.8          | 387.1          | 407.7          | 400.5          | 411.5          | 398.8          | 417.7          | 362.7          |
| Other                              | 54.7           | 49.0           | 50.9           | 53.8           | 57.8           | 56.3           | 57.1           | 57.1           | 60.6           | 52.8           |
| <b>Former Soviet Union</b>         | <b>650.5</b>   | <b>625.5</b>   | <b>595.4</b>   | <b>595.3</b>   | <b>617.1</b>   | <b>654.7</b>   | <b>667.2</b>   | <b>637.7</b>   | <b>706.8</b>   | <b>679.0</b>   |
| Azerbaijan                         | 10.7           | 11.5           | 11.4           | 11.2           | 10.8           | 11.0           | 12.5           | 12.6           | 13.1           | 12.9           |
| Kazakhstan                         | 27.0           | 15.2           | 14.8           | 15.1           | 16.4           | 16.5           | 15.5           | 17.3           | 21.2           | 23.3           |
| Russia                             | 465.9          | 464.6          | 445.5          | 444.1          | 463.0          | 498.5          | 510.1          | 481.3          | 539.4          | 524.0          |
| Turkmenistan                       | 21.5           | 20.4           | 21.2           | 21.2           | 21.2           | 21.2           | 22.1           | 23.0           | 24.0           | 23.5           |
| Ukraine                            | 49.5           | 41.0           | 33.1           | 32.2           | 31.0           | 31.1           | 28.4           | 29.5           | 27.6           | 20.7           |
| Uzbekistan                         | 48.3           | 44.7           | 42.5           | 44.8           | 47.5           | 47.6           | 49.3           | 46.2           | 52.0           | 47.1           |
| Other                              | 27.5           | 28.1           | 27.1           | 26.7           | 27.2           | 28.8           | 29.2           | 27.8           | 29.5           | 27.5           |
| <b>Middle East</b>                 | <b>425.0</b>   | <b>452.3</b>   | <b>481.1</b>   | <b>501.5</b>   | <b>514.2</b>   | <b>517.6</b>   | <b>533.0</b>   | <b>536.9</b>   | <b>550.3</b>   | <b>561.3</b>   |
| Iran                               | 152.9          | 172.5          | 184.1          | 196.8          | 209.1          | 211.9          | 209.5          | 212.2          | 219.7          | 222.0          |
| Iraq                               | 7.0            | 6.8            | 7.0            | 7.6            | 11.0           | 13.8           | 17.6           | 18.3           | 19.0           | 20.4           |
| Kuwait                             | 18.5           | 18.3           | 20.9           | 22.1           | 22.4           | 23.7           | 25.5           | 25.7           | 27.2           | 29.1           |
| Qatar                              | 44.5           | 48.5           | 50.2           | 48.9           | 47.2           | 49.7           | 51.3           | 50.5           | 50.7           | 51.1           |
| Saudi Arabia                       | 82.0           | 85.1           | 87.3           | 90.8           | 95.5           | 96.8           | 98.2           | 98.8           | 100.1          | 65.1           |
| United Arab Emirates               | 67.8           | 67.3           | 74.4           | 75.3           | 68.5           | 60.2           | 67.9           | 69.1           | 67.6           | 65.1           |
| Other                              | 52.4           | 53.9           | 57.3           | 60.0           | 60.6           | 61.5           | 62.9           | 62.4           | 65.8           | 108.6          |
| <b>Africa</b>                      | <b>125.1</b>   | <b>126.4</b>   | <b>133.7</b>   | <b>140.2</b>   | <b>151.2</b>   | <b>157.2</b>   | <b>158.3</b>   | <b>157.3</b>   | <b>171.2</b>   | <b>167.9</b>   |
| Algeria                            | 34.6           | 37.8           | 40.6           | 40.7           | 42.1           | 45.7           | 47.1           | 45.5           | 50.5           | 62.4           |
| Angola                             | 0.4            | 0.3            | 0.8            | 0.8            | 0.8            | 1.2            | 1.3            | 1.3            | 1.3            | 1.3            |
| Egypt                              | 46.0           | 42.7           | 45.0           | 50.8           | 60.6           | 61.8           | 59.5           | 60.6           | 63.9           | 62.3           |
| Libya                              | 9.5            | 8.5            | 8.5            | 8.5            | 8.5            | 8.4            | 8.8            | 7.7            | 8.4            | 8.1            |
| Nigeria                            | 15.8           | 18.0           | 18.4           | 18.8           | 17.4           | 18.2           | 18.3           | 18.4           | 21.7           | 21.4           |
| South Africa                       | 5.0            | 4.8            | 5.3            | 5.2            | 5.0            | 5.2            | 5.3            | 5.2            | 5.5            | 5.4            |
| Other                              | 13.8           | 14.3           | 15.1           | 15.5           | 16.6           | 16.8           | 18.0           | 18.6           | 19.9           | 6.9            |
| <b>Asia-Pacific</b>                | <b>675.8</b>   | <b>696.6</b>   | <b>701.5</b>   | <b>733.0</b>   | <b>769.9</b>   | <b>814.9</b>   | <b>837.2</b>   | <b>844.9</b>   | <b>881.1</b>   | <b>869.2</b>   |
| Australia                          | 36.1           | 36.8           | 37.2           | 38.2           | 39.4           | 40.7           | 41.5           | 42.6           | 41.0           | 42.6           |
| China                              | 167.5          | 184.5          | 191.8          | 207.9          | 237.8          | 278.5          | 302.7          | 321.8          | 362.0          | 357.7          |
| India                              | 51.5           | 51.6           | 54.6           | 58.4           | 61.6           | 61.3           | 65.3           | 62.7           | 64.5           | 60.6           |
| Indonesia                          | 42.1           | 43.3           | 43.2           | 42.3           | 40.4           | 42.3           | 42.2           | 39.2           | 38.7           | 36.1           |
| Japan                              | 117.7          | 118.6          | 113.0          | 115.5          | 112.5          | 109.7          | 105.1          | 104.6          | 93.5           | 92.1           |
| Malaysia                           | 45.0           | 45.4           | 44.4           | 42.3           | 46.4           | 45.9           | 46.5           | 43.2           | 44.6           | 47.4           |
| New Zealand                        | 4.8            | 5.4            | 5.1            | 5.1            | 5.2            | 4.6            | 4.7            | 4.5            | 3.8            | 49.6           |
| South Korea                        | 52.6           | 47.4           | 44.3           | 47.0           | 48.8           | 54.1           | 52.2           | 54.4           | 60.1           | 39.7           |
| Thailand                           | 48.4           | 48.5           | 48.2           | 47.3           | 44.7           | 45.9           | 48.3           | 41.8           | 42.1           | 47.1           |
| Other                              | 110.2          | 115.2          | 119.7          | 129.0          | 133.4          | 131.9          | 128.6          | 130.2          | 130.9          | 96.5           |
| <b>OECD</b>                        | <b>1,650.9</b> | <b>1,623.7</b> | <b>1,650.8</b> | <b>1,698.0</b> | <b>1,723.7</b> | <b>1,811.0</b> | <b>1,835.1</b> | <b>1,790.7</b> | <b>1,826.4</b> | <b>1,813.1</b> |
| <b>Non-OECD</b>                    | <b>1,840.1</b> | <b>1,870.2</b> | <b>1,890.4</b> | <b>1,934.6</b> | <b>2,018.4</b> | <b>2,108.0</b> | <b>2,157.6</b> | <b>2,120.9</b> | <b>2,273.7</b> | <b>2,227.7</b> |
| <b>World</b>                       | <b>3,491.0</b> | <b>3,494.0</b> | <b>3,541.3</b> | <b>3,632.6</b> | <b>3,742.1</b> | <b>3,919.1</b> | <b>3,992.7</b> | <b>3,911.6</b> | <b>4,100.2</b> | <b>4,040.8</b> |

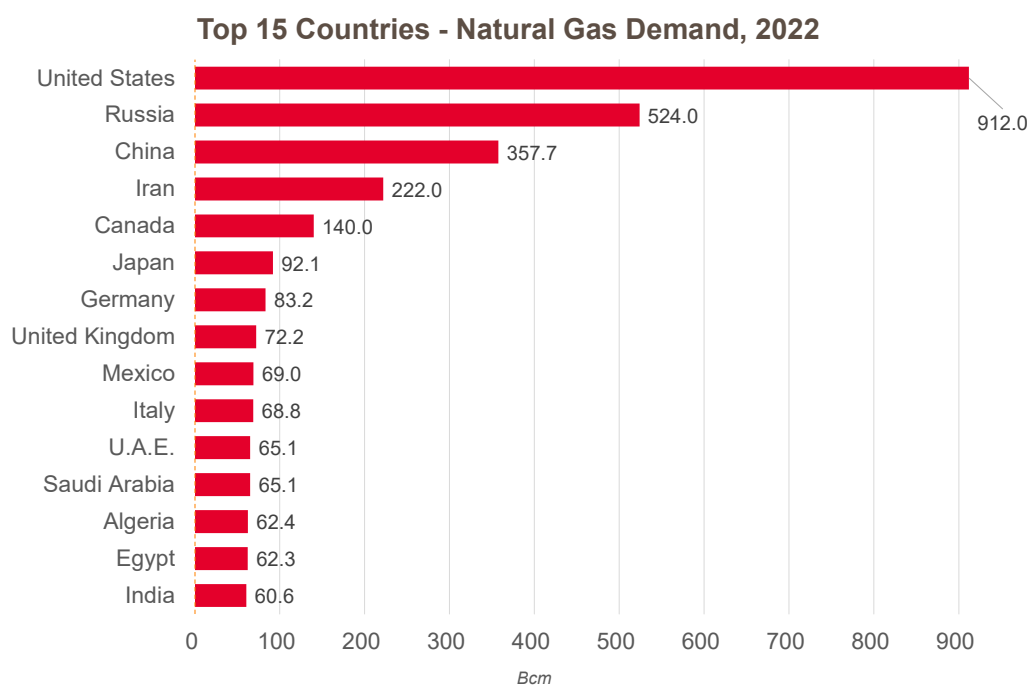
Note: Natural gas primary demand including power generation feedstock.

### Top 15 Countries - Natural Gas Proved Reserves, 2022



### Top 15 Countries - Natural Gas Production, 2022



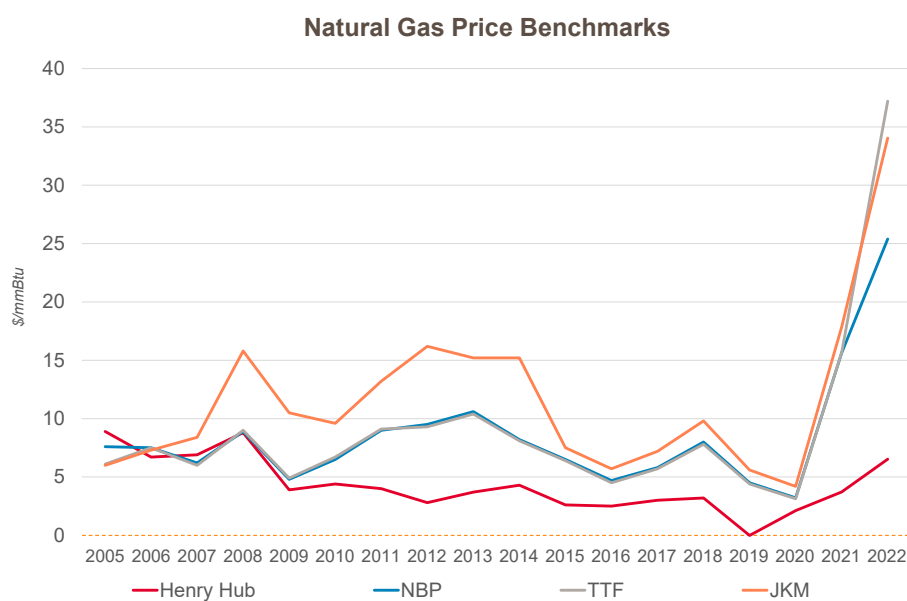
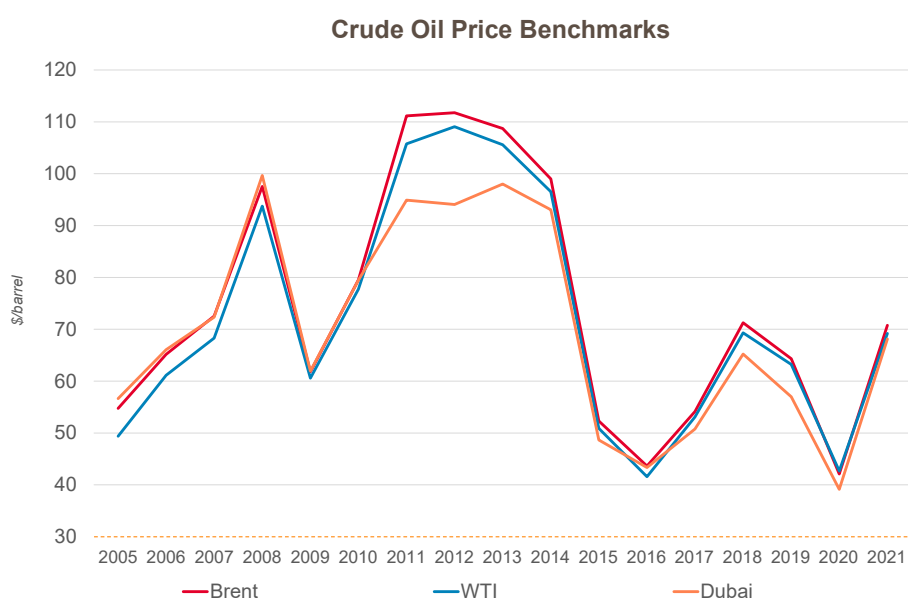




Oil and  
Natural Gas  
prices

| Oil and Natural Gas Prices                  | 2013  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022  |
|---------------------------------------------|-------|------|------|------|------|------|------|------|------|-------|
| <b>Crude oil (\$ per barrel)</b>            |       |      |      |      |      |      |      |      |      |       |
| Brent                                       | 108.7 | 99.0 | 52.3 | 43.7 | 54.2 | 71.3 | 64.3 | 42.1 | 70.8 | 101.1 |
| WTI                                         | 105.6 | 96.5 | 50.9 | 41.6 | 53.1 | 69.3 | 63.2 | 42.7 | 69.2 | 95.5  |
| Dubai                                       | 98.0  | 93.0 | 48.7 | 43.3 | 50.8 | 65.2 | 57.0 | 39.2 | 68.1 | 95.0  |
| <b>Natural gas (dollar per million Btu)</b> |       |      |      |      |      |      |      |      |      |       |
| Henry Hub (HH)                              | 3.7   | 4.3  | 2.6  | 2.5  | 3.0  | 3.2  | 2.6  | 2.1  | 3.7  | 6.5   |
| National Balancing Point (NBP)              | 10.6  | 8.2  | 6.5  | 4.7  | 5.8  | 8.0  | 4.5  | 3.2  | 15.6 | 25.4  |
| Japan Korea Marker (JKM)                    | 15.2  | 15.2 | 7.5  | 5.7  | 7.2  | 9.8  | 5.6  | 4.2  | 17.9 | 34.1  |
| Title Transfer Facility (TTF)               | 10.4  | 8.1  | 6.4  | 4.5  | 5.7  | 7.8  | 4.4  | 3.1  | 15.7 | 37.2  |

Source: Thomson Reuters





Power  
Generation

| <b>Total Power Generation</b><br>(TWh) | 2013          | 2014          | 2015          | 2016          | 2017          | 2018          | 2019          | 2020          | 2021          | 2022          |
|----------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>North America</b>                   | <b>5,261</b>  | <b>5,301</b>  | <b>5,286</b>  | <b>5,309</b>  | <b>5,272</b>  | <b>5,471</b>  | <b>5,389</b>  | <b>5,226</b>  | <b>5,340</b>  | <b>5,501</b>  |
| Canada                                 | 658           | 659           | 658           | 666           | 663           | 658           | 653           | 652           | 644           | 657           |
| Mexico                                 | 297           | 301           | 311           | 321           | 322           | 358           | 344           | 315           | 326           | 334           |
| United States                          | 4,306         | 4,340         | 4,317         | 4,322         | 4,286         | 4,455         | 4,392         | 4,260         | 4,371         | 4,510         |
| <b>South and Central America</b>       | <b>1,236</b>  | <b>1,230</b>  | <b>1,271</b>  | <b>1,273</b>  | <b>1,280</b>  | <b>1,299</b>  | <b>1,301</b>  | <b>1,274</b>  | <b>1,338</b>  | <b>1,360</b>  |
| Argentina                              | 139           | 139           | 145           | 147           | 146           | 147           | 140           | 144           | 151           | 150           |
| Brazil                                 | 571           | 590           | 581           | 579           | 589           | 601           | 626           | 621           | 656           | 668           |
| Chile                                  | 73            | 71            | 75            | 79            | 79            | 82            | 85            | 84            | 88            | 90            |
| Colombia                               | 74            | 71            | 79            | 77            | 79            | 80            | 80            | 80            | 86            | 90            |
| Peru                                   | 44            | 46            | 48            | 52            | 53            | 55            | 57            | 53            | 57            | n.d.          |
| Trinidad & Tobago                      | 10            | 9             | 10            | 9             | 9             | 9             | 9             | 9             | 9             | n.d.          |
| Venezuela                              | 123           | 103           | 123           | 108           | 104           | 100           | 83            | 74            | 76            | 77            |
| Other                                  | 202           | 201           | 209           | 222           | 220           | 224           | 221           | 209           | 214           | n.d.          |
| <b>Europe</b>                          | <b>3,823</b>  | <b>3,753</b>  | <b>3,815</b>  | <b>3,852</b>  | <b>3,900</b>  | <b>3,898</b>  | <b>3,839</b>  | <b>3,729</b>  | <b>3,879</b>  | <b>3,770</b>  |
| Belgium                                | 83            | 73            | 70            | 86            | 87            | 75            | 94            | 89            | 100           | 95            |
| Czech Republic                         | 87            | 86            | 84            | 83            | 87            | 88            | 87            | 82            | 85            | 85            |
| Finland                                | 71            | 68            | 69            | 69            | 68            | 70            | 69            | 69            | 72            | n.d.          |
| France                                 | 582           | 573           | 579           | 564           | 562           | 582           | 571           | 532           | 555           | 473           |
| Germany                                | 639           | 628           | 648           | 650           | 654           | 640           | 607           | 575           | 588           | 578           |
| Italy                                  | 290           | 280           | 283           | 290           | 296           | 290           | 294           | 281           | 289           | 285           |
| Netherlands                            | 102           | 103           | 110           | 115           | 117           | 114           | 121           | 123           | 122           | 122           |
| Norway                                 | 134           | 142           | 145           | 149           | 149           | 147           | 135           | 155           | 158           | 147           |
| Poland                                 | 165           | 159           | 165           | 167           | 170           | 170           | 164           | 158           | 180           | 179           |
| Portugal                               | 52            | 53            | 52            | 60            | 59            | 60            | 53            | 53            | 51            | 49            |
| Romania                                | 59            | 66            | 66            | 65            | 64            | 65            | 60            | 56            | 59            | 56            |
| Spain                                  | 286           | 279           | 281           | 275           | 276           | 274           | 273           | 263           | 274           | 292           |
| Sweden                                 | 153           | 154           | 162           | 156           | 164           | 163           | 168           | 164           | 172           | 173           |
| Turkey                                 | 240           | 252           | 262           | 274           | 297           | 305           | 304           | 307           | 335           | 326           |
| United Kingdom                         | 358           | 338           | 340           | 339           | 338           | 333           | 324           | 311           | 308           | 325           |
| EU                                     | 2,921         | 2,861         | 2,907         | 2,928         | 2,961         | 2,943         | 2,907         | 2,789         | 2,911         | 2,806         |
| Other                                  | 522           | 501           | 499           | 510           | 511           | 521           | 515           | 510           | 530           | n.d.          |
| <b>Former Soviet Union</b>             | <b>1,538</b>  | <b>1,532</b>  | <b>1,517</b>  | <b>1,545</b>  | <b>1,554</b>  | <b>1,593</b>  | <b>1,596</b>  | <b>1,563</b>  | <b>1,658</b>  | <b>1,617</b>  |
| Azerbaijan                             | 23            | 25            | 25            | 25            | 24            | 25            | 26            | 26            | 28            | n.d.          |
| Kazakhstan                             | 103           | 95            | 92            | 95            | 103           | 108           | 107           | 111           | 118           | 116           |
| Russia                                 | 1,059         | 1,064         | 1,068         | 1,091         | 1,094         | 1,115         | 1,121         | 1,090         | 1,158         | 1,165         |
| Ukraine                                | 194           | 183           | 164           | 165           | 156           | 160           | 154           | 148           | 156           | 113           |
| Uzbekistan                             | 55            | 56            | 57            | 59            | 61            | 63            | 64            | 67            | 71            | 70            |
| Other                                  | 104           | 109           | 111           | 111           | 115           | 122           | 124           | 122           | 128           | n.d.          |
| <b>Middle East</b>                     | <b>1,013</b>  | <b>1,082</b>  | <b>1,134</b>  | <b>1,172</b>  | <b>1,225</b>  | <b>1,239</b>  | <b>1,269</b>  | <b>1,277</b>  | <b>1,331</b>  | <b>1,389</b>  |
| Iran                                   | 262           | 275           | 281           | 289           | 308           | 309           | 322           | 325           | 345           | 353           |
| Iraq                                   | 58            | 68            | 69            | 80            | 87            | 83            | 89            | 91            | 93            | 101           |
| Kuwait                                 | 61            | 65            | 68            | 70            | 73            | 74            | 75            | 75            | 81            | 83            |
| Qatar                                  | 35            | 39            | 41            | 42            | 46            | 48            | 50            | 49            | 52            | 50            |
| Saudi Arabia                           | 303           | 337           | 360           | 369           | 379           | 389           | 388           | 395           | 408           | 433           |
| United Arab Emirates                   | 110           | 117           | 127           | 130           | 135           | 136           | 138           | 139           | 151           | 156           |
| Other                                  | 183           | 182           | 187           | 192           | 197           | 200           | 207           | 202           | 202           | 214           |
| <b>Africa</b>                          | <b>742</b>    | <b>768</b>    | <b>792</b>    | <b>803</b>    | <b>827</b>    | <b>849</b>    | <b>864</b>    | <b>854</b>    | <b>895</b>    | <b>894</b>    |
| Algeria                                | 60            | 64            | 69            | 71            | 76            | 77            | 82            | 79            | 85            | 92            |
| Angola                                 | 8             | 9             | 10            | 10            | 11            | 13            | 15            | 16            | 16            | n.d.          |
| Egypt                                  | 168           | 175           | 186           | 189           | 197           | 200           | 197           | 205           | 214           | 218           |
| Libya                                  | 38            | 38            | 38            | 31            | 33            | 34            | 35            | 29            | 32            | n.d.          |
| Nigeria                                | 29            | 32            | 33            | 37            | 32            | 33            | 33            | 32            | 36            | 34            |
| South Africa                           | 256           | 253           | 250           | 253           | 255           | 256           | 253           | 240           | 244           | 235           |
| Other                                  | 183           | 196           | 208           | 211           | 223           | 236           | 250           | 253           | 267           | n.d.          |
| <b>Asia-Pacific</b>                    | <b>9,874</b>  | <b>10,391</b> | <b>10,534</b> | <b>11,088</b> | <b>11,750</b> | <b>12,367</b> | <b>12,799</b> | <b>12,926</b> | <b>13,929</b> | <b>14,499</b> |
| Australia                              | 249           | 247           | 251           | 257           | 258           | 261           | 264           | 265           | 266           | 271           |
| China                                  | 5,447         | 5,817         | 5,854         | 6,200         | 6,715         | 7,143         | 7,504         | 7,765         | 8,519         | 8,833         |
| India                                  | 1,184         | 1,289         | 1,357         | 1,432         | 1,509         | 1,608         | 1,647         | 1,533         | 1,643         | 1,802         |
| Indonesia                              | 216           | 228           | 234           | 248           | 255           | 284           | 295           | 292           | 309           | 334           |
| Japan                                  | 1,104         | 1,076         | 1,059         | 1,071         | 1,081         | 1,068         | 1,041         | 1,018         | 1,056         | 1,063         |
| Malaysia                               | 138           | 147           | 150           | 157           | 164           | 171           | 178           | 183           | 187           | 194           |
| New Zealand                            | 44            | 44            | 45            | 44            | 45            | 45            | 45            | 45            | 45            | 45            |
| South Korea                            | 542           | 551           | 553           | 563           | 567           | 590           | 581           | 579           | 606           | 625           |
| Taiwan                                 | 252           | 260           | 258           | 264           | 270           | 276           | 274           | 280           | 291           | 288           |
| Thailand                               | 170           | 172           | 177           | 188           | 182           | 182           | 191           | 179           | 180           | 186           |
| Other                                  | 527           | 559           | 596           | 665           | 705           | 740           | 778           | 787           | 826           | 860           |
| <b>OECD</b>                            | <b>10,943</b> | <b>10,891</b> | <b>10,929</b> | <b>11,022</b> | <b>11,057</b> | <b>11,261</b> | <b>11,105</b> | <b>10,814</b> | <b>11,131</b> | <b>11,225</b> |
| <b>Non-OECD</b>                        | <b>12,545</b> | <b>13,166</b> | <b>13,419</b> | <b>14,020</b> | <b>14,751</b> | <b>15,455</b> | <b>15,952</b> | <b>16,035</b> | <b>17,239</b> | <b>17,805</b> |
| <b>World</b>                           | <b>23,488</b> | <b>24,057</b> | <b>24,348</b> | <b>25,042</b> | <b>25,808</b> | <b>26,716</b> | <b>27,057</b> | <b>26,849</b> | <b>28,370</b> | <b>29,029</b> |

| Renewables in Power Generation (%) | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         |
|------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>North America</b>               | <b>19.4%</b> | <b>19.8%</b> | <b>20.0%</b> | <b>21.5%</b> | <b>23.4%</b> | <b>22.9%</b> | <b>23.6%</b> | <b>25.8%</b> | <b>26.2%</b> | <b>27.7%</b> |
| Canada                             | 64.1%        | 63.2%        | 64.0%        | 64.9%        | 66.6%        | 66.0%        | 65.9%        | 67.1%        | 67.1%        | 68.8%        |
| Mexico                             | 13.3%        | 17.5%        | 15.3%        | 15.3%        | 16.0%        | 15.2%        | 16.0%        | 20.0%        | 22.7%        | 22.0%        |
| United States                      | 13.0%        | 13.4%        | 13.6%        | 15.3%        | 17.3%        | 17.2%        | 17.9%        | 19.9%        | 20.5%        | 22.2%        |
| <b>South and Central America</b>   | <b>63.0%</b> | <b>61.2%</b> | <b>60.7%</b> | <b>63.5%</b> | <b>65.1%</b> | <b>66.8%</b> | <b>66.8%</b> | <b>69.6%</b> | <b>66.3%</b> | <b>75.1%</b> |
| Argentina                          | 25.6%        | 25.1%        | 23.8%        | 21.8%        | 23.5%        | 24.2%        | 25.3%        | 26.0%        | 24.8%        | 30.9%        |
| Brazil                             | 76.8%        | 73.3%        | 74.1%        | 80.5%        | 79.3%        | 82.4%        | 82.3%        | 84.2%        | 77.4%        | 89.2%        |
| Chile                              | 35.7%        | 42.9%        | 43.6%        | 43.3%        | 43.9%        | 46.2%        | 46.6%        | 48.7%        | 45.5%        | 54.6%        |
| Colombia                           | 69.4%        | 69.4%        | 63.6%        | 65.9%        | 79.3%        | 76.9%        | 70.1%        | 65.8%        | 73.4%        | 75.1%        |
| Peru                               | 53.9%        | 52.4%        | 52.7%        | 50.4%        | 58.6%        | 60.8%        | 60.4%        | 63.8%        | 61.3%        | n.d.         |
| Trinidad & Tobago                  | 0.0%         | 0.1%         | 0.1%         | 0.1%         | 0.1%         | 0.1%         | 0.1%         | 0.1%         | 0.1%         | n.d.         |
| Venezuela                          | 67.9%        | 62.3%        | 61.1%        | 58.4%        | 58.4%        | 58.4%        | 60.2%        | 84.3%        | 82.8%        | 82.2%        |
| <b>Europe</b>                      | <b>30.9%</b> | <b>32.3%</b> | <b>33.6%</b> | <b>34.0%</b> | <b>33.8%</b> | <b>36.3%</b> | <b>38.6%</b> | <b>42.8%</b> | <b>41.3%</b> | <b>43.0%</b> |
| Belgium                            | 15.6%        | 18.5%        | 22.3%        | 18.0%        | 19.6%        | 24.3%        | 21.7%        | 27.4%        | 23.6%        | 26.1%        |
| Czech Republic                     | 11.8%        | 11.9%        | 12.8%        | 12.7%        | 12.4%        | 11.9%        | 12.9%        | 14.3%        | 14.0%        | 14.1%        |
| Finland                            | 36.0%        | 38.6%        | 44.5%        | 44.2%        | 46.6%        | 45.7%        | 46.4%        | 51.7%        | 52.7%        | n.d.         |
| France                             | 18.0%        | 17.4%        | 16.7%        | 18.4%        | 17.4%        | 20.5%        | 20.7%        | 24.4%        | 22.8%        | 25.5%        |
| Germany                            | 24.8%        | 26.8%        | 30.0%        | 30.0%        | 34.0%        | 35.6%        | 40.6%        | 44.8%        | 40.1%        | 44.4%        |
| Italy                              | 39.3%        | 43.7%        | 39.0%        | 37.9%        | 35.7%        | 40.1%        | 40.1%        | 42.4%        | 41.0%        | 36.1%        |
| Netherlands                        | 11.9%        | 11.3%        | 12.4%        | 12.8%        | 14.9%        | 16.5%        | 18.8%        | 26.6%        | 33.1%        | 39.7%        |
| Norway                             | 97.7%        | 97.7%        | 97.7%        | 97.8%        | 97.8%        | 97.8%        | 97.7%        | 98.4%        | 99.1%        | 98.5%        |
| Poland                             | 10.7%        | 12.8%        | 14.1%        | 14.0%        | 14.4%        | 13.0%        | 16.0%        | 18.4%        | 17.4%        | 21.1%        |
| Portugal                           | 59.2%        | 61.4%        | 48.7%        | 55.5%        | 40.9%        | 51.4%        | 54.2%        | 59.6%        | 64.9%        | 61.0%        |
| Romania                            | 34.8%        | 42.0%        | 40.1%        | 42.2%        | 38.3%        | 41.0%        | 42.0%        | 44.6%        | 44.9%        | 42.9%        |
| Spain                              | 40.5%        | 40.9%        | 35.7%        | 39.3%        | 32.9%        | 38.8%        | 37.8%        | 44.5%        | 47.0%        | 43.1%        |
| Sweden                             | 54.1%        | 55.9%        | 63.3%        | 57.2%        | 57.9%        | 55.8%        | 58.8%        | 68.5%        | 67.4%        | 68.5%        |
| Turkey                             | 28.8%        | 20.9%        | 32.0%        | 32.9%        | 29.3%        | 32.1%        | 43.5%        | 41.9%        | 35.4%        | 41.9%        |
| United Kingdom                     | 15.7%        | 19.9%        | 25.6%        | 25.3%        | 30.1%        | 33.8%        | 37.5%        | 43.8%        | 40.8%        | 43.3%        |
| EU                                 | 28.6%        | 30.3%        | 30.4%        | 30.7%        | 30.5%        | 32.8%        | 34.5%        | 39.0%        | 37.8%        | 39.2%        |
| <b>Former Soviet Union</b>         | <b>16.6%</b> | <b>16.0%</b> | <b>15.6%</b> | <b>16.8%</b> | <b>17.1%</b> | <b>17.2%</b> | <b>17.4%</b> | <b>19.1%</b> | <b>18.7%</b> | <b>17.9%</b> |
| Azerbaijan                         | 6.7%         | 5.6%         | 7.0%         | 8.4%         | 7.8%         | 7.8%         | 7.0%         | 5.1%         | 5.5%         | n.d.         |
| Kazakhstan                         | 7.5%         | 8.8%         | 10.4%        | 12.7%        | 11.4%        | 10.5%        | 10.8%        | 11.0%        | 11.0%        | 11.8%        |
| Russia                             | 17.3%        | 16.7%        | 16.0%        | 17.2%        | 17.2%        | 17.4%        | 17.7%        | 20.0%        | 19.2%        | 17.7%        |
| Ukraine                            | 8.1%         | 6.0%         | 5.3%         | 6.6%         | 8.0%         | 9.1%         | 8.6%         | 11.8%        | 14.1%        | 16.6%        |
| Uzbekistan                         | 10.4%        | 10.9%        | 11.9%        | 11.7%        | 13.0%        | 9.4%         | 10.2%        | 7.5%         | 7.8%         | 8.7%         |
| <b>Middle East</b>                 | <b>2.4%</b>  | <b>2.0%</b>  | <b>1.7%</b>  | <b>2.1%</b>  | <b>1.9%</b>  | <b>2.1%</b>  | <b>2.8%</b>  | <b>3.1%</b>  | <b>2.9%</b>  | <b>3.2%</b>  |
| Iran                               | 5.7%         | 5.2%         | 5.1%         | 5.8%         | 5.0%         | 5.4%         | 5.2%         | 5.2%         | 3.3%         | 3.6%         |
| Iraq                               | 8.2%         | 4.4%         | 3.8%         | 4.3%         | 2.6%         | 2.3%         | 5.7%         | 5.4%         | 4.3%         | 4.0%         |
| Kuwait                             | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.1%         | 0.1%         | 0.2%         | 0.3%         | 0.3%         | 0.3%         |
| Qatar                              | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         |
| Saudi Arabia                       | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.1%         | 0.2%         | 0.7%         | 1.1%         |
| United Arab Emirates               | 0.1%         | 0.3%         | 0.2%         | 0.2%         | 0.6%         | 1.0%         | 2.7%         | 3.9%         | 4.4%         | 4.5%         |
| <b>Africa</b>                      | <b>17.3%</b> | <b>18.0%</b> | <b>18.0%</b> | <b>18.1%</b> | <b>18.7%</b> | <b>20.1%</b> | <b>21.4%</b> | <b>22.4%</b> | <b>22.7%</b> | <b>25.0%</b> |
| Algeria                            | 0.6%         | 0.4%         | 0.3%         | 0.5%         | 0.8%         | 1.0%         | 1.0%         | 0.9%         | 0.8%         | 0.7%         |
| Angola                             | 58.0%        | 53.2%        | 53.2%        | 56.1%        | 71.4%        | 76.2%        | 70.3%        | 73.0%        | 72.5%        | n.d.         |
| Egypt                              | 8.8%         | 8.9%         | 8.5%         | 8.3%         | 7.9%         | 8.9%         | 12.0%        | 12.2%        | 11.5%        | 12.6%        |
| Libya                              | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | 0.0%         | n.d.         |
| Nigeria                            | 18.5%        | 16.7%        | 19.5%        | 22.4%        | 24.1%        | 23.1%        | 25.6%        | 23.8%        | 29.0%        | 27.8%        |
| South Africa                       | 1.7%         | 2.5%         | 3.5%         | 4.4%         | 5.7%         | 6.5%         | 7.0%         | 7.3%         | 8.8%         | 10.4%        |
| <b>Asia-Pacific</b>                | <b>17.8%</b> | <b>19.0%</b> | <b>19.8%</b> | <b>20.9%</b> | <b>21.6%</b> | <b>22.5%</b> | <b>23.6%</b> | <b>25.1%</b> | <b>25.9%</b> | <b>27.1%</b> |
| Australia                          | 13.2%        | 14.6%        | 13.3%        | 14.6%        | 15.7%        | 17.1%        | 19.7%        | 22.6%        | 26.7%        | 30.7%        |
| China                              | 20.5%        | 22.4%        | 24.1%        | 25.0%        | 25.2%        | 26.1%        | 27.3%        | 28.5%        | 29.1%        | 30.6%        |
| India                              | 17.6%        | 16.5%        | 15.3%        | 16.1%        | 16.9%        | 17.9%        | 19.8%        | 21.1%        | 21.4%        | 21.9%        |
| Indonesia                          | 12.3%        | 11.5%        | 10.7%        | 12.6%        | 12.7%        | 17.4%        | 16.8%        | 18.8%        | 18.3%        | 18.7%        |
| Japan                              | 10.9%        | 12.4%        | 14.2%        | 14.7%        | 16.2%        | 17.1%        | 18.6%        | 20.3%        | 21.0%        | 21.6%        |
| Malaysia                           | 8.6%         | 9.7%         | 10.0%        | 13.5%        | 17.0%        | 16.6%        | 16.1%        | 16.2%        | 17.6%        | 16.1%        |
| New Zealand                        | 74.7%        | 79.5%        | 80.5%        | 84.6%        | 81.5%        | 83.7%        | 82.0%        | 80.4%        | 81.4%        | 86.6%        |
| South Korea                        | 2.4%         | 2.5%         | 2.6%         | 3.5%         | 4.0%         | 4.6%         | 5.3%         | 6.4%         | 7.0%         | 8.1%         |
| Taiwan                             | 4.9%         | 4.4%         | 4.6%         | 5.4%         | 5.2%         | 5.2%         | 6.1%         | 6.0%         | 6.5%         | 8.8%         |
| Thailand                           | 8.1%         | 8.2%         | 7.9%         | 13.5%        | 14.2%        | 16.6%        | 17.7%        | 16.5%        | 17.3%        | 17.9%        |
| <b>OECD</b>                        | <b>21.5%</b> | <b>22.3%</b> | <b>23.2%</b> | <b>24.1%</b> | <b>25.3%</b> | <b>25.9%</b> | <b>27.3%</b> | <b>30.1%</b> | <b>29.9%</b> | <b>31.4%</b> |
| <b>Non-OECD</b>                    | <b>22.2%</b> | <b>22.4%</b> | <b>22.8%</b> | <b>23.9%</b> | <b>24.2%</b> | <b>25.1%</b> | <b>25.7%</b> | <b>27.1%</b> | <b>27.4%</b> | <b>28.9%</b> |
| <b>World</b>                       | <b>21.9%</b> | <b>22.4%</b> | <b>23.0%</b> | <b>24.0%</b> | <b>24.7%</b> | <b>25.4%</b> | <b>26.4%</b> | <b>28.3%</b> | <b>28.4%</b> | <b>29.8%</b> |



## CO<sub>2</sub> Emissions from Fossil Fuels

| <b>Total CO<sub>2</sub> Emissions</b><br>(Million tonnes of carbon dioxide) | 2013          | 2014          | 2015          | 2016          | 2017          | 2018          | 2019          | 2020          | 2021          | 2022          |
|-----------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>North America</b>                                                        | <b>6,461</b>  | <b>6,498</b>  | <b>6,368</b>  | <b>6,267</b>  | <b>6,211</b>  | <b>6,319</b>  | <b>6,220</b>  | <b>5,548</b>  | <b>5,929</b>  | <b>6,053</b>  |
| Canada                                                                      | 624           | 623           | 622           | 618           | 627           | 640           | 624           | 576           | 599           | 617           |
| Mexico                                                                      | 490           | 479           | 493           | 503           | 495           | 466           | 473           | 394           | 433           | 479           |
| United States                                                               | 5,347         | 5,396         | 5,252         | 5,146         | 5,089         | 5,213         | 5,123         | 4,578         | 4,897         | 4,958         |
| <b>South and Central America</b>                                            | <b>1,377</b>  | <b>1,404</b>  | <b>1,388</b>  | <b>1,341</b>  | <b>1,314</b>  | <b>1,282</b>  | <b>1,257</b>  | <b>1,125</b>  | <b>1,239</b>  | <b>1,242</b>  |
| Argentina                                                                   | 189           | 185           | 192           | 189           | 186           | 183           | 204           | 177           | 177           | 177           |
| Brazil                                                                      | 533           | 562           | 528           | 488           | 497           | 471           | 473           | 448           | 507           | 475           |
| Chile                                                                       | 85            | 78            | 83            | 90            | 90            | 91            | 97            | 89            | 95            | 91            |
| Colombia                                                                    | 80            | 82            | 84            | 88            | 80            | 83            | 84            | 83            | 86            | 87            |
| Peru                                                                        | 50            | 53            | 54            | 57            | 54            | 55            | 57            | 47            | 50            | n.d.          |
| Trinidad & Tobago                                                           | 44            | 43            | 43            | 39            | 38            | 38            | 39            | 34            | 34            | n.d.          |
| Venezuela                                                                   | 196           | 195           | 183           | 169           | 154           | 139           | 108           | 67            | 74            | 86            |
| Other                                                                       | 202           | 205           | 221           | 221           | 215           | 222           | 226           | 197           | 217           | n.d.          |
| <b>Europe</b>                                                               | <b>4,256</b>  | <b>4,086</b>  | <b>4,140</b>  | <b>4,154</b>  | <b>4,217</b>  | <b>4,133</b>  | <b>3,952</b>  | <b>3,641</b>  | <b>3,907</b>  | <b>3,828</b>  |
| Belgium                                                                     | 112           | 105           | 110           | 109           | 108           | 109           | 108           | 100           | 105           | 99            |
| Czech Republic                                                              | 111           | 109           | 109           | 110           | 112           | 111           | 106           | 97            | 102           | 105           |
| Finland                                                                     | 55            | 51            | 47            | 51            | 48            | 49            | 46            | 41            | 41            | n.d.          |
| France                                                                      | 372           | 340           | 344           | 345           | 351           | 340           | 332           | 295           | 326           | 312           |
| Germany                                                                     | 830           | 793           | 792           | 801           | 784           | 755           | 707           | 652           | 693           | 677           |
| Italy                                                                       | 365           | 348           | 355           | 351           | 347           | 342           | 334           | 297           | 330           | 329           |
| Netherlands                                                                 | 184           | 177           | 183           | 184           | 183           | 177           | 171           | 155           | 163           | 146           |
| Norway                                                                      | 49            | 49            | 51            | 49            | 49            | 49            | 47            | 45            | 44            | 43            |
| Poland                                                                      | 329           | 317           | 322           | 332           | 346           | 345           | 327           | 311           | 342           | 326           |
| Portugal                                                                    | 51            | 50            | 54            | 53            | 58            | 53            | 49            | 43            | 41            | 44            |
| Romania                                                                     | 78            | 78            | 78            | 76            | 79            | 80            | 78            | 74            | 81            | 76            |
| Spain                                                                       | 262           | 262           | 277           | 269           | 286           | 281           | 261           | 220           | 237           | 250           |
| Sweden                                                                      | 46            | 45            | 45            | 45            | 45            | 42            | 41            | 39            | 42            | 42            |
| Turkey                                                                      | 343           | 366           | 379           | 402           | 445           | 442           | 425           | 433           | 470           | 457           |
| United Kingdom                                                              | 477           | 436           | 423           | 401           | 386           | 379           | 363           | 324           | 349           | 340           |
| EU                                                                          | 3,242         | 3,107         | 3,152         | 3,162         | 3,197         | 3,125         | 2,979         | 2,704         | 2,908         | 2,855         |
| Other                                                                       | 591           | 561           | 571           | 576           | 590           | 578           | 557           | 515           | 540           | n.d.          |
| <b>Former Soviet Union</b>                                                  | <b>2,699</b>  | <b>2,578</b>  | <b>2,503</b>  | <b>2,506</b>  | <b>2,557</b>  | <b>2,668</b>  | <b>2,702</b>  | <b>2,606</b>  | <b>2,838</b>  | <b>2,770</b>  |
| Azerbaijan                                                                  | 31            | 33            | 33            | 33            | 33            | 34            | 37            | 36            | 37            | n.d.          |
| Kazakhstan                                                                  | 278           | 232           | 204           | 219           | 232           | 234           | 221           | 230           | 243           | 251           |
| Russia                                                                      | 1,802         | 1,779         | 1,779         | 1,759         | 1,811         | 1,897         | 1,949         | 1,860         | 2,049         | 2,056         |
| Ukraine                                                                     | 314           | 266           | 224           | 225           | 204           | 216           | 203           | 195           | 201           | 140           |
| Uzbekistan                                                                  | 113           | 106           | 101           | 107           | 112           | 115           | 119           | 117           | 127           | 119           |
| Other                                                                       | 161           | 164           | 163           | 164           | 166           | 173           | 173           | 169           | 179           | n.d.          |
| <b>Middle East</b>                                                          | <b>1,944</b>  | <b>2,008</b>  | <b>2,030</b>  | <b>2,047</b>  | <b>2,075</b>  | <b>2,056</b>  | <b>2,079</b>  | <b>2,008</b>  | <b>2,085</b>  | <b>2,199</b>  |
| Iran                                                                        | 639           | 662           | 650           | 655           | 683           | 696           | 686           | 672           | 698           | 709           |
| Iraq                                                                        | 138           | 131           | 129           | 138           | 152           | 161           | 175           | 155           | 177           | 196           |
| Kuwait                                                                      | 88            | 87            | 91            | 93            | 92            | 94            | 95            | 93            | 107           | 116           |
| Qatar                                                                       | 89            | 96            | 99            | 101           | 102           | 101           | 104           | 103           | 104           | 106           |
| Saudi Arabia                                                                | 527           | 564           | 587           | 586           | 577           | 551           | 553           | 538           | 552           | 609           |
| United Arab Emirates                                                        | 189           | 191           | 201           | 207           | 198           | 181           | 194           | 197           | 193           | 196           |
| Other                                                                       | 275           | 277           | 272           | 267           | 270           | 272           | 271           | 250           | 253           | 266           |
| <b>Africa</b>                                                               | <b>1,294</b>  | <b>1,341</b>  | <b>1,333</b>  | <b>1,348</b>  | <b>1,387</b>  | <b>1,418</b>  | <b>1,438</b>  | <b>1,337</b>  | <b>1,406</b>  | <b>1,432</b>  |
| Algeria                                                                     | 133           | 144           | 152           | 149           | 150           | 161           | 166           | 156           | 170           | 173           |
| Angola                                                                      | 42            | 44            | 44            | 42            | 34            | 31            | 34            | 28            | 29            | n.d.          |
| Egypt                                                                       | 225           | 226           | 231           | 242           | 260           | 259           | 238           | 233           | 255           | 254           |
| Libya                                                                       | 61            | 65            | 58            | 53            | 59            | 61            | 61            | 53            | 56            | n.a.          |
| Nigeria                                                                     | 114           | 120           | 113           | 115           | 115           | 120           | 126           | 117           | 130           | 132           |
| South Africa                                                                | 444           | 454           | 430           | 431           | 442           | 445           | 453           | 403           | 397           | 378           |
| Other                                                                       | 275           | 289           | 306           | 317           | 328           | 341           | 360           | 347           | 371           | n.d.          |
| <b>Asia-Pacific</b>                                                         | <b>17,671</b> | <b>17,964</b> | <b>17,875</b> | <b>18,027</b> | <b>18,417</b> | <b>18,881</b> | <b>19,036</b> | <b>18,767</b> | <b>19,710</b> | <b>20,558</b> |
| Australia                                                                   | 417           | 407           | 414           | 425           | 426           | 426           | 419           | 400           | 389           | 390           |
| China                                                                       | 11,168        | 11,254        | 11,093        | 11,119        | 11,234        | 11,487        | 11,630        | 11,796        | 12,439        | 12,568        |
| India                                                                       | 2,061         | 2,235         | 2,256         | 2,301         | 2,433         | 2,570         | 2,528         | 2,307         | 2,545         | 2,768         |
| Indonesia                                                                   | 483           | 519           | 526           | 518           | 552           | 607           | 654           | 609           | 642           | 823           |
| Japan                                                                       | 1,322         | 1,272         | 1,232         | 1,218         | 1,202         | 1,164         | 1,124         | 1,065         | 1,089         | 1,087         |
| Malaysia                                                                    | 237           | 245           | 245           | 243           | 257           | 260           | 264           | 261           | 268           | 281           |
| New Zealand                                                                 | 35            | 36            | 36            | 35            | 36            | 36            | 37            | 34            | 34            | 33            |
| South Korea                                                                 | 679           | 676           | 691           | 707           | 717           | 718           | 701           | 655           | 661           | 642           |
| Taiwan                                                                      | 273           | 279           | 278           | 282           | 290           | 287           | 275           | 274           | 271           | 281           |
| Thailand                                                                    | 281           | 277           | 283           | 279           | 278           | 276           | 286           | 275           | 263           | 267           |
| Other                                                                       | 714           | 764           | 821           | 899           | 989           | 1,050         | 1,117         | 1,092         | 1,107         | 1,418         |
| <b>OECD</b>                                                                 | <b>13,056</b> | <b>12,864</b> | <b>12,765</b> | <b>12,696</b> | <b>12,693</b> | <b>12,678</b> | <b>12,347</b> | <b>11,241</b> | <b>11,897</b> | <b>11,926</b> |
| <b>Non-OECD</b>                                                             | <b>22,645</b> | <b>23,016</b> | <b>22,871</b> | <b>22,994</b> | <b>23,484</b> | <b>24,078</b> | <b>24,338</b> | <b>23,791</b> | <b>25,218</b> | <b>26,155</b> |
| <b>World</b>                                                                | <b>35,701</b> | <b>35,880</b> | <b>35,636</b> | <b>35,690</b> | <b>36,177</b> | <b>36,756</b> | <b>36,684</b> | <b>35,031</b> | <b>37,115</b> | <b>38,081</b> |

Note: Total CO<sub>2</sub> emissions includes emissions from fuel combustion, emissions from industrial process, fugitive emissions from flared gas and emissions from wastes

| <b>Oil CO<sub>2</sub> Emissions</b><br>(Million tonnes of carbon dioxide) | 2013          | 2014          | 2015          | 2016          | 2017          | 2018          | 2019          | 2020         | 2021          | 2022          |
|---------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|
| <b>North America</b>                                                      | <b>2,542</b>  | <b>2,544</b>  | <b>2,589</b>  | <b>2,601</b>  | <b>2,594</b>  | <b>2,630</b>  | <b>2,610</b>  | <b>2,247</b> | <b>2,470</b>  | <b>2,548</b>  |
| Canada                                                                    | 277           | 272           | 277           | 275           | 281           | 287           | 278           | 242          | 255           | 270           |
| Mexico                                                                    | 259           | 248           | 245           | 254           | 247           | 227           | 243           | 191          | 231           | 267           |
| United States                                                             | 2,005         | 2,024         | 2,067         | 2,072         | 2,066         | 2,115         | 2,089         | 1,814        | 1,984         | 2,011         |
| <b>South and Central America</b>                                          | <b>795</b>    | <b>803</b>    | <b>780</b>    | <b>759</b>    | <b>742</b>    | <b>720</b>    | <b>711</b>    | <b>630</b>   | <b>701</b>    | <b>748</b>    |
| Argentina                                                                 | 79            | 75            | 79            | 78            | 73            | 69            | 67            | 60           | 75            | 81            |
| Brazil                                                                    | 326           | 339           | 316           | 299           | 302           | 282           | 286           | 273          | 298           | 305           |
| Chile                                                                     | 45            | 44            | 45            | 48            | 48            | 49            | 49            | 45           | 48            | 51            |
| Colombia                                                                  | 36            | 37            | 38            | 41            | 38            | 39            | 40            | 36           | 45            | 48            |
| Peru                                                                      | 27            | 27            | 28            | 30            | 31            | 31            | 32            | 26           | 28            | n.d.          |
| Trinidad & Tobago                                                         | 4             | 4             | 4             | 4             | 4             | 3             | 3             | 3            | 3             | n.d.          |
| Venezuela                                                                 | 112           | 111           | 95            | 83            | 77            | 70            | 55            | 33           | 36            | 45            |
| Other                                                                     | 165           | 167           | 175           | 176           | 170           | 177           | 179           | 155          | 169           | n.d.          |
| <b>Europe</b>                                                             | <b>1,522</b>  | <b>1,505</b>  | <b>1,540</b>  | <b>1,564</b>  | <b>1,588</b>  | <b>1,565</b>  | <b>1,556</b>  | <b>1,404</b> | <b>1,489</b>  | <b>1,525</b>  |
| Belgium                                                                   | 47            | 45            | 48            | 47            | 46            | 46            | 44            | 40           | 42            | 41            |
| Czech Republic                                                            | 20            | 21            | 22            | 21            | 23            | 23            | 23            | 21           | 23            | 24            |
| Finland                                                                   | 23            | 21            | 21            | 22            | 21            | 21            | 21            | 20           | 19            | n.d.          |
| France                                                                    | 197           | 191           | 193           | 190           | 190           | 182           | 180           | 159          | 172           | 172           |
| Germany                                                                   | 263           | 256           | 254           | 256           | 255           | 244           | 250           | 235          | 231           | 233           |
| Italy                                                                     | 152           | 152           | 154           | 148           | 143           | 145           | 142           | 119          | 140           | 142           |
| Netherlands                                                               | 60            | 58            | 57            | 59            | 59            | 58            | 56            | 52           | 53            | 53            |
| Norway                                                                    | 24            | 24            | 24            | 24            | 23            | 24            | 22            | 22           | 21            | 21            |
| Poland                                                                    | 59            | 58            | 62            | 69            | 78            | 80            | 82            | 79           | 84            | 85            |
| Portugal                                                                  | 25            | 25            | 25            | 25            | 26            | 25            | 26            | 23           | 23            | 27            |
| Romania                                                                   | 23            | 24            | 24            | 25            | 27            | 28            | 28            | 27           | 30            | 31            |
| Spain                                                                     | 134           | 133           | 140           | 144           | 145           | 146           | 144           | 121          | 133           | 142           |
| Sweden                                                                    | 28            | 28            | 27            | 27            | 26            | 24            | 23            | 22           | 25            | 25            |
| Turkey                                                                    | 82            | 87            | 97            | 106           | 123           | 118           | 116           | 115          | 121           | 123           |
| United Kingdom                                                            | 155           | 155           | 160           | 164           | 165           | 162           | 157           | 131          | 145           | 150           |
| EU                                                                        | 1,206         | 1,188         | 1,208         | 1,218         | 1,225         | 1,210         | 1,208         | 1,090        | 1,151         | 1,179         |
| Other                                                                     | 229           | 227           | 233           | 237           | 240           | 240           | 240           | 218          | 228           | n.d.          |
| <b>Former Soviet Union</b>                                                | <b>477</b>    | <b>482</b>    | <b>481</b>    | <b>472</b>    | <b>484</b>    | <b>474</b>    | <b>481</b>    | <b>465</b>   | <b>495</b>    | <b>494</b>    |
| Azerbaijan                                                                | 10            | 10            | 11            | 11            | 11            | 11            | 12            | 10           | 11            | n.d.          |
| Kazakhstan                                                                | 47            | 33            | 42            | 47            | 44            | 42            | 37            | 42           | 43            | 46            |
| Russia                                                                    | 327           | 348           | 341           | 322           | 340           | 329           | 340           | 324          | 347           | 357           |
| Ukraine                                                                   | 36            | 31            | 29            | 31            | 29            | 29            | 30            | 26           | 28            | 24            |
| Uzbekistan                                                                | 9             | 9             | 9             | 10            | 10            | 11            | 11            | 12           | 12            | 13            |
| Other                                                                     | 49            | 50            | 49            | 51            | 50            | 53            | 52            | 52           | 54            | n.d.          |
| <b>Middle East</b>                                                        | <b>939</b>    | <b>955</b>    | <b>924</b>    | <b>900</b>    | <b>899</b>    | <b>882</b>    | <b>873</b>    | <b>804</b>   | <b>835</b>    | <b>917</b>    |
| Iran                                                                      | 259           | 246           | 217           | 196           | 197           | 204           | 200           | 183          | 192           | 197           |
| Iraq                                                                      | 99            | 93            | 87            | 92            | 99            | 101           | 105           | 88           | 104           | 117           |
| Kuwait                                                                    | 50            | 48            | 48            | 47            | 46            | 46            | 43            | 42           | 52            | 57            |
| Qatar                                                                     | 15            | 18            | 17            | 18            | 18            | 18            | 17            | 17           | 18            | 20            |
| Saudi Arabia                                                              | 346           | 378           | 398           | 389           | 374           | 347           | 347           | 331          | 341           | 387           |
| United Arab Emirates                                                      | 44            | 46            | 42            | 46            | 49            | 48            | 46            | 45           | 44            | 51            |
| Other                                                                     | 126           | 126           | 115           | 111           | 116           | 117           | 114           | 99           | 83            | 88            |
| <b>Africa</b>                                                             | <b>505</b>    | <b>525</b>    | <b>532</b>    | <b>526</b>    | <b>526</b>    | <b>525</b>    | <b>531</b>    | <b>488</b>   | <b>524</b>    | <b>577</b>    |
| Algeria                                                                   | 52            | 55            | 58            | 56            | 55            | 56            | 58            | 52           | 54            | 59            |
| Angola                                                                    | 19            | 20            | 20            | 18            | 15            | 15            | 17            | 13           | 13            | n.d.          |
| Egypt                                                                     | 110           | 118           | 121           | 117           | 106           | 95            | 85            | 81           | 90            | 93            |
| Libya                                                                     | 36            | 37            | 31            | 28            | 28            | 29            | 28            | 25           | 25            | n.d.          |
| Nigeria                                                                   | 55            | 60            | 54            | 57            | 57            | 60            | 65            | 57           | 61            | 63            |
| South Africa                                                              | 56            | 52            | 57            | 52            | 58            | 57            | 57            | 52           | 55            | 56            |
| Other                                                                     | 178           | 183           | 191           | 200           | 207           | 212           | 221           | 210          | 225           | n.d.          |
| <b>Asia-Pacific</b>                                                       | <b>3,262</b>  | <b>3,301</b>  | <b>3,433</b>  | <b>3,477</b>  | <b>3,574</b>  | <b>3,681</b>  | <b>3,708</b>  | <b>3,552</b> | <b>3,703</b>  | <b>3,832</b>  |
| Australia                                                                 | 137           | 135           | 135           | 135           | 137           | 141           | 141           | 134          | 130           | 132           |
| China                                                                     | 1,204         | 1,244         | 1,323         | 1,339         | 1,388         | 1,507         | 1,544         | 1,561        | 1,605         | 1,599         |
| India                                                                     | 463           | 488           | 534           | 566           | 596           | 601           | 603           | 542          | 567           | 641           |
| Indonesia                                                                 | 231           | 234           | 225           | 204           | 218           | 238           | 227           | 199          | 219           | 241           |
| Japan                                                                     | 505           | 463           | 444           | 426           | 414           | 396           | 380           | 355          | 378           | 378           |
| Malaysia                                                                  | 84            | 88            | 82            | 80            | 81            | 80            | 85            | 79           | 87            | 94            |
| New Zealand                                                               | 18            | 18            | 19            | 19            | 20            | 20            | 21            | 18           | 19            | 20            |
| South Korea                                                               | 182           | 179           | 191           | 198           | 194           | 189           | 190           | 181          | 185           | 182           |
| Taiwan                                                                    | 75            | 77            | 80            | 80            | 79            | 76            | 72            | 69           | 57            | 74            |
| Thailand                                                                  | 106           | 106           | 109           | 112           | 114           | 112           | 115           | 113          | 108           | 122           |
| Other                                                                     | 256           | 269           | 293           | 317           | 333           | 323           | 330           | 300          | 348           | 348           |
| <b>OECD</b>                                                               | <b>4,893</b>  | <b>4,825</b>  | <b>4,900</b>  | <b>4,926</b>  | <b>4,927</b>  | <b>4,920</b>  | <b>4,875</b>  | <b>4,317</b> | <b>4,648</b>  | <b>4,764</b>  |
| <b>Non-OECD</b>                                                           | <b>5,149</b>  | <b>5,290</b>  | <b>5,381</b>  | <b>5,373</b>  | <b>5,480</b>  | <b>5,557</b>  | <b>5,593</b>  | <b>5,273</b> | <b>5,569</b>  | <b>5,876</b>  |
| <b>World</b>                                                              | <b>10,041</b> | <b>10,115</b> | <b>10,280</b> | <b>10,299</b> | <b>10,407</b> | <b>10,476</b> | <b>10,469</b> | <b>9,590</b> | <b>10,217</b> | <b>10,640</b> |

| <b>Natural Gas CO<sub>2</sub> Emissions</b><br>(Million tonnes of carbon dioxide) | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         |
|-----------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>North America</b>                                                              | <b>1,780</b> | <b>1,816</b> | <b>1,863</b> | <b>1,884</b> | <b>1,867</b> | <b>2,006</b> | <b>2,098</b> | <b>2,047</b> | <b>2,054</b> | <b>2,156</b> |
| Canada                                                                            | 214          | 225          | 226          | 225          | 229          | 247          | 243          | 240          | 247          | 259          |
| Mexico                                                                            | 147          | 145          | 151          | 156          | 159          | 156          | 148          | 137          | 139          | 136          |
| United States                                                                     | 1,418        | 1,446        | 1,486        | 1,504        | 1,480        | 1,603        | 1,706        | 1,671        | 1,669        | 1,761        |
| <b>South and Central America</b>                                                  | <b>306</b>   | <b>316</b>   | <b>320</b>   | <b>308</b>   | <b>309</b>   | <b>304</b>   | <b>291</b>   | <b>261</b>   | <b>282</b>   | <b>263</b>   |
| Argentina                                                                         | 95           | 95           | 97           | 97           | 98           | 98           | 94           | 87           | 87           | 89           |
| Brazil                                                                            | 78           | 85           | 84           | 72           | 77           | 73           | 74           | 69           | 85           | 65           |
| Chile                                                                             | 9            | 8            | 9            | 9            | 10           | 10           | 12           | 11           | 12           | 13           |
| Colombia                                                                          | 19           | 19           | 20           | 21           | 19           | 20           | 16           | 18           | 16           | 16           |
| Peru                                                                              | 15           | 18           | 18           | 19           | 17           | 17           | 18           | 15           | 17           | n.d.         |
| Trinidad & Tobago                                                                 | 32           | 32           | 31           | 28           | 27           | 28           | 29           | 25           | 26           | n.d.         |
| Venezuela                                                                         | 46           | 46           | 47           | 46           | 47           | 43           | 33           | 22           | 24           | 25           |
| Other                                                                             | 13           | 14           | 14           | 15           | 15           | 15           | 16           | 14           | 15           | n.d.         |
| <b>Europe</b>                                                                     | <b>1,006</b> | <b>916</b>   | <b>952</b>   | <b>1,009</b> | <b>1,054</b> | <b>1,030</b> | <b>1,042</b> | <b>1,018</b> | <b>1,087</b> | <b>955</b>   |
| Belgium                                                                           | 33           | 29           | 32           | 33           | 33           | 34           | 35           | 34           | 35           | 30           |
| Czech Republic                                                                    | 17           | 15           | 16           | 17           | 17           | 16           | 17           | 17           | 18           | 15           |
| Finland                                                                           | 7            | 6            | 5            | 5            | 5            | 5            | 5            | 5            | 5            | n.d.         |
| France                                                                            | 91           | 76           | 81           | 89           | 89           | 85           | 86           | 80           | 86           | 78           |
| Germany                                                                           | 168          | 151          | 156          | 171          | 177          | 174          | 176          | 176          | 187          | 158          |
| Italy                                                                             | 134          | 118          | 129          | 135          | 143          | 139          | 142          | 136          | 146          | 131          |
| Netherlands                                                                       | 77           | 68           | 67           | 69           | 71           | 70           | 73           | 71           | 69           | 54           |
| Norway                                                                            | 12           | 13           | 14           | 13           | 14           | 13           | 13           | 12           | 11           | 11           |
| Poland                                                                            | 31           | 30           | 31           | 33           | 34           | 35           | 36           | 37           | 40           | 33           |
| Portugal                                                                          | 9            | 8            | 10           | 10           | 13           | 12           | 12           | 12           | 12           | 11           |
| Romania                                                                           | 23           | 21           | 21           | 21           | 22           | 22           | 21           | 21           | 23           | 19           |
| Spain                                                                             | 60           | 55           | 57           | 58           | 63           | 63           | 72           | 65           | 68           | 66           |
| Sweden                                                                            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 2            | 1            |
| Turkey                                                                            | 89           | 94           | 93           | 89           | 104          | 95           | 87           | 93           | 115          | 98           |
| United Kingdom                                                                    | 152          | 137          | 144          | 162          | 157          | 158          | 156          | 147          | 156          | 144          |
| EU                                                                                | 741          | 661          | 690          | 733          | 766          | 751          | 773          | 753          | 791          | 689          |
| Other                                                                             | 104          | 93           | 97           | 102          | 109          | 107          | 108          | 108          | 115          | n.d.         |
| <b>Former Soviet Union</b>                                                        | <b>1,209</b> | <b>1,153</b> | <b>1,092</b> | <b>1,114</b> | <b>1,152</b> | <b>1,200</b> | <b>1,207</b> | <b>1,145</b> | <b>1,268</b> | <b>1,219</b> |
| Azerbaijan                                                                        | 19           | 21           | 20           | 20           | 20           | 21           | 23           | 24           | 25           | n.d.         |
| Kazakhstan                                                                        | 58           | 28           | 27           | 29           | 33           | 33           | 31           | 35           | 42           | 47           |
| Russia                                                                            | 861          | 857          | 817          | 834          | 865          | 907          | 914          | 857          | 960          | 932          |
| Ukraine                                                                           | 89           | 73           | 58           | 57           | 56           | 57           | 52           | 53           | 49           | 37           |
| Uzbekistan                                                                        | 89           | 83           | 79           | 83           | 88           | 89           | 92           | 86           | 97           | 88           |
| Other                                                                             | 92           | 91           | 91           | 90           | 91           | 94           | 94           | 91           | 96           | n.d.         |
| <b>Middle East</b>                                                                | <b>785</b>   | <b>834</b>   | <b>890</b>   | <b>932</b>   | <b>960</b>   | <b>961</b>   | <b>991</b>   | <b>999</b>   | <b>1,024</b> | <b>1,044</b> |
| Iran                                                                              | 297          | 335          | 358          | 383          | 405          | 411          | 406          | 411          | 426          | 430          |
| Iraq                                                                              | 13           | 13           | 13           | 14           | 21           | 26           | 34           | 35           | 36           | 39           |
| Kuwait                                                                            | 35           | 35           | 40           | 42           | 43           | 46           | 49           | 49           | 52           | 56           |
| Qatar                                                                             | 62           | 66           | 70           | 71           | 72           | 72           | 75           | 74           | 74           | 74           |
| Saudi Arabia                                                                      | 154          | 160          | 164          | 170          | 179          | 182          | 184          | 186          | 188          | 197          |
| United Arab Emirates                                                              | 128          | 126          | 140          | 142          | 129          | 113          | 128          | 130          | 128          | 123          |
| Other                                                                             | 96           | 99           | 105          | 109          | 110          | 112          | 115          | 114          | 120          | 125          |
| <b>Africa</b>                                                                     | <b>230</b>   | <b>235</b>   | <b>246</b>   | <b>258</b>   | <b>279</b>   | <b>291</b>   | <b>293</b>   | <b>292</b>   | <b>317</b>   | <b>311</b>   |
| Algeria                                                                           | 66           | 73           | 78           | 78           | 80           | 87           | 90           | 88           | 97           | 95           |
| Angola                                                                            | 1            | 1            | 1            | 2            | 2            | 2            | 2            | 3            | 3            | n.d.         |
| Egypt                                                                             | 85           | 80           | 84           | 94           | 112          | 116          | 111          | 113          | 119          | 116          |
| Libya                                                                             | 18           | 16           | 16           | 16           | 16           | 16           | 17           | 15           | 16           | n.d.         |
| Nigeria                                                                           | 30           | 33           | 33           | 34           | 32           | 33           | 33           | 33           | 39           | 39           |
| South Africa                                                                      | 5            | 5            | 5            | 5            | 5            | 5            | 5            | 5            | 5            | 5            |
| Other                                                                             | 27           | 28           | 29           | 30           | 32           | 33           | 35           | 36           | 39           | n.d.         |
| <b>Asia-Pacific</b>                                                               | <b>1,292</b> | <b>1,329</b> | <b>1,338</b> | <b>1,399</b> | <b>1,470</b> | <b>1,560</b> | <b>1,599</b> | <b>1,613</b> | <b>1,683</b> | <b>1,660</b> |
| Australia                                                                         | 68           | 69           | 70           | 71           | 70           | 72           | 66           | 68           | 66           | 68           |
| China                                                                             | 323          | 354          | 371          | 402          | 461          | 543          | 591          | 627          | 704          | 695          |
| India                                                                             | 89           | 89           | 94           | 102          | 110          | 109          | 117          | 111          | 113          | 106          |
| Indonesia                                                                         | 83           | 85           | 85           | 83           | 80           | 83           | 83           | 77           | 76           | 70           |
| Japan                                                                             | 248          | 250          | 238          | 244          | 237          | 228          | 218          | 217          | 194          | 191          |
| Malaysia                                                                          | 77           | 80           | 78           | 73           | 80           | 78           | 81           | 75           | 78           | 83           |
| New Zealand                                                                       | 9            | 10           | 9            | 9            | 9            | 8            | 9            | 8            | 7            | 7            |
| South Korea                                                                       | 111          | 100          | 93           | 99           | 103          | 114          | 110          | 115          | 127          | 125          |
| Taiwan                                                                            | 36           | 38           | 41           | 43           | 47           | 47           | 46           | 51           | 55           | 57           |
| Thailand                                                                          | 87           | 87           | 87           | 86           | 81           | 83           | 87           | 76           | 77           | 72           |
| Other                                                                             | 161          | 167          | 172          | 188          | 192          | 193          | 190          | 188          | 187          | 185          |
| <b>OECD</b>                                                                       | <b>3,200</b> | <b>3,142</b> | <b>3,208</b> | <b>3,301</b> | <b>3,325</b> | <b>3,440</b> | <b>3,528</b> | <b>3,458</b> | <b>3,519</b> | <b>3,496</b> |
| <b>Non-OECD</b>                                                                   | <b>3,409</b> | <b>3,457</b> | <b>3,493</b> | <b>3,602</b> | <b>3,766</b> | <b>3,913</b> | <b>3,992</b> | <b>3,917</b> | <b>4,197</b> | <b>4,112</b> |
| <b>World</b>                                                                      | <b>6,608</b> | <b>6,599</b> | <b>6,702</b> | <b>6,904</b> | <b>7,091</b> | <b>7,353</b> | <b>7,520</b> | <b>7,375</b> | <b>7,716</b> | <b>7,608</b> |

| <b>Coal CO<sub>2</sub> Emissions</b><br>(Million tonnes of carbon dioxide) | 2013          | 2014          | 2015          | 2016          | 2017          | 2018          | 2019          | 2020          | 2021          | 2022          |
|----------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>North America</b>                                                       | <b>1,835</b>  | <b>1,825</b>  | <b>1,595</b>  | <b>1,472</b>  | <b>1,442</b>  | <b>1,360</b>  | <b>1,169</b>  | <b>944</b>    | <b>1,074</b>  | <b>1,011</b>  |
| Canada                                                                     | 75            | 72            | 66            | 65            | 66            | 53            | 51            | 43            | 43            | 33            |
| Mexico                                                                     | 52            | 51            | 55            | 48            | 51            | 43            | 42            | 32            | 27            | 35            |
| United States                                                              | 1,707         | 1,702         | 1,474         | 1,358         | 1,326         | 1,264         | 1,076         | 869           | 1,004         | 943           |
| <b>South and Central America</b>                                           | <b>121</b>    | <b>124</b>    | <b>128</b>    | <b>123</b>    | <b>118</b>    | <b>117</b>    | <b>121</b>    | <b>115</b>    | <b>123</b>    | <b>96</b>     |
| Argentina                                                                  | 4             | 4             | 5             | 4             | 4             | 4             | 3             | 3             | 4             | 4             |
| Brazil                                                                     | 59            | 65            | 65            | 60            | 60            | 58            | 55            | 50            | 61            | 46            |
| Chile                                                                      | 28            | 25            | 28            | 30            | 30            | 28            | 32            | 30            | 30            | 23            |
| Colombia                                                                   | 18            | 19            | 18            | 18            | 15            | 17            | 19            | 22            | 17            | 15            |
| Peru                                                                       | 3             | 3             | 3             | 3             | 3             | 2             | 3             | 2             | 2             | n.d.          |
| Trinidad & Tobago                                                          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| Venezuela                                                                  | 1             | 1             | 1             | 1             | 0             | 0             | 0             | 0             | 0             | 0             |
| Other                                                                      | 7             | 7             | 9             | 8             | 7             | 8             | 8             | 8             | 8             | 7             |
| <b>Europe</b>                                                              | <b>1,357</b>  | <b>1,291</b>  | <b>1,273</b>  | <b>1,203</b>  | <b>1,189</b>  | <b>1,147</b>  | <b>977</b>    | <b>845</b>    | <b>925</b>    | <b>948</b>    |
| Belgium                                                                    | 16            | 14            | 14            | 13            | 13            | 13            | 13            | 10            | 11            | 12            |
| Czech Republic                                                             | 65            | 63            | 62            | 63            | 62            | 62            | 56            | 49            | 51            | 56            |
| Finland                                                                    | 22            | 20            | 17            | 19            | 18            | 19            | 16            | 12            | 14            | n.d.          |
| France                                                                     | 49            | 38            | 36            | 32            | 40            | 42            | 34            | 27            | 36            | 32            |
| Germany                                                                    | 339           | 325           | 323           | 314           | 292           | 277           | 223           | 183           | 215           | 226           |
| Italy                                                                      | 53            | 52            | 48            | 44            | 38            | 35            | 26            | 20            | 22            | 32            |
| Netherlands                                                                | 36            | 40            | 48            | 44            | 40            | 37            | 29            | 20            | 29            | 29            |
| Norway                                                                     | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             | 3             |
| Poland                                                                     | 214           | 202           | 201           | 202           | 203           | 199           | 178           | 165           | 187           | 177           |
| Portugal                                                                   | 10            | 11            | 13            | 11            | 13            | 11            | 5             | 2             | 1             | 0             |
| Romania                                                                    | 24            | 23            | 24            | 22            | 22            | 21            | 20            | 14            | 16            | 15            |
| Spain                                                                      | 46            | 51            | 57            | 44            | 53            | 47            | 21            | 12            | 12            | 17            |
| Sweden                                                                     | 8             | 8             | 7             | 7             | 8             | 8             | 7             | 6             | 6             | 6             |
| Turkey                                                                     | 125           | 138           | 141           | 156           | 165           | 169           | 171           | 167           | 170           | 172           |
| United Kingdom                                                             | 146           | 118           | 94            | 50            | 40            | 35            | 25            | 23            | 24            | 22            |
| EU                                                                         | 1,017         | 977           | 974           | 931           | 918           | 878           | 717           | 590           | 670           | 695           |
| Other                                                                      | 202           | 185           | 184           | 178           | 180           | 171           | 149           | 132           | 130           | n.d.          |
| <b>Former Soviet Union</b>                                                 | <b>702</b>    | <b>639</b>    | <b>631</b>    | <b>620</b>    | <b>616</b>    | <b>670</b>    | <b>659</b>    | <b>633</b>    | <b>704</b>    | <b>695</b>    |
| Azerbaijan                                                                 | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | n.d.          |
| Kazakhstan                                                                 | 147           | 141           | 107           | 116           | 127           | 131           | 127           | 125           | 129           | 128           |
| Russia                                                                     | 390           | 354           | 404           | 384           | 380           | 418           | 419           | 402           | 440           | 462           |
| Ukraine                                                                    | 149           | 127           | 104           | 104           | 92            | 102           | 93            | 82            | 90            | 54            |
| Uzbekistan                                                                 | 8             | 8             | 6             | 7             | 7             | 8             | 8             | 11            | 10            | 11            |
| Other                                                                      | 8             | 9             | 9             | 9             | 10            | 11            | 11            | 11            | 36            | n.d.          |
| <b>Middle East</b>                                                         | <b>43</b>     | <b>43</b>     | <b>41</b>     | <b>37</b>     | <b>37</b>     | <b>35</b>     | <b>36</b>     | <b>35</b>     | <b>33</b>     | <b>34</b>     |
| Iran                                                                       | 6             | 6             | 7             | 6             | 7             | 7             | 7             | 7             | 7             | 7             |
| Iraq                                                                       | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| Kuwait                                                                     | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| Qatar                                                                      | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| Saudi Arabia                                                               | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| United Arab Emirates                                                       | 7             | 8             | 7             | 7             | 8             | 8             | 7             | 8             | 9             | 10            |
| Other                                                                      | 30            | 29            | 27            | 24            | 21            | 20            | 21            | 19            | 17            | 17            |
| <b>Africa</b>                                                              | <b>398</b>    | <b>419</b>    | <b>393</b>    | <b>401</b>    | <b>411</b>    | <b>423</b>    | <b>434</b>    | <b>386</b>    | <b>404</b>    | <b>379</b>    |
| Algeria                                                                    | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| Angola                                                                     | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| Egypt                                                                      | 1             | 1             | 0             | 4             | 7             | 10            | 7             | 5             | 8             | 7             |
| Libya                                                                      | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          | n.d.          |
| Nigeria                                                                    | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| South Africa                                                               | 368           | 382           | 354           | 359           | 364           | 368           | 377           | 334           | 325           | 307           |
| Other                                                                      | 28            | 36            | 38            | 38            | 40            | 45            | 50            | 47            | 70            | 65            |
| <b>Asia-Pacific</b>                                                        | <b>10,467</b> | <b>10,585</b> | <b>10,449</b> | <b>10,409</b> | <b>10,670</b> | <b>10,982</b> | <b>11,047</b> | <b>10,936</b> | <b>11,530</b> | <b>12,150</b> |
| Australia                                                                  | 188           | 178           | 184           | 192           | 189           | 182           | 177           | 167           | 163           | 159           |
| China                                                                      | 7,605         | 7,535         | 7,394         | 7,319         | 7,398         | 7,519         | 7,560         | 7,647         | 8,064         | 8,184         |
| India                                                                      | 1,306         | 1,446         | 1,405         | 1,389         | 1,469         | 1,592         | 1,544         | 1,413         | 1,599         | 1,732         |
| Indonesia                                                                  | 115           | 145           | 160           | 174           | 194           | 223           | 276           | 270           | 282           | 428           |
| Japan                                                                      | 444           | 436           | 430           | 422           | 422           | 410           | 401           | 375           | 396           | 395           |
| Malaysia                                                                   | 60            | 61            | 69            | 75            | 82            | 88            | 83            | 92            | 88            | 88            |
| New Zealand                                                                | 5             | 4             | 4             | 3             | 3             | 4             | 5             | 4             | 5             | 4             |
| South Korea                                                                | 319           | 332           | 339           | 340           | 347           | 347           | 336           | 297           | 285           | 270           |
| Taiwan                                                                     | 151           | 153           | 148           | 150           | 154           | 154           | 147           | 144           | 150           | 140           |
| Thailand                                                                   | 69            | 64            | 68            | 62            | 66            | 64            | 66            | 69            | 61            | 56            |
| Other                                                                      | 204           | 231           | 249           | 282           | 344           | 400           | 452           | 458           | 437           | 695           |
| <b>OECD</b>                                                                | <b>4,087</b>  | <b>4,011</b>  | <b>3,765</b>  | <b>3,572</b>  | <b>3,531</b>  | <b>3,388</b>  | <b>3,012</b>  | <b>2,584</b>  | <b>2,796</b>  | <b>2,728</b>  |
| <b>Non-OECD</b>                                                            | <b>10,834</b> | <b>10,916</b> | <b>10,746</b> | <b>10,693</b> | <b>10,952</b> | <b>11,346</b> | <b>11,431</b> | <b>11,309</b> | <b>11,996</b> | <b>12,584</b> |
| <b>World</b>                                                               | <b>14,921</b> | <b>14,927</b> | <b>14,510</b> | <b>14,265</b> | <b>14,483</b> | <b>14,734</b> | <b>14,443</b> | <b>13,893</b> | <b>14,792</b> | <b>15,312</b> |

| <b>CO<sub>2</sub> Emissions Intensity to GDP</b><br>(kCO <sub>2</sub> /thousand \$15ppp) | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019       | 2020       | 2021       | 2022       |
|------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>North America</b>                                                                     | <b>300</b> | <b>300</b> | <b>280</b> | <b>270</b> | <b>270</b> | <b>260</b> | <b>250</b> | <b>230</b> | <b>240</b> | <b>240</b> |
| Canada                                                                                   | 370        | 360        | 360        | 350        | 350        | 340        | 330        | 320        | 320        | 320        |
| Mexico                                                                                   | 220        | 210        | 200        | 200        | 200        | 180        | 180        | 160        | 170        | 190        |
| United States                                                                            | 300        | 290        | 280        | 270        | 260        | 260        | 250        | 230        | 230        | 230        |
| <b>South and Central America</b>                                                         | <b>180</b> | <b>180</b> | <b>180</b> | <b>180</b> | <b>170</b> | <b>160</b> | <b>160</b> | <b>150</b> | <b>160</b> | <b>160</b> |
| Argentina                                                                                | 210        | 210        | 210        | 210        | 200        | 200        | 200        | 200        | 200        | 200        |
| Brazil                                                                                   | 150        | 160        | 150        | 150        | 150        | 140        | 140        | 140        | 150        | 130        |
| Chile                                                                                    | 210        | 190        | 200        | 210        | 210        | 200        | 210        | 210        | 200        | 190        |
| Colombia                                                                                 | 120        | 120        | 120        | 120        | 110        | 110        | 110        | 120        | 110        | 100        |
| Peru                                                                                     | 140        | 140        | 140        | 140        | 130        | 130        | 130        | 120        | 120        | n.d.       |
| Trinidad & Tobago                                                                        | 960        | 970        | 950        | 910        | 910        | 930        | 940        | 880        | 900        | n.d.       |
| Venezuela                                                                                | 250        | 260        | 250        | 270        | 310        | 350        | 370        | 330        | 360        | 390        |
| <b>Europe</b>                                                                            | <b>180</b> | <b>170</b> | <b>170</b> | <b>160</b> | <b>160</b> | <b>150</b> | <b>150</b> | <b>140</b> | <b>140</b> | <b>130</b> |
| Belgium                                                                                  | 200        | 180        | 190        | 180        | 180        | 180        | 170        | 170        | 160        | 150        |
| Czech Republic                                                                           | 310        | 290        | 280        | 280        | 270        | 260        | 240        | 230        | 240        | 240        |
| Finland                                                                                  | 220        | 210        | 190        | 200        | 180        | 190        | 170        | 160        | 150        | n.d.       |
| France                                                                                   | 130        | 120        | 120        | 120        | 120        | 110        | 110        | 100        | 110        | 100        |
| Germany                                                                                  | 210        | 200        | 190        | 190        | 180        | 170        | 160        | 150        | 160        | 150        |
| Italy                                                                                    | 150        | 150        | 150        | 150        | 140        | 140        | 130        | 130        | 140        | 130        |
| Netherlands                                                                              | 210        | 200        | 210        | 200        | 190        | 180        | 170        | 160        | 160        | 140        |
| Norway                                                                                   | 140        | 130        | 130        | 130        | 130        | 120        | 120        | 120        | 110        | 100        |
| Poland                                                                                   | 320        | 300        | 290        | 290        | 290        | 270        | 250        | 240        | 250        | 230        |
| Portugal                                                                                 | 150        | 150        | 160        | 150        | 160        | 150        | 130        | 120        | 110        | n.d.       |
| Romania                                                                                  | 170        | 170        | 160        | 150        | 150        | 140        | 130        | 130        | 130        | 120        |
| Spain                                                                                    | 160        | 150        | 160        | 150        | 150        | 150        | 130        | 130        | 130        | 130        |
| Sweden                                                                                   | 90         | 90         | 80         | 80         | 80         | 70         | 70         | 70         | 70         | n.d.       |
| Turkey                                                                                   | 160        | 170        | 160        | 170        | 170        | 170        | 160        | 160        | 160        | 140        |
| United Kingdom                                                                           | 170        | 150        | 140        | 130        | 130        | 120        | 110        | 110        | 110        | 110        |
| EU                                                                                       | 180        | 170        | 170        | 170        | 170        | 160        | 150        | 140        | 150        | 140        |
| <b>Former Soviet Union</b>                                                               | <b>460</b> | <b>440</b> | <b>440</b> | <b>430</b> | <b>430</b> | <b>440</b> | <b>430</b> | <b>420</b> | <b>440</b> | <b>440</b> |
| Azerbaijan                                                                               | 210        | 220        | 220        | 230        | 220        | 220        | 240        | 240        | 240        | n.d.       |
| Kazakhstan                                                                               | 650        | 500        | 430        | 460        | 480        | 460        | 420        | 440        | 450        | 450        |
| Russia                                                                                   | 450        | 440        | 450        | 440        | 450        | 460        | 450        | 440        | 460        | 480        |
| Ukraine                                                                                  | 510        | 480        | 440        | 430        | 390        | 400        | 360        | 350        | 350        | 350        |
| Uzbekistan                                                                               | 580        | 510        | 450        | 450        | 450        | 440        | 430        | 420        | 420        | 380        |
| <b>Middle East</b>                                                                       | <b>370</b> | <b>370</b> | <b>370</b> | <b>360</b> | <b>360</b> | <b>350</b> | <b>360</b> | <b>360</b> | <b>360</b> | <b>350</b> |
| Iran                                                                                     | 510        | 510        | 510        | 480        | 480        | 500        | 500        | 480        | 480        | 480        |
| Iraq                                                                                     | 340        | 320        | 290        | 270        | 310        | 320        | 330        | 330        | 370        | 380        |
| Kuwait                                                                                   | 480        | 460        | 490        | 480        | 500        | 500        | 510        | 550        | 630        | 630        |
| Qatar                                                                                    | 360        | 370        | 370        | 360        | 370        | 370        | 370        | 380        | 380        | 370        |
| Saudi Arabia                                                                             | 350        | 360        | 360        | 360        | 360        | 330        | 330        | 340        | 330        | 340        |
| United Arab Emirates                                                                     | 330        | 310        | 310        | 320        | 290        | 260        | 270        | 300        | 280        | 260        |
| <b>Africa</b>                                                                            | <b>210</b> | <b>210</b> | <b>200</b> | <b>200</b> | <b>200</b> | <b>200</b> | <b>190</b> | <b>180</b> | <b>190</b> | <b>180</b> |
| Algeria                                                                                  | 270        | 280        | 280        | 270        | 270        | 280        | 290        | 290        | 300        | 300        |
| Angola                                                                                   | 100        | 100        | 110        | 100        | 80         | 90         | 100        | 80         | 90         | n.d.       |
| Egypt                                                                                    | 200        | 190        | 190        | 190        | 200        | 180        | 160        | 150        | 160        | 150        |
| Libya                                                                                    | 300        | 380        | 340        | 320        | 250        | 230        | 260        | 300        | 240        | n.d.       |
| Nigeria                                                                                  | 90         | 100        | 90         | 90         | 90         | 90         | 100        | 90         | 100        | 100        |
| South Africa                                                                             | 580        | 590        | 550        | 540        | 550        | 550        | 560        | 530        | 500        | 470        |
| <b>Asia-Pacific</b>                                                                      | <b>390</b> | <b>380</b> | <b>360</b> | <b>340</b> | <b>330</b> | <b>320</b> | <b>310</b> | <b>310</b> | <b>310</b> | <b>310</b> |
| Australia                                                                                | 370        | 360        | 350        | 350        | 340        | 330        | 320        | 300        | 290        | 280        |
| China                                                                                    | 590        | 550        | 510        | 480        | 460        | 440        | 420        | 420        | 410        | 400        |
| India                                                                                    | 300        | 310        | 280        | 270        | 260        | 260        | 250        | 240        | 250        | 250        |
| Indonesia                                                                                | 180        | 180        | 180        | 170        | 170        | 180        | 180        | 170        | 180        | 210        |
| Japan                                                                                    | 240        | 230        | 220        | 210        | 210        | 200        | 190        | 190        | 190        | 190        |
| Malaysia                                                                                 | 330        | 320        | 300        | 290        | 290        | 280        | 270        | 290        | 290        | 280        |
| New Zealand                                                                              | 200        | 190        | 180        | 170        | 180        | 170        | 170        | 160        | 150        | 150        |
| South Korea                                                                              | 340        | 330        | 330        | 330        | 320        | 320        | 300        | 280        | 280        | 260        |
| Taiwan                                                                                   | 530        | 520        | 510        | 520        | 520        | 490        | 460        | 440        | 410        | 420        |
| Thailand                                                                                 | 250        | 240        | 240        | 230        | 220        | 210        | 220        | 220        | 210        | 210        |
| <b>OECD</b>                                                                              | <b>240</b> | <b>230</b> | <b>230</b> | <b>220</b> | <b>220</b> | <b>210</b> | <b>200</b> | <b>190</b> | <b>190</b> | <b>190</b> |
| <b>Non-OECD</b>                                                                          | <b>360</b> | <b>350</b> | <b>340</b> | <b>330</b> | <b>320</b> | <b>310</b> | <b>310</b> | <b>310</b> | <b>310</b> | <b>310</b> |
| <b>World</b>                                                                             | <b>310</b> | <b>300</b> | <b>290</b> | <b>280</b> | <b>270</b> | <b>270</b> | <b>260</b> | <b>250</b> | <b>250</b> | <b>250</b> |

Note: CO<sub>2</sub> Emissions Intensity to GDP is calculated with CO<sub>2</sub> emissions from fuel combustion only.

| <b>CO<sub>2</sub> Emissions per capita</b><br>(tCO <sub>2</sub> per capita) | 2013        | 2014        | 2015        | 2016        | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        |
|-----------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>North America</b>                                                        | <b>13.7</b> | <b>13.7</b> | <b>13.3</b> | <b>13.0</b> | <b>12.8</b> | <b>12.9</b> | <b>12.6</b> | <b>11.1</b> | <b>11.8</b> | <b>12.0</b> |
| Canada                                                                      | 17.8        | 17.6        | 17.4        | 17.1        | 17.2        | 17.3        | 16.6        | 15.2        | 15.7        | 15.9        |
| Mexico                                                                      | 4.1         | 4.0         | 4.0         | 4.1         | 4.0         | 3.7         | 3.7         | 3.1         | 3.3         | 3.6         |
| United States                                                               | 16.9        | 16.9        | 16.4        | 15.9        | 15.7        | 15.9        | 15.6        | 13.8        | 14.8        | 14.9        |
| <b>South and Central America</b>                                            | <b>2.8</b>  | <b>2.9</b>  | <b>2.8</b>  | <b>2.7</b>  | <b>2.6</b>  | <b>2.5</b>  | <b>2.4</b>  | <b>2.2</b>  | <b>2.4</b>  | <b>2.4</b>  |
| Argentina                                                                   | 4.5         | 4.3         | 4.4         | 4.3         | 4.2         | 4.1         | 3.9         | 3.5         | 3.9         | 4.0         |
| Brazil                                                                      | 2.6         | 2.8         | 2.6         | 2.4         | 2.4         | 2.2         | 2.2         | 2.1         | 2.4         | 2.2         |
| Chile                                                                       | 4.8         | 4.4         | 4.6         | 4.9         | 4.9         | 4.8         | 5.1         | 4.7         | 4.9         | 4.7         |
| Colombia                                                                    | 1.7         | 1.8         | 1.8         | 1.8         | 1.6         | 1.7         | 1.7         | 1.6         | 1.7         | 1.7         |
| Peru                                                                        | 1.7         | 1.8         | 1.8         | 1.8         | 1.7         | 1.7         | 1.8         | 1.4         | 1.5         | n.d.        |
| Trinidad & Tobago                                                           | 32.1        | 31.4        | 31.2        | 28.4        | 27.6        | 27.6        | 27.7        | 24.2        | 24.4        | n.d.        |
| Venezuela                                                                   | 6.6         | 6.5         | 6.1         | 5.6         | 5.2         | 4.8         | 3.8         | 2.4         | 2.6         | 3.1         |
| Other                                                                       | 1.7         | 1.7         | 1.8         | 1.8         | 1.7         | 1.8         | 1.8         | 1.5         | 1.7         | n.d.        |
| <b>Europe</b>                                                               | <b>6.9</b>  | <b>6.6</b>  | <b>6.7</b>  | <b>6.7</b>  | <b>6.7</b>  | <b>6.6</b>  | <b>6.3</b>  | <b>5.8</b>  | <b>6.2</b>  | <b>6.0</b>  |
| Belgium                                                                     | 10.0        | 9.4         | 9.8         | 9.6         | 9.5         | 9.6         | 9.4         | 8.7         | 9.0         | 8.5         |
| Czech Republic                                                              | 10.6        | 10.3        | 10.3        | 10.4        | 10.6        | 10.5        | 9.9         | 9.0         | 9.5         | 10.0        |
| Finland                                                                     | 10.1        | 9.3         | 8.6         | 9.2         | 8.8         | 9.0         | 8.3         | 7.5         | 7.4         | n.d.        |
| France                                                                      | 5.6         | 5.1         | 5.2         | 5.2         | 5.2         | 5.1         | 4.9         | 4.4         | 4.8         | 4.6         |
| Germany                                                                     | 10.3        | 9.8         | 9.7         | 9.7         | 9.5         | 9.1         | 8.5         | 7.8         | 8.3         | 8.1         |
| Italy                                                                       | 6.1         | 5.7         | 5.8         | 5.8         | 5.7         | 5.7         | 5.6         | 5.0         | 5.6         | 5.6         |
| Netherlands                                                                 | 11.0        | 10.5        | 10.8        | 10.8        | 10.7        | 10.3        | 9.8         | 8.9         | 9.3         | 8.3         |
| Norway                                                                      | 9.7         | 9.6         | 9.7         | 9.4         | 9.3         | 9.2         | 8.8         | 8.5         | 8.1         | 7.9         |
| Poland                                                                      | 8.7         | 8.3         | 8.5         | 8.7         | 9.1         | 9.1         | 8.6         | 8.2         | 9.1         | 8.7         |
| Portugal                                                                    | 4.9         | 4.8         | 5.2         | 5.1         | 5.6         | 5.2         | 4.8         | 4.2         | 4.0         | 4.3         |
| Romania                                                                     | 3.9         | 3.9         | 3.9         | 3.9         | 4.1         | 4.1         | 4.0         | 3.8         | 4.2         | 4.0         |
| Spain                                                                       | 5.6         | 5.6         | 6.0         | 5.8         | 6.1         | 6.0         | 5.5         | 4.7         | 5.0         | 5.3         |
| Sweden                                                                      | 4.8         | 4.6         | 4.6         | 4.5         | 4.5         | 4.2         | 4.0         | 3.8         | 4.0         | 4.0         |
| Turkey                                                                      | 4.5         | 4.7         | 4.8         | 5.0         | 5.5         | 5.4         | 5.1         | 5.1         | 5.5         | 5.3         |
| United Kingdom                                                              | 7.4         | 6.7         | 6.5         | 6.1         | 5.8         | 5.7         | 5.4         | 4.8         | 5.2         | 5.0         |
| EU                                                                          | 7.3         | 7.0         | 7.1         | 7.1         | 7.2         | 7.0         | 6.7         | 6.0         | 6.5         | 6.4         |
| Other                                                                       | 6.3         | 6.0         | 6.1         | 6.2         | 6.3         | 6.2         | 6           | 5           | 6           | n.d.        |
| <b>Former Soviet Union</b>                                                  | <b>8.5</b>  | <b>8.2</b>  | <b>8.0</b>  | <b>8.0</b>  | <b>8.2</b>  | <b>8.3</b>  | <b>8.3</b>  | <b>8.3</b>  | <b>8.3</b>  | <b>8.3</b>  |
| Azerbaijan                                                                  | 3.2         | 3.3         | 3.2         | 3.3         | 3.3         | n.d.        | n.d.        | n.d.        | n.d.        | n.d.        |
| Kazakhstan                                                                  | 14.7        | 13.6        | 13.0        | 13.1        | 13.2        | 13.5        | 13.5        | 13.5        | 13.5        | 13.5        |
| Russia                                                                      | 11.2        | 11.1        | 11.1        | 11.0        | 11.7        | 12.1        | 12.1        | 12.1        | 12.1        | 12.1        |
| Ukraine                                                                     | 6.0         | 5.1         | 4.2         | 4.5         | 3.9         | 3.9         | 3.9         | 3.9         | 3.9         | 3.9         |
| Uzbekistan                                                                  | 3.3         | 3.3         | 2.9         | 2.7         | 2.7         | 2.8         | 2.8         | 2.8         | 2.8         | 2.8         |
| Other                                                                       | 161         | 164         | 163         | 164         | 166         | 173         | 173         | 169         | 179         | n.d.        |
| <b>Middle East</b>                                                          | <b>8.6</b>  | <b>8.7</b>  | <b>8.6</b>  | <b>8.5</b>  | <b>8.5</b>  | <b>8.3</b>  | <b>8.2</b>  | <b>7.8</b>  | <b>8.0</b>  | <b>8.3</b>  |
| Iran                                                                        | 8.3         | 8.5         | 8.3         | 8.2         | 8.5         | 8.5         | 8.3         | 8.0         | 8.2         | 8.3         |
| Iraq                                                                        | 4.2         | 3.8         | 3.6         | 3.8         | 4.0         | 4.2         | 4.5         | 3.8         | 4.3         | 4.6         |
| Kuwait                                                                      | 25.0        | 23.5        | 23.8        | 23.4        | 22.7        | 22.7        | 22.6        | 21.8        | 24.8        | 26.4        |
| Qatar                                                                       | 38.2        | 39.0        | 38.8        | 38.2        | 37.4        | 36.4        | 36.7        | 35.6        | 35.7        | 35.6        |
| Saudi Arabia                                                                | 17.5        | 18.2        | 18.5        | 18.1        | 17.4        | 16.4        | 16.2        | 15.5        | 15.6        | 16.9        |
| United Arab Emirates                                                        | 20.5        | 20.7        | 21.7        | 22.1        | 20.9        | 18.8        | 19.8        | 19.9        | 19.4        | 19.0        |
| Other                                                                       | 3.8         | 3.8         | 3.7         | 3.5         | 3.5         | 3.5         | 3.4         | 3.1         | 3.1         | 3.2         |
| <b>Africa</b>                                                               | <b>1.2</b>  | <b>1.2</b>  | <b>1.1</b>  | <b>1.1</b>  | <b>1.1</b>  | <b>1.1</b>  | <b>1.1</b>  | <b>1.0</b>  | <b>1.0</b>  | <b>1.0</b>  |
| Algeria                                                                     | 3.5         | 3.7         | 3.8         | 3.7         | 3.6         | 3.8         | 3.8         | 3.6         | 3.8         | 3.8         |
| Angola                                                                      | 1.6         | 1.6         | 1.6         | 1.4         | 1.1         | 1.0         | 1.1         | 0.8         | 0.8         | n.d.        |
| Egypt                                                                       | 2.5         | 2.5         | 2.5         | 2.6         | 2.7         | 2.6         | 2.4         | 2.3         | 2.4         | 2.4         |
| Libya                                                                       | 9.6         | 10.2        | 9.0         | 8.2         | 8.9         | 9.1         | 9.0         | 7.8         | 8.0         | n.d.        |
| Nigeria                                                                     | 0.7         | 0.7         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         |
| South Africa                                                                | 8.3         | 8.3         | 7.8         | 7.7         | 7.7         | 7.7         | 7.7         | 6.8         | 6.6         | 6.3         |
| Other                                                                       | 0.38        | 0.39        | 0.40        | 0.40        | 0.41        | 0.41        | 0.42        | 0.40        | 0.41        | n.d.        |
| <b>Asia-Pacific</b>                                                         | <b>4.5</b>  | <b>4.5</b>  | <b>4.5</b>  | <b>4.5</b>  | <b>4.5</b>  | <b>4.6</b>  | <b>4.6</b>  | <b>4.5</b>  | <b>4.7</b>  | <b>4.9</b>  |
| Australia                                                                   | 18.0        | 17.3        | 17.4        | 17.6        | 17.3        | 17.0        | 16.5        | 15.6        | 15.1        | 15.0        |
| China                                                                       | 8.2         | 8.2         | 8.0         | 8.0         | 8.0         | 8.2         | 8.3         | 8.4         | 8.8         | 8.9         |
| India                                                                       | 1.6         | 1.7         | 1.7         | 1.7         | 1.8         | 1.9         | 1.9         | 1.7         | 1.8         | 2.0         |
| Indonesia                                                                   | 1.9         | 2.0         | 2.0         | 2.0         | 2.1         | 2.3         | 2.4         | 2.2         | 2.3         | 3.0         |
| Japan                                                                       | 10.4        | 10.0        | 9.7         | 9.6         | 9.5         | 9.2         | 8.9         | 8.4         | 8.7         | 8.7         |
| Malaysia                                                                    | 8.0         | 8.2         | 8.1         | 7.9         | 8.3         | 8.3         | 8.3         | 8.1         | 8.2         | 8.5         |
| New Zealand                                                                 | 7.9         | 8.0         | 7.8         | 7.4         | 7.6         | 7.3         | 7.5         | 6.7         | 6.6         | 6.4         |
| South Korea                                                                 | 13.5        | 13.3        | 13.5        | 13.8        | 14.0        | 13.9        | 13.5        | 12.6        | 12.8        | 12.4        |
| Taiwan                                                                      | 11.7        | 11.9        | 11.8        | 12.0        | 12.3        | 12.2        | 11.7        | 11.6        | 11.5        | 11.9        |
| Thailand                                                                    | 4.1         | 4.0         | 4.1         | 4.0         | 4.0         | 4.0         | 4.1         | 3.9         | 3.8         | 3.8         |
| Other                                                                       | 1.0         | 1.1         | 1.1         | 1.2         | 1.3         | 1.4         | 1.5         | 1.4         | 1.4         | 1.8         |
| <b>OECD</b>                                                                 | <b>10.4</b> | <b>10.2</b> | <b>10.0</b> | <b>9.9</b>  | <b>9.8</b>  | <b>9.8</b>  | <b>9.5</b>  | <b>8.6</b>  | <b>9.0</b>  | <b>8.6</b>  |
| <b>Non-OECD</b>                                                             | <b>3.9</b>  | <b>3.9</b>  | <b>3.8</b>  | <b>3.8</b>  | <b>3.8</b>  | <b>3.9</b>  | <b>3.9</b>  | <b>3.7</b>  | <b>3.9</b>  | <b>4.1</b>  |
| <b>World</b>                                                                | <b>5.0</b>  | <b>5.0</b>  | <b>4.9</b>  | <b>4.8</b>  | <b>4.9</b>  | <b>4.9</b>  | <b>4.8</b>  | <b>4.6</b>  | <b>4.8</b>  | <b>4.9</b>  |

Note: CO<sub>2</sub> Emissions per capita is calculated with total CO<sub>2</sub> emissions.



Primary Energy  
Intensity to GDP

| Primary Energy Intensity to GDP<br>(ktep/\$15ppp) | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019       | 2020       | 2021       | 2022       |
|---------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>North America</b>                              | <b>130</b> | <b>130</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>110</b> | <b>110</b> | <b>110</b> |
| Canada                                            | 180        | 180        | 170        | 180        | 180        | 180        | 180        | 170        | 170        | 170        |
| Mexico                                            | 90         | 90         | 80         | 80         | 80         | 80         | 80         | 80         | 80         | 80         |
| United States                                     | 130        | 130        | 120        | 120        | 110        | 110        | 110        | 110        | 110        | 110        |
| <b>South and Central America</b>                  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  |
| Argentina                                         | 90         | 100        | 100        | 100        | 90         | 90         | 100        | 100        | 100        | 100        |
| Brazil                                            | 90         | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        |
| Chile                                             | 100        | 90         | 90         | 90         | 90         | 90         | 90         | 90         | 80         | 80         |
| Colombia                                          | 70         | 70         | 60         | 70         | 60         | 60         | 60         | 60         | 60         | 60         |
| Peru                                              | 60         | 60         | 60         | 60         | 60         | 60         | 60         | 60         | 60         | n.d.       |
| Trinidad & Tobago                                 | 510        | 530        | 500        | 470        | 480        | 490        | 500        | 460        | 480        | n.d.       |
| Venezuela                                         | 120        | 110        | 110        | 120        | 140        | 120        | 140        | 150        | 160        | 180        |
| <b>Europe</b>                                     | <b>80</b>  | <b>80</b>  | <b>80</b>  | <b>80</b>  | <b>80</b>  | <b>70</b>  | <b>70</b>  | <b>70</b>  | <b>70</b>  | <b>70</b>  |
| Belgium                                           | 110        | 100        | 100        | 110        | 100        | 100        | 100        | 100        | 100        | 90         |
| Czech Republic                                    | 130        | 120        | 120        | 110        | 110        | 110        | 100        | 100        | 110        | 100        |
| Finland                                           | 140        | 150        | 140        | 140        | 140        | 140        | 130        | 130        | 130        | n.d.       |
| France                                            | 100        | 90         | 90         | 90         | 90         | 90         | 80         | 80         | 80         | 70         |
| Germany                                           | 90         | 80         | 80         | 80         | 80         | 70         | 70         | 70         | 70         | 60         |
| Italy                                             | 70         | 70         | 70         | 70         | 70         | 60         | 60         | 60         | 70         | 60         |
| Netherlands                                       | 90         | 80         | 90         | 80         | 80         | 80         | 80         | 80         | 80         | 60         |
| Norway                                            | 100        | 90         | 80         | 90         | 90         | 90         | 90         | 90         | 90         | 80         |
| Poland                                            | 100        | 100        | 90         | 90         | 90         | 90         | 90         | 90         | 90         | 80         |
| Portugal                                          | 70         | 70         | 70         | 70         | 70         | 70         | 60         | 60         | 60         | n.d.       |
| Romania                                           | 80         | 80         | 70         | 70         | 70         | 70         | 60         | 60         | 60         | 60         |
| Spain                                             | 80         | 70         | 70         | 70         | 70         | 70         | 70         | 70         | 70         | 70         |
| Sweden                                            | 110        | 100        | 90         | 100        | 100        | 100        | 90         | 90         | 90         | n.d.       |
| Turkey                                            | 60         | 60         | 60         | 70         | 70         | 60         | 60         | 60         | 60         | 60         |
| United Kingdom                                    | 70         | 70         | 60         | 60         | 60         | 60         | 60         | 60         | 50         | 50         |
| EU                                                | 90         | 80         | 80         | 80         | 80         | 80         | 80         | 70         | 70         | 70         |
| <b>Former Soviet Union</b>                        | <b>200</b> | <b>190</b> | <b>190</b> | <b>190</b> | <b>190</b> | <b>200</b> | <b>190</b> | <b>190</b> | <b>200</b> | <b>200</b> |
| Azerbaijan                                        | 100        | 100        | 100        | 100        | 100        | 100        | 110        | 110        | 110        | n.d.       |
| Kazakhstan                                        | 210        | 160        | 130        | 160        | 150        | 170        | 160        | 140        | 150        | 150        |
| Russia                                            | 200        | 200        | 200        | 200        | 200        | 210        | 210        | 210        | 210        | 220        |
| Ukraine                                           | 210        | 210        | 210        | 200        | 200        | 200        | 180        | 180        | 190        | 190        |
| Uzbekistan                                        | 220        | 190        | 170        | 170        | 170        | 200        | 180        | 170        | 180        | 160        |
| <b>Middle East</b>                                | <b>150</b> | <b>150</b> | <b>150</b> | <b>150</b> | <b>150</b> | <b>150</b> | <b>150</b> | <b>160</b> | <b>150</b> | <b>150</b> |
| Iran                                              | 200        | 210        | 210        | 200        | 210        | 220        | 220        | 210        | 210        | 210        |
| Iraq                                              | 130        | 120        | 110        | 100        | 120        | 130        | 130        | 120        | 130        | 140        |
| Kuwait                                            | 170        | 150        | 180        | 190        | 190        | 190        | 200        | 230        | 260        | 260        |
| Qatar                                             | 210        | 190        | 190        | 170        | 190        | 190        | 190        | 200        | 210        | 200        |
| Saudi Arabia                                      | 140        | 150        | 150        | 150        | 150        | 150        | 150        | 150        | 150        | 150        |
| United Arab Emirates                              | 120        | 130        | 140        | 150        | 120        | 120        | 130        | 130        | 130        | 120        |
| <b>Africa</b>                                     | <b>140</b> | <b>140</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> |
| Algeria                                           | 110        | 120        | 120        | 110        | 110        | 120        | 120        | 120        | 130        | 130        |
| Angola                                            | 70         | 90         | 70         | 70         | 70         | 80         | 80         | 70         | 80         | n.d.       |
| Egypt                                             | 80         | 80         | 80         | 80         | 80         | 80         | 70         | 70         | 70         | 70         |
| Libya                                             | 100        | 160        | 130        | 130        | 100        | 90         | 130        | 120        | 130        | n.d.       |
| Nigeria                                           | 160        | 150        | 150        | 150        | 150        | 150        | 160        | 160        | 160        | 160        |
| South Africa                                      | 180        | 190        | 180        | 180        | 180        | 170        | 170        | 180        | 170        | 160        |
| <b>Asia-Pacific</b>                               | <b>140</b> | <b>140</b> | <b>130</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> |
| Australia                                         | 120        | 120        | 120        | 110        | 110        | 110        | 110        | 110        | 100        | 100        |
| China                                             | 190        | 180        | 170        | 160        | 150        | 150        | 150        | 150        | 150        | 150        |
| India                                             | 120        | 120        | 120        | 110        | 110        | 110        | 100        | 100        | 100        | 100        |
| Indonesia                                         | 80         | 80         | 70         | 70         | 70         | 70         | 70         | 70         | 70         | 80         |
| Japan                                             | 90         | 90         | 80         | 80         | 80         | 80         | 80         | 80         | 80         | 80         |
| Malaysia                                          | 130        | 120        | 110        | 110        | 110        | 110        | 110        | 110        | 110        | 100        |
| New Zealand                                       | 120        | 130        | 120        | 120        | 110        | 110        | 110        | 100        | 100        | 100        |
| South Korea                                       | 140        | 140        | 140        | 140        | 140        | 130        | 130        | 130        | 130        | 130        |
| Taiwan                                            | 220        | 210        | 210        | 210        | 200        | 200        | 190        | 180        | 170        | 160        |
| Thailand                                          | 130        | 130        | 120        | 120        | 120        | 110        | 110        | 110        | 110        | 110        |
| <b>OECD</b>                                       | <b>110</b> | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  | <b>90</b>  |
| <b>Non-OECD</b>                                   | <b>140</b> | <b>140</b> | <b>140</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> | <b>130</b> |
| <b>World</b>                                      | <b>130</b> | <b>130</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>120</b> | <b>110</b> | <b>110</b> | <b>110</b> | <b>110</b> |



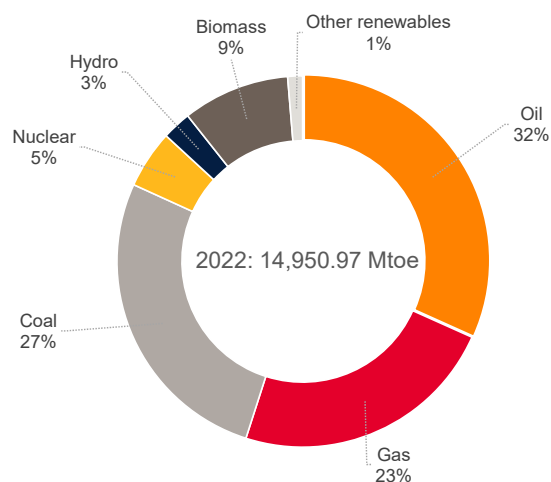


Regional  
and country  
data

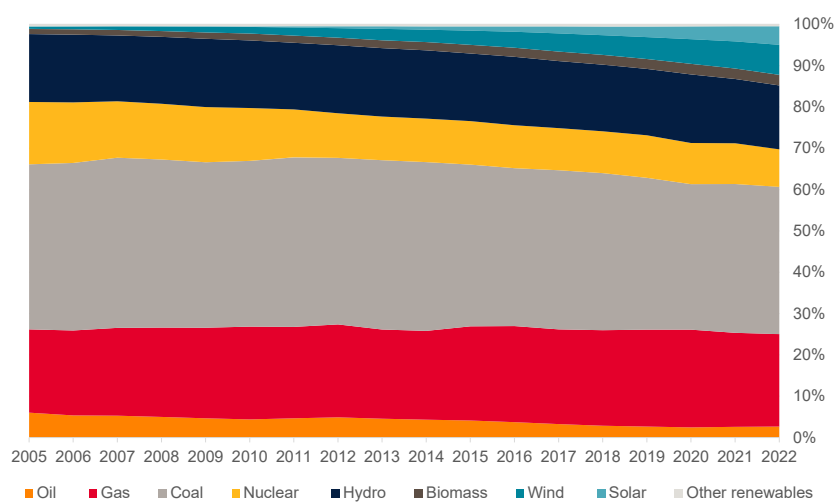
| World<br>(Million toe)                                            | 2013            | 2014            | 2015            | 2016            | 2017            | 2018            | 2019            | 2020            | 2021            | 2022            | Share in<br>2022 (%) |
|-------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>13,385.4</b> | <b>13,559.1</b> | <b>13,578.3</b> | <b>13,700.9</b> | <b>14,000.1</b> | <b>14,352.9</b> | <b>14,522.9</b> | <b>13,965.5</b> | <b>14,663.1</b> | <b>14,951.0</b> | <b>100.0</b>         |
| Oil                                                               | 4,218.5         | 4,299.4         | 4,362.5         | 4,431.5         | 4,517.8         | 4,532.6         | 4,560.4         | 4,140.7         | 4,367.2         | 4,519.0         | 30.2                 |
| Gas                                                               | 2,894.9         | 2,894.0         | 2,920.0         | 3,020.4         | 3,104.6         | 3,268.4         | 3,345.0         | 3,303.0         | 3,459.5         | 3,402.8         | 22.8                 |
| Coal                                                              | 3,911.9         | 3,955.3         | 3,849.9         | 3,738.5         | 3,801.2         | 3,880.9         | 3,863.3         | 3,752.0         | 3,965.2         | 4,102.1         | 27.4                 |
| Nuclear                                                           | 646.1           | 660.7           | 669.8           | 679.8           | 687.0           | 706.0           | 726.9           | 697.3           | 731.0           | 688.3           | 4.6                  |
| Hydro                                                             | 327.3           | 334.3           | 334.9           | 346.8           | 350.4           | 361.4           | 364.3           | 373.7           | 369.4           | 375.4           | 2.5                  |
| Biomass                                                           | 1,222.6         | 1,233.9         | 1,238.0         | 1,257.8         | 1,283.5         | 1,315.7         | 1,344.1         | 1,351.0         | 1,379.2         | 1,423.1         | 9.5                  |
| Other renewables                                                  | 69.1            | 80.0            | 95.0            | 112.9           | 137.3           | 160.1           | 185.0           | 211.9           | 251.6           | 294.1           | 2.0                  |
| Electricity balance of trade*                                     | 95.1            | 101.5           | 108.3           | 113.2           | 118.4           | 127.8           | 133.9           | 136.0           | 140.0           | 146.1           | 1.0                  |
| <b>Total final consumption, by source</b>                         | <b>9,343.3</b>  | <b>9,471.1</b>  | <b>9,542.4</b>  | <b>9,656.3</b>  | <b>9,845.9</b>  | <b>10,066.1</b> | <b>10,130.4</b> | <b>9,701.2</b>  | <b>10,158.5</b> | <b>10,379.5</b> | <b>100.0</b>         |
| Oil                                                               | 3,688.3         | 3,751.4         | 3,843.5         | 3,901.1         | 3,997.1         | 4,065.0         | 4,078.2         | 3,697.5         | 3,916.1         | 4,059.2         | 39.1                 |
| Gas                                                               | 1,360.8         | 1,364.3         | 1,364.7         | 1,400.7         | 1,449.2         | 1,526.7         | 1,558.6         | 1,519.6         | 1,618.9         | 1,584.6         | 15.3                 |
| Coal                                                              | 1,328.0         | 1,342.3         | 1,305.1         | 1,254.4         | 1,217.4         | 1,176.4         | 1,149.7         | 1,137.6         | 1,127.3         | 1,156.3         | 11.1                 |
| Electricity                                                       | 1,674.2         | 1,719.5         | 1,737.9         | 1,790.2         | 1,850.9         | 1,932.3         | 1,960.1         | 1,957.2         | 2,070.5         | 2,115.4         | 20.4                 |
| Heat                                                              | 314.0           | 312.8           | 313.4           | 329.7           | 339.2           | 358.1           | 361.9           | 367.0           | 391.1           | 396.3           | 3.8                  |
| Biomass                                                           | 977.9           | 980.7           | 977.8           | 980.2           | 992.1           | 1,007.6         | 1,021.9         | 1,022.2         | 1,034.6         | 1,067.7         | 10.3                 |
| <b>Electricity generation, by source</b>                          | <b>2,020.0</b>  | <b>2,068.9</b>  | <b>2,093.9</b>  | <b>2,153.6</b>  | <b>2,219.5</b>  | <b>2,297.6</b>  | <b>2,326.9</b>  | <b>2,309.0</b>  | <b>2,439.8</b>  | <b>2,496.5</b>  | <b>100.0</b>         |
| Oil                                                               | 91.7            | 89.3            | 86.4            | 79.7            | 72.2            | 65.5            | 61.5            | 56.6            | 63.1            | 66.1            | 2.6                  |
| Gas                                                               | 436.0           | 444.6           | 476.7           | 500.9           | 508.8           | 531.4           | 546.1           | 546.3           | 555.3           | 558.8           | 22.4                 |
| Coal                                                              | 828.1           | 844.8           | 819.6           | 822.9           | 854.3           | 872.8           | 854.7           | 812.7           | 878.2           | 889.7           | 35.6                 |
| Nuclear                                                           | 213.2           | 218.0           | 221.0           | 224.3           | 226.7           | 233.0           | 239.9           | 230.1           | 241.2           | 227.1           | 9.1                  |
| Hydro                                                             | 334.4           | 341.8           | 342.4           | 356.1           | 360.3           | 371.0           | 373.6           | 383.3           | 378.9           | 385.6           | 15.4                 |
| Biomass                                                           | 38.7            | 41.7            | 43.8            | 47.8            | 50.7            | 53.6            | 56.1            | 59.0            | 62.2            | 63.9            | 2.6                  |
| Wind                                                              | 55.7            | 62.1            | 71.7            | 82.8            | 97.6            | 109.7           | 122.9           | 137.6           | 160.4           | 181.6           | 7.3                  |
| Solar                                                             | 12.5            | 16.6            | 21.9            | 28.5            | 38.0            | 48.6            | 59.9            | 72.1            | 88.8            | 111.9           | 4.5                  |
| Other renewables                                                  | 9.6             | 10.0            | 10.4            | 10.6            | 10.9            | 12.0            | 12.3            | 11.3            | 11.6            | 11.7            | 0.5                  |
| <b>Total final consumption, by sector</b>                         | <b>9,343.3</b>  | <b>9,471.1</b>  | <b>9,542.4</b>  | <b>9,656.3</b>  | <b>9,845.9</b>  | <b>10,066.1</b> | <b>10,130.4</b> | <b>9,701.2</b>  | <b>10,158.5</b> | <b>10,379.5</b> | <b>100.0</b>         |
| Industry                                                          | 2,991.4         | 3,040.4         | 2,996.0         | 2,984.3         | 3,010.4         | 3,064.7         | 3,084.2         | 3,080.8         | 3,181.4         | 3,214.9         | 31.0                 |
| Transport                                                         | 2,508.3         | 2,553.9         | 2,634.7         | 2,691.4         | 2,762.7         | 2,832.1         | 2,843.7         | 2,453.9         | 2,644.9         | 2,776.0         | 26.7                 |
| Residential/Commercial                                            | 2,765.4         | 2,760.4         | 2,782.5         | 2,829.1         | 2,888.4         | 2,970.7         | 2,980.2         | 2,956.0         | 3,079.0         | 3,138.2         | 30.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>3,688.3</b>  | <b>3,751.4</b>  | <b>3,843.5</b>  | <b>3,901.1</b>  | <b>3,997.1</b>  | <b>4,065.0</b>  | <b>4,078.2</b>  | <b>3,697.5</b>  | <b>3,916.1</b>  | <b>4,059.2</b>  | <b>100.0</b>         |
| Industry                                                          | 276.3           | 278.2           | 283.3           | 276.0           | 276.5           | 277.8           | 278.6           | 284.1           | 289.4           | 302.6           | 7.5                  |
| Transport                                                         | 2,373.6         | 2,410.8         | 2,485.8         | 2,536.8         | 2,600.6         | 2,657.6         | 2,657.6         | 2,274.4         | 2,455.5         | 2,585.0         | 63.7                 |
| Residential/Commercial                                            | 287.1           | 280.3           | 288.6           | 291.3           | 297.2           | 296.3           | 290.0           | 288.0           | 293.5           | 302.1           | 7.4                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>1,360.8</b>  | <b>1,364.3</b>  | <b>1,364.7</b>  | <b>1,400.7</b>  | <b>1,449.2</b>  | <b>1,526.7</b>  | <b>1,558.6</b>  | <b>1,519.6</b>  | <b>1,618.9</b>  | <b>1,584.6</b>  | <b>100.0</b>         |
| Industry                                                          | 537.4           | 546.4           | 542.4           | 554.0           | 570.1           | 594.7           | 613.6           | 610.8           | 648.3           | 631.1           | 39.8                 |
| Transport                                                         | 35.7            | 39.7            | 42.0            | 43.3            | 45.5            | 50.1            | 53.5            | 52.0            | 56.5            | 58.0            | 3.7                  |
| Residential/Commercial                                            | 618.2           | 608.4           | 606.8           | 621.8           | 638.7           | 680.1           | 685.7           | 666.7           | 712.7           | 699.2           | 44.1                 |
| <b>Refined products consumption</b>                               | <b>3,675.8</b>  | <b>3,739.1</b>  | <b>3,830.4</b>  | <b>3,888.0</b>  | <b>3,984.6</b>  | <b>4,051.8</b>  | <b>4,062.6</b>  | <b>3,681.2</b>  | <b>3,897.4</b>  | <b>4,039.1</b>  | <b>100.0</b>         |
| Gasoline                                                          | 1,005.9         | 1,016.3         | 1,050.7         | 1,076.7         | 1,088.3         | 1,105.5         | 1,112.1         | 987.0           | 1,070.3         | 1,098.2         | 27.2                 |
| Diesel                                                            | 1,233.2         | 1,256.8         | 1,278.2         | 1,272.5         | 1,298.7         | 1,318.2         | 1,304.9         | 1,200.6         | 1,264.9         | 1,326.2         | 32.8                 |
| Heating Oil                                                       | 255.7           | 250.7           | 246.8           | 245.7           | 251.6           | 246.0           | 234.1           | 219.4           | 233.1           | 248.7           | 6.2                  |
| Aviation Jet                                                      | 268.5           | 278.3           | 293.6           | 307.3           | 327.2           | 341.0           | 347.5           | 195.9           | 222.9           | 237.1           | 5.9                  |
| LPG                                                               | 266.9           | 275.6           | 280.5           | 291.7           | 299.3           | 315.0           | 322.8           | 318.3           | 328.7           | 337.1           | 8.3                  |
| <b>Imports</b>                                                    | <b>4,287.3</b>  | <b>4,255.9</b>  | <b>4,435.1</b>  | <b>4,608.9</b>  | <b>4,751.3</b>  | <b>4,813.3</b>  | <b>4,807.0</b>  | <b>4,461.1</b>  | <b>4,618.3</b>  | <b>4,716.0</b>  | <b>100.0</b>         |
| Oil                                                               | 3,434.3         | 3,430.0         | 3,589.4         | 3,721.4         | 3,818.2         | 3,853.5         | 3,811.0         | 3,493.1         | 3,584.1         | 3,707.8         | 78.6                 |
| Gas                                                               | 853.0           | 825.9           | 845.7           | 887.5           | 933.1           | 959.8           | 996.0           | 968.0           | 1,034.2         | 1,008.2         | 21.4                 |
| Gasoline                                                          | 201.8           | 206.6           | 223.2           | 239.8           | 241.2           | 249.5           | 263.0           | 233.6           | 256.4           | 273.1           | 5.8                  |
| Diesel                                                            | 344.7           | 354.1           | 370.0           | 389.1           | 393.8           | 391.1           | 384.9           | 357.7           | 375.6           | 399.3           | 8.5                  |
| Heating Oil                                                       | 252.3           | 241.3           | 246.6           | 241.7           | 228.0           | 221.7           | 210.2           | 202.9           | 219.5           | 224.8           | 4.8                  |
| Aviation Jet                                                      | 73.0            | 71.9            | 78.4            | 86.6            | 92.2            | 93.9            | 94.8            | 59.9            | 57.3            | 71.4            | 1.5                  |
| LPG                                                               | 92.6            | 100.8           | 110.4           | 124.8           | 130.1           | 135.8           | 143.4           | 143.1           | 150.2           | 155.6           | 3.3                  |
| <b>Exports</b>                                                    | <b>4,337.5</b>  | <b>4,298.1</b>  | <b>4,508.0</b>  | <b>4,707.1</b>  | <b>4,793.5</b>  | <b>4,900.8</b>  | <b>4,868.5</b>  | <b>4,529.7</b>  | <b>4,630.6</b>  | <b>4,772.6</b>  | <b>100.0</b>         |
| Oil                                                               | 3,466.6         | 3,445.1         | 3,634.6         | 3,792.1         | 3,827.9         | 3,908.6         | 3,824.7         | 3,523.9         | 3,562.7         | 3,719.7         | 77.9                 |
| Gas                                                               | 870.9           | 853.0           | 873.4           | 914.9           | 965.6           | 992.2           | 1,043.9         | 1,005.9         | 1,067.9         | 1,052.9         | 22.1                 |
| Gasoline                                                          | 190.2           | 197.7           | 224.6           | 239.1           | 241.4           | 251.5           | 245.3           | 218.0           | 238.1           | 240.6           | 5.0                  |
| Diesel                                                            | 358.5           | 361.2           | 386.6           | 411.9           | 430.7           | 430.9           | 423.3           | 397.1           | 405.7           | 407.1           | 8.5                  |
| Heating Oil                                                       | 300.9           | 292.2           | 303.3           | 284.2           | 270.8           | 272.3           | 234.9           | 217.6           | 237.6           | 235.5           | 4.9                  |
| Aviation Jet                                                      | 88.0            | 84.6            | 89.2            | 92.8            | 98.6            | 103.6           | 102.1           | 75.6            | 71.8            | 90.4            | 1.9                  |
| LPG                                                               | 73.2            | 87.5            | 100.4           | 113.6           | 118.6           | 125.2           | 126.3           | 127.6           | 138.6           | 146.7           | 3.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>31,759.8</b> | <b>31,833.3</b> | <b>31,685.2</b> | <b>31,682.3</b> | <b>32,202.1</b> | <b>32,793.7</b> | <b>32,664.4</b> | <b>31,095.3</b> | <b>32,939.6</b> | <b>33,795.6</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>304.9</b>    | <b>295.7</b>    | <b>284.9</b>    | <b>276.2</b>    | <b>270.7</b>    | <b>266.1</b>    | <b>257.9</b>    | <b>253.5</b>    | <b>253.6</b>    | <b>251.8</b>    | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>81.8</b>     | <b>80.0</b>     | <b>78.0</b>     | <b>76.4</b>     | <b>75.0</b>     | <b>74.1</b>     | <b>72.3</b>     | <b>71.3</b>     | <b>70.5</b>     | <b>70.0</b>     | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>128.5</b>    | <b>126.0</b>    | <b>122.1</b>    | <b>119.4</b>    | <b>117.7</b>    | <b>116.5</b>    | <b>114.7</b>    | <b>113.9</b>    | <b>112.9</b>    | <b>111.4</b>    | -                    |

\*Heat is included

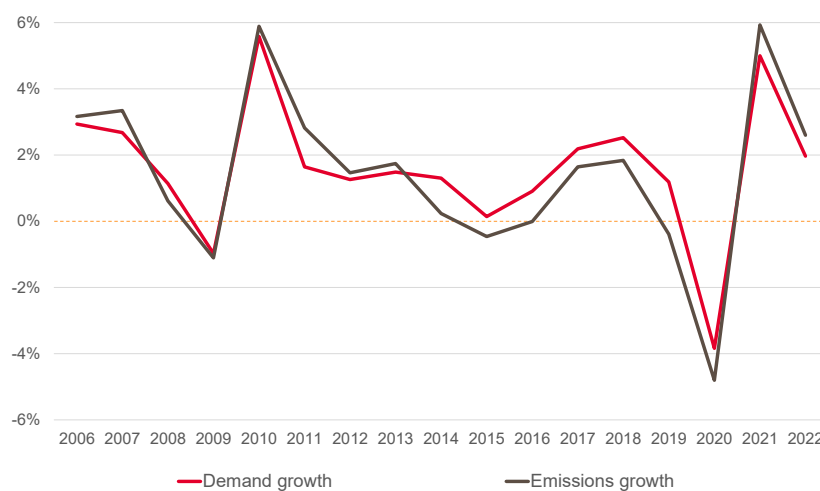
### Primary energy demand mix



### Electricity generation by source



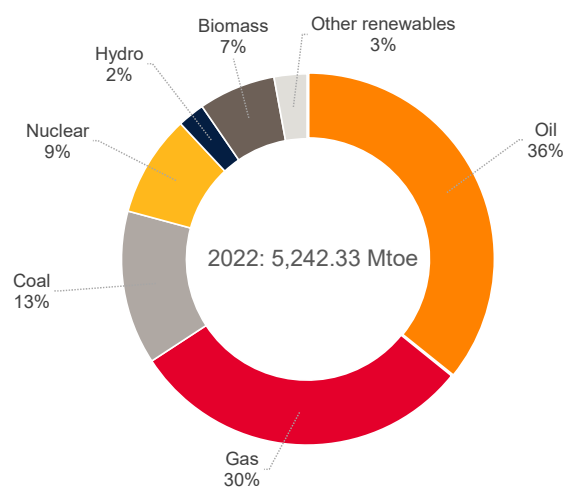
### Primary energy demand and CO<sub>2</sub> emissions growth



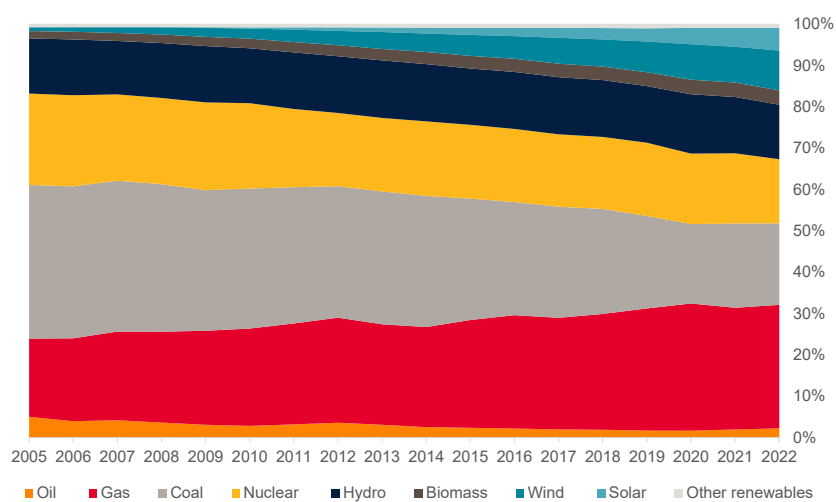
| OECD<br>(Million toe)                                             | 2013            | 2014            | 2015            | 2016            | 2017            | 2018            | 2019            | 2020            | 2021            | 2022            | Share in<br>2022 (%) |
|-------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>5,381.7</b>  | <b>5,333.4</b>  | <b>5,326.3</b>  | <b>5,343.8</b>  | <b>5,377.9</b>  | <b>5,426.6</b>  | <b>5,390.8</b>  | <b>5,032.7</b>  | <b>5,271.4</b>  | <b>5,242.3</b>  | <b>100.0</b>         |
| Oil                                                               | 1,916.5         | 1,898.9         | 1,921.6         | 1,922.9         | 1,940.8         | 1,927.4         | 1,913.3         | 1,720.2         | 1,831.7         | 1,854.4         | 35.4                 |
| Gas                                                               | 1,381.7         | 1,360.6         | 1,386.6         | 1,437.8         | 1,453.3         | 1,510.9         | 1,562.5         | 1,536.7         | 1,566.9         | 1,554.2         | 29.6                 |
| Coal                                                              | 1,035.5         | 1,015.5         | 951.6           | 902.7           | 886.3           | 858.3           | 767.3           | 654.9           | 715.2           | 695.0           | 13.3                 |
| Nuclear                                                           | 511.4           | 516.1           | 513.6           | 512.3           | 509.6           | 515.8           | 517.4           | 484.2           | 497.9           | 459.2           | 8.8                  |
| Hydro                                                             | 127.0           | 125.6           | 124.0           | 126.4           | 126.8           | 128.9           | 126.5           | 129.3           | 125.8           | 122.3           | 2.3                  |
| Biomass                                                           | 313.2           | 311.6           | 312.6           | 316.6           | 325.0           | 335.8           | 341.6           | 331.1           | 344.9           | 348.2           | 6.6                  |
| Other renewables                                                  | 50.0            | 56.8            | 66.1            | 73.3            | 85.1            | 92.4            | 104.2           | 119.1           | 129.3           | 148.1           | 2.8                  |
| Electricity balance of trade*                                     | 46.4            | 48.4            | 50.3            | 51.9            | 51.0            | 57.1            | 57.8            | 57.2            | 59.6            | 60.9            | 1.2                  |
| <b>Total final consumption, by source</b>                         | <b>3,723.6</b>  | <b>3,690.6</b>  | <b>3,710.2</b>  | <b>3,747.4</b>  | <b>3,787.2</b>  | <b>3,828.6</b>  | <b>3,818.2</b>  | <b>3,553.0</b>  | <b>3,733.9</b>  | <b>3,718.8</b>  | <b>100.0</b>         |
| Oil                                                               | 1,714.8         | 1,710.1         | 1,739.1         | 1,756.6         | 1,772.4         | 1,773.3         | 1,772.3         | 1,591.1         | 1,695.8         | 1,711.0         | 46.0                 |
| Gas                                                               | 731.9           | 717.5           | 709.1           | 721.3           | 738.2           | 758.6           | 763.9           | 724.1           | 754.3           | 731.7           | 19.7                 |
| Coal                                                              | 176.6           | 173.9           | 170.3           | 163.8           | 164.9           | 159.8           | 151.2           | 138.4           | 148.9           | 138.2           | 3.7                  |
| Electricity                                                       | 815.6           | 812.8           | 816.0           | 826.1           | 827.8           | 841.8           | 832.6           | 813.8           | 836.3           | 838.7           | 22.6                 |
| Heat                                                              | 69.7            | 66.3            | 67.3            | 70.6            | 70.6            | 72.4            | 71.6            | 69.5            | 73.3            | 71.4            | 1.9                  |
| Biomass                                                           | 215.1           | 210.0           | 208.5           | 209.0           | 213.3           | 222.7           | 226.5           | 216.1           | 225.4           | 227.9           | 6.1                  |
| <b>Electricity generation, by source</b>                          | <b>949.3</b>    | <b>944.4</b>    | <b>948.5</b>    | <b>956.4</b>    | <b>959.7</b>    | <b>977.2</b>    | <b>963.9</b>    | <b>938.8</b>    | <b>966.7</b>    | <b>975.1</b>    | <b>100.0</b>         |
| Oil                                                               | 29.2            | 23.7            | 22.2            | 20.7            | 18.6            | 18.5            | 16.2            | 15.6            | 18.7            | 21.7            | 2.2                  |
| Gas                                                               | 231.0           | 228.9           | 247.5           | 262.4           | 259.4           | 273.6           | 284.9           | 288.9           | 284.7           | 291.3           | 29.9                 |
| Coal                                                              | 305.2           | 299.8           | 278.7           | 261.9           | 258.1           | 248.6           | 215.7           | 180.8           | 197.3           | 192.2           | 19.7                 |
| Nuclear                                                           | 168.8           | 170.3           | 169.5           | 169.1           | 168.2           | 170.2           | 170.8           | 159.8           | 164.3           | 151.5           | 15.5                 |
| Hydro                                                             | 132.3           | 130.8           | 129.1           | 131.9           | 132.7           | 134.4           | 131.9           | 135.0           | 131.5           | 128.6           | 13.2                 |
| Biomass                                                           | 26.4            | 27.7            | 29.0            | 30.6            | 31.2            | 31.9            | 32.5            | 33.0            | 33.9            | 34.0            | 3.5                  |
| Wind                                                              | 38.7            | 42.2            | 48.2            | 52.4            | 60.2            | 64.2            | 71.7            | 80.5            | 83.7            | 93.8            | 9.6                  |
| Solar                                                             | 10.4            | 13.3            | 16.4            | 19.5            | 23.4            | 26.8            | 31.0            | 37.2            | 44.2            | 53.6            | 5.5                  |
| Other renewables                                                  | 7.4             | 7.6             | 7.7             | 7.9             | 8.0             | 8.9             | 9.2             | 8.1             | 8.4             | 8.4             | 0.9                  |
| <b>Total final consumption, by sector</b>                         | <b>3,723.6</b>  | <b>3,690.6</b>  | <b>3,710.2</b>  | <b>3,747.4</b>  | <b>3,787.2</b>  | <b>3,828.6</b>  | <b>3,818.2</b>  | <b>3,553.0</b>  | <b>3,733.9</b>  | <b>3,718.8</b>  | <b>100.0</b>         |
| Industry                                                          | 873.5           | 867.0           | 861.1           | 866.2           | 874.7           | 882.1           | 870.6           | 838.1           | 875.5           | 852.4           | 22.9                 |
| Transport                                                         | 1,184.4         | 1,188.2         | 1,220.3         | 1,240.0         | 1,252.9         | 1,264.1         | 1,262.3         | 1,087.2         | 1,184.8         | 1,216.5         | 32.7                 |
| Residential/Commercial                                            | 1,229.0         | 1,188.1         | 1,186.5         | 1,192.4         | 1,196.4         | 1,222.9         | 1,215.5         | 1,185.0         | 1,219.3         | 1,216.0         | 32.7                 |
| <b>Oil final consumption, by sector</b>                           | <b>1,714.8</b>  | <b>1,710.1</b>  | <b>1,739.1</b>  | <b>1,756.6</b>  | <b>1,772.4</b>  | <b>1,773.3</b>  | <b>1,772.3</b>  | <b>1,591.1</b>  | <b>1,695.8</b>  | <b>1,711.0</b>  | <b>100.0</b>         |
| Industry                                                          | 86.3            | 81.3            | 83.1            | 82.1            | 81.9            | 83.2            | 78.4            | 79.0            | 80.3            | 79.6            | 4.7                  |
| Transport                                                         | 1,119.7         | 1,121.9         | 1,153.3         | 1,170.0         | 1,180.2         | 1,190.0         | 1,186.7         | 1,017.1         | 1,110.3         | 1,141.5         | 66.7                 |
| Residential/Commercial                                            | 132.6           | 121.3           | 123.2           | 122.7           | 120.6           | 114.1           | 111.2           | 110.5           | 107.5           | 109.1           | 6.4                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>731.9</b>    | <b>717.5</b>    | <b>709.1</b>    | <b>721.3</b>    | <b>738.2</b>    | <b>758.6</b>    | <b>763.9</b>    | <b>724.1</b>    | <b>754.3</b>    | <b>731.7</b>    | <b>100.0</b>         |
| Industry                                                          | 266.6           | 267.8           | 264.4           | 273.6           | 276.8           | 279.0           | 280.2           | 277.1           | 287.7           | 277.5           | 37.9                 |
| Transport                                                         | 4.3             | 4.6             | 4.7             | 4.7             | 4.8             | 4.8             | 5.0             | 4.6             | 5.3             | 5.0             | 0.7                  |
| Residential/Commercial                                            | 420.2           | 403.3           | 397.2           | 396.5           | 403.9           | 422.8           | 426.7           | 405.6           | 426.2           | 417.4           | 57.1                 |
| <b>Refined products consumption</b>                               | <b>1,709.3</b>  | <b>1,704.5</b>  | <b>1,732.3</b>  | <b>1,751.2</b>  | <b>1,765.6</b>  | <b>1,765.7</b>  | <b>1,762.3</b>  | <b>1,580.4</b>  | <b>1,683.1</b>  | <b>1,698.3</b>  | <b>100.0</b>         |
| Gasoline                                                          | 598.0           | 596.7           | 608.4           | 617.2           | 613.7           | 613.9           | 611.4           | 528.0           | 576.7           | 587.2           | 34.6                 |
| Diesel                                                            | 599.6           | 603.4           | 609.8           | 613.7           | 623.6           | 627.8           | 621.3           | 569.2           | 600.3           | 606.9           | 35.7                 |
| Heating Oil                                                       | 21.7            | 18.9            | 20.5            | 18.6            | 17.9            | 16.6            | 14.4            | 12.9            | 13.3            | 13.1            | 0.8                  |
| Aviation Jet                                                      | 71.2            | 73.8            | 77.0            | 79.6            | 83.4            | 85.0            | 86.1            | 52.0            | 65.2            | 78.7            | 4.6                  |
| LPG                                                               | 112.2           | 108.9           | 109.9           | 108.7           | 106.1           | 111.5           | 115.4           | 107.3           | 107.5           | 110.3           | 6.5                  |
| <b>Imports</b>                                                    | <b>2,643.6</b>  | <b>2,561.4</b>  | <b>2,652.8</b>  | <b>2,738.7</b>  | <b>2,781.4</b>  | <b>2,764.3</b>  | <b>2,723.6</b>  | <b>2,433.7</b>  | <b>2,546.9</b>  | <b>2,623.4</b>  | <b>100.0</b>         |
| Oil                                                               | 2,012.2         | 1,961.8         | 2,049.4         | 2,101.5         | 2,126.8         | 2,104.6         | 2,043.1         | 1,785.6         | 1,860.7         | 1,932.1         | 73.6                 |
| Gas                                                               | 631.4           | 599.6           | 603.5           | 637.1           | 654.6           | 659.7           | 680.5           | 648.2           | 686.2           | 691.4           | 26.4                 |
| Gasoline                                                          | 86.8            | 84.4            | 94.8            | 103.0           | 100.6           | 102.0           | 110.9           | 90.1            | 107.7           | 103.5           | 3.9                  |
| Diesel                                                            | 177.9           | 177.0           | 189.9           | 202.8           | 201.6           | 199.6           | 199.3           | 188.0           | 192.7           | 196.6           | 7.5                  |
| Heating Oil                                                       | 93.2            | 88.9            | 88.3            | 85.7            | 68.1            | 68.8            | 58.4            | 61.0            | 69.5            | 68.6            | 2.6                  |
| Aviation Jet                                                      | 44.6            | 44.8            | 50.1            | 55.1            | 58.2            | 60.3            | 62.8            | 40.3            | 40.2            | 51.6            | 2.0                  |
| LPG                                                               | 51.8            | 52.8            | 54.9            | 59.8            | 60.3            | 61.0            | 63.7            | 62.1            | 63.7            | 65.1            | 2.5                  |
| <b>Exports</b>                                                    | <b>1,291.7</b>  | <b>1,319.7</b>  | <b>1,406.0</b>  | <b>1,470.3</b>  | <b>1,564.1</b>  | <b>1,640.1</b>  | <b>1,707.0</b>  | <b>1,659.8</b>  | <b>1,722.2</b>  | <b>1,820.8</b>  | <b>100.0</b>         |
| Oil                                                               | 993.6           | 1,033.0         | 1,109.7         | 1,145.4         | 1,213.7         | 1,279.5         | 1,308.1         | 1,251.2         | 1,272.1         | 1,322.9         | 72.7                 |
| Gas                                                               | 298.0           | 286.7           | 296.4           | 324.8           | 350.5           | 360.6           | 398.9           | 408.6           | 450.1           | 497.9           | 27.3                 |
| Gasoline                                                          | 116.4           | 119.5           | 136.5           | 143.0           | 150.4           | 154.3           | 153.0           | 130.5           | 149.8           | 151.9           | 8.3                  |
| Diesel                                                            | 201.6           | 195.4           | 207.2           | 212.5           | 226.1           | 210.9           | 215.0           | 201.9           | 202.7           | 214.2           | 11.8                 |
| Heating Oil                                                       | 111.4           | 113.0           | 117.7           | 114.5           | 97.0            | 96.4            | 76.6            | 73.0            | 82.2            | 82.5            | 4.5                  |
| Aviation Jet                                                      | 40.9            | 38.0            | 40.7            | 42.9            | 45.9            | 49.7            | 49.8            | 30.8            | 29.8            | 39.1            | 2.1                  |
| LPG                                                               | 10.7            | 27.2            | 35.8            | 42.7            | 47.6            | 51.0            | 58.9            | 67.8            | 72.1            | 73.4            | 4.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>12,402.0</b> | <b>12,202.9</b> | <b>12,100.8</b> | <b>12,049.5</b> | <b>12,029.2</b> | <b>12,004.2</b> | <b>11,671.1</b> | <b>10,612.6</b> | <b>11,219.7</b> | <b>11,248.5</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>241.3</b>    | <b>232.5</b>    | <b>224.8</b>    | <b>219.7</b>    | <b>213.7</b>    | <b>208.3</b>    | <b>199.1</b>    | <b>189.6</b>    | <b>190.2</b>    | <b>185.3</b>    | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>65.4</b>     | <b>63.2</b>     | <b>62.1</b>     | <b>61.5</b>     | <b>60.4</b>     | <b>59.8</b>     | <b>58.4</b>     | <b>56.9</b>     | <b>56.8</b>     | <b>55.3</b>     | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>104.7</b>    | <b>101.6</b>    | <b>98.9</b>     | <b>97.4</b>     | <b>95.5</b>     | <b>94.2</b>     | <b>92.0</b>     | <b>89.9</b>     | <b>89.4</b>     | <b>86.6</b>     | -                    |

\*Heat is included

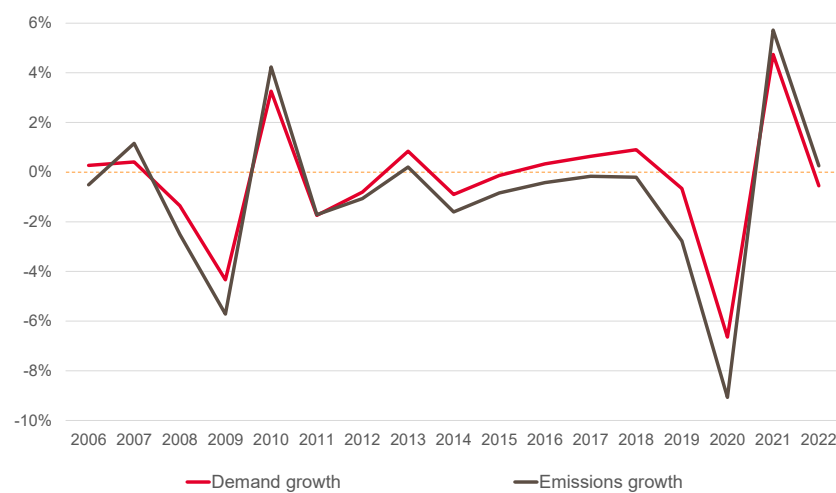
### Primary energy demand mix



### Electricity generation by source



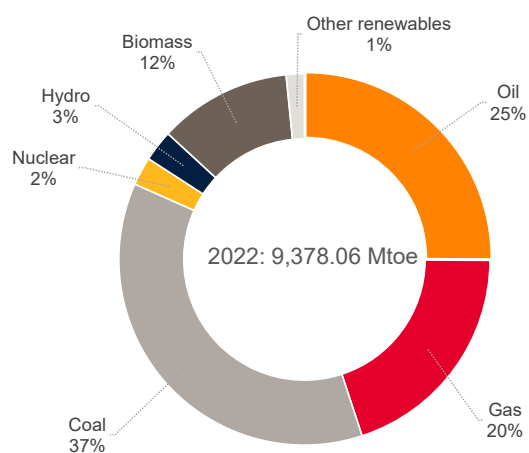
### Primary energy demand and CO<sub>2</sub> emissions growth



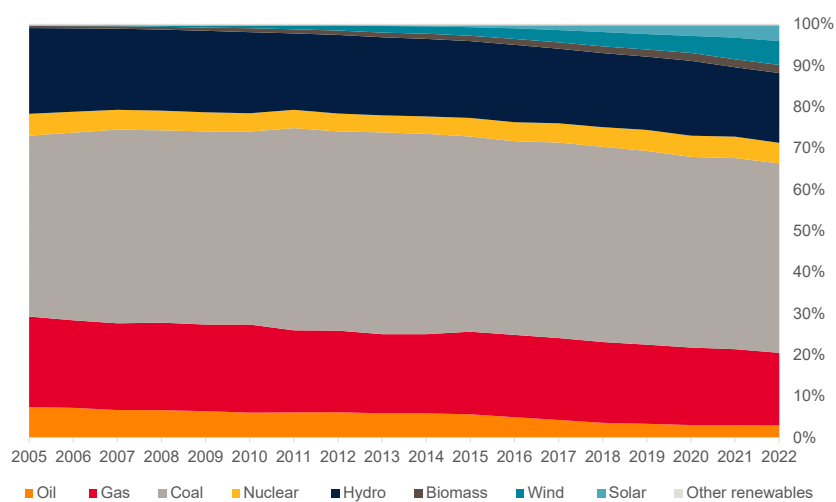
| Non-OECD<br>(Million toe)                                         | 2013            | 2014            | 2015            | 2016            | 2017            | 2018            | 2019            | 2020            | 2021            | 2022            | Share in<br>2022 (%) |
|-------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>7,652.2</b>  | <b>7,861.8</b>  | <b>7,870.0</b>  | <b>7,962.5</b>  | <b>8,207.6</b>  | <b>8,502.4</b>  | <b>8,709.4</b>  | <b>8,636.7</b>  | <b>9,071.9</b>  | <b>9,378.1</b>  | <b>100.0</b>         |
| Oil                                                               | 1,950.5         | 2,036.6         | 2,058.8         | 2,114.0         | 2,162.5         | 2,181.2         | 2,224.4         | 2,124.5         | 2,215.7         | 2,328.5         | 24.8                 |
| Gas                                                               | 1,513.1         | 1,533.4         | 1,533.4         | 1,582.6         | 1,651.3         | 1,757.5         | 1,782.4         | 1,766.3         | 1,892.6         | 1,848.6         | 19.7                 |
| Coal                                                              | 2,876.3         | 2,939.8         | 2,898.4         | 2,835.8         | 2,914.9         | 3,022.6         | 3,096.0         | 3,097.1         | 3,250.0         | 3,407.1         | 36.3                 |
| Nuclear                                                           | 134.7           | 144.7           | 156.1           | 167.5           | 177.4           | 190.2           | 209.5           | 213.0           | 233.1           | 229.1           | 2.4                  |
| Hydro                                                             | 200.3           | 208.8           | 210.9           | 220.4           | 223.6           | 232.6           | 237.7           | 244.4           | 243.5           | 253.2           | 2.7                  |
| Biomass                                                           | 909.4           | 922.2           | 925.5           | 941.3           | 958.4           | 979.9           | 1,002.5         | 1,019.8         | 1,034.3         | 1,074.9         | 11.5                 |
| Other renewables                                                  | 19.1            | 23.2            | 29.0            | 39.6            | 52.2            | 67.7            | 80.8            | 92.8            | 122.3           | 146.0           | 1.6                  |
| Electricity balance of trade*                                     | 48.7            | 53.1            | 58.0            | 61.3            | 67.3            | 70.7            | 76.1            | 78.8            | 80.4            | 90.7            | 1.0                  |
| <b>Total final consumption, by source</b>                         | <b>5,268.2</b>  | <b>5,416.6</b>  | <b>5,450.1</b>  | <b>5,514.3</b>  | <b>5,644.2</b>  | <b>5,813.6</b>  | <b>5,889.6</b>  | <b>5,852.1</b>  | <b>6,104.8</b>  | <b>6,329.2</b>  | <b>100.0</b>         |
| Oil                                                               | 1,622.0         | 1,677.5         | 1,722.4         | 1,749.9         | 1,810.2         | 1,867.8         | 1,883.2         | 1,810.5         | 1,900.5         | 2,010.0         | 31.8                 |
| Gas                                                               | 628.9           | 646.8           | 655.6           | 679.4           | 711.1           | 768.1           | 794.7           | 795.5           | 864.6           | 852.9           | 13.5                 |
| Coal                                                              | 1,151.5         | 1,168.4         | 1,134.9         | 1,090.5         | 1,052.4         | 1,016.6         | 998.5           | 999.2           | 978.4           | 1,018.1         | 16.1                 |
| Electricity                                                       | 858.7           | 906.7           | 921.9           | 964.1           | 1,023.2         | 1,090.5         | 1,127.5         | 1,143.4         | 1,234.2         | 1,276.7         | 20.2                 |
| Heat                                                              | 244.3           | 246.5           | 246.1           | 259.1           | 268.5           | 285.7           | 290.3           | 297.5           | 317.8           | 324.9           | 5.1                  |
| Biomass                                                           | 762.9           | 770.7           | 769.3           | 771.2           | 778.8           | 784.9           | 795.4           | 806.1           | 809.2           | 839.8           | 13.3                 |
| <b>Electricity generation, by source</b>                          | <b>1,070.7</b>  | <b>1,124.5</b>  | <b>1,145.5</b>  | <b>1,197.2</b>  | <b>1,259.8</b>  | <b>1,320.4</b>  | <b>1,363.0</b>  | <b>1,370.2</b>  | <b>1,473.1</b>  | <b>1,521.5</b>  | <b>100.0</b>         |
| Oil                                                               | 62.5            | 65.6            | 64.1            | 59.0            | 53.6            | 47.0            | 45.3            | 41.0            | 44.4            | 44.4            | 2.9                  |
| Gas                                                               | 205.0           | 215.6           | 229.2           | 238.5           | 249.5           | 257.8           | 261.2           | 257.4           | 270.6           | 267.5           | 17.6                 |
| Coal                                                              | 522.9           | 545.0           | 540.9           | 561.0           | 596.2           | 624.1           | 638.9           | 632.0           | 680.9           | 697.6           | 45.8                 |
| Nuclear                                                           | 44.4            | 47.7            | 51.5            | 55.3            | 58.5            | 62.8            | 69.1            | 70.3            | 76.9            | 75.6            | 5.0                  |
| Hydro                                                             | 202.2           | 210.9           | 213.2           | 224.2           | 227.6           | 236.6           | 241.7           | 248.3           | 247.4           | 257.0           | 16.9                 |
| Biomass                                                           | 12.2            | 14.0            | 14.9            | 17.2            | 19.4            | 21.7            | 23.7            | 26.0            | 28.3            | 29.9            | 2.0                  |
| Wind                                                              | 17.0            | 19.9            | 23.4            | 30.4            | 37.4            | 45.5            | 51.2            | 57.0            | 76.7            | 87.8            | 5.8                  |
| Solar                                                             | 2.1             | 3.3             | 5.4             | 9.0             | 14.6            | 21.8            | 29.0            | 35.0            | 44.6            | 58.3            | 3.8                  |
| Other renewables                                                  | 2.2             | 2.4             | 2.7             | 2.7             | 2.9             | 3.0             | 3.1             | 3.2             | 3.2             | 3.3             | 0.2                  |
| <b>Total final consumption, by sector</b>                         | <b>5,268.2</b>  | <b>5,416.6</b>  | <b>5,450.1</b>  | <b>5,514.3</b>  | <b>5,644.2</b>  | <b>5,813.6</b>  | <b>5,889.6</b>  | <b>5,852.1</b>  | <b>6,104.8</b>  | <b>6,329.2</b>  | <b>100.0</b>         |
| Industry                                                          | 2,117.9         | 2,173.3         | 2,134.9         | 2,118.1         | 2,135.8         | 2,182.6         | 2,213.6         | 2,242.7         | 2,306.0         | 2,362.5         | 37.3                 |
| Transport                                                         | 972.4           | 1,001.8         | 1,032.4         | 1,056.8         | 1,095.3         | 1,144.0         | 1,158.8         | 1,070.7         | 1,140.3         | 1,218.0         | 19.2                 |
| Residential/Commercial                                            | 1,536.4         | 1,572.3         | 1,595.9         | 1,636.7         | 1,692.1         | 1,747.8         | 1,764.7         | 1,770.9         | 1,859.7         | 1,922.3         | 30.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>1,622.0</b>  | <b>1,677.5</b>  | <b>1,722.4</b>  | <b>1,749.9</b>  | <b>1,810.2</b>  | <b>1,867.8</b>  | <b>1,883.2</b>  | <b>1,810.5</b>  | <b>1,900.5</b>  | <b>2,010.0</b>  | <b>100.0</b>         |
| Industry                                                          | 190.0           | 196.9           | 200.2           | 193.9           | 194.5           | 194.6           | 200.2           | 205.1           | 209.0           | 223.0           | 11.1                 |
| Transport                                                         | 902.4           | 925.0           | 950.5           | 972.2           | 1,006.0         | 1,043.6         | 1,048.2         | 961.4           | 1,025.4         | 1,100.4         | 54.7                 |
| Residential/Commercial                                            | 154.5           | 159.0           | 165.3           | 168.6           | 176.6           | 182.2           | 178.8           | 177.4           | 186.0           | 193.0           | 9.6                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>628.9</b>    | <b>646.8</b>    | <b>655.6</b>    | <b>679.4</b>    | <b>711.1</b>    | <b>768.1</b>    | <b>794.7</b>    | <b>795.5</b>    | <b>864.6</b>    | <b>852.9</b>    | <b>100.0</b>         |
| Industry                                                          | 270.8           | 278.6           | 278.0           | 280.4           | 293.2           | 315.7           | 333.5           | 333.7           | 360.6           | 353.6           | 41.5                 |
| Transport                                                         | 31.4            | 35.1            | 37.3            | 38.6            | 40.7            | 45.3            | 48.5            | 47.4            | 51.2            | 53.1            | 6.2                  |
| Residential/Commercial                                            | 198.1           | 205.2           | 209.7           | 225.3           | 234.8           | 257.3           | 259.0           | 261.1           | 286.5           | 281.8           | 33.0                 |
| <b>Refined products consumption</b>                               | <b>1,615.0</b>  | <b>1,670.7</b>  | <b>1,716.1</b>  | <b>1,742.2</b>  | <b>1,804.5</b>  | <b>1,862.1</b>  | <b>1,877.6</b>  | <b>1,804.9</b>  | <b>1,894.5</b>  | <b>2,002.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 407.9           | 419.6           | 442.4           | 459.5           | 474.6           | 491.6           | 500.7           | 459.0           | 493.6           | 511.0           | 25.5                 |
| Diesel                                                            | 611.8           | 620.8           | 625.4           | 618.0           | 632.5           | 647.4           | 635.6           | 592.6           | 622.9           | 674.2           | 33.7                 |
| Heating Oil                                                       | 64.9            | 66.6            | 63.0            | 56.6            | 56.6            | 52.0            | 51.9            | 48.3            | 51.9            | 55.6            | 2.8                  |
| Aviation Jet                                                      | 37.0            | 38.7            | 41.4            | 44.7            | 49.3            | 52.7            | 54.8            | 45.2            | 48.2            | 48.4            | 2.4                  |
| LPG                                                               | 154.6           | 166.7           | 170.6           | 183.0           | 193.2           | 203.5           | 207.5           | 211.0           | 221.2           | 226.8           | 11.3                 |
| <b>Imports</b>                                                    | <b>1,643.7</b>  | <b>1,694.5</b>  | <b>1,782.2</b>  | <b>1,870.2</b>  | <b>1,969.9</b>  | <b>2,049.0</b>  | <b>2,083.5</b>  | <b>2,027.4</b>  | <b>2,071.4</b>  | <b>2,092.6</b>  | <b>100.0</b>         |
| Oil                                                               | 1,422.1         | 1,468.2         | 1,540.0         | 1,619.9         | 1,691.4         | 1,748.9         | 1,768.0         | 1,707.6         | 1,723.4         | 1,775.8         | 84.9                 |
| Gas                                                               | 221.6           | 226.3           | 242.2           | 250.3           | 278.5           | 300.1           | 315.5           | 319.8           | 348.0           | 316.8           | 15.1                 |
| Gasoline                                                          | 115.0           | 122.3           | 128.4           | 136.9           | 140.6           | 147.5           | 152.1           | 143.5           | 148.6           | 169.7           | 8.1                  |
| Diesel                                                            | 166.9           | 177.2           | 180.1           | 186.2           | 192.2           | 191.5           | 185.6           | 169.7           | 182.9           | 202.7           | 9.7                  |
| Heating Oil                                                       | 159.1           | 152.4           | 158.3           | 155.9           | 159.9           | 153.0           | 151.8           | 141.9           | 150.1           | 156.2           | 7.5                  |
| Aviation Jet                                                      | 28.4            | 27.1            | 28.3            | 31.6            | 34.1            | 33.6            | 32.0            | 19.6            | 17.1            | 19.8            | 0.9                  |
| LPG                                                               | 40.9            | 48.0            | 55.5            | 65.1            | 69.8            | 74.8            | 79.7            | 81.0            | 86.6            | 90.6            | 4.3                  |
| <b>Exports</b>                                                    | <b>3,045.9</b>  | <b>2,978.4</b>  | <b>3,102.0</b>  | <b>3,236.8</b>  | <b>3,229.4</b>  | <b>3,260.7</b>  | <b>3,161.5</b>  | <b>2,869.9</b>  | <b>2,908.3</b>  | <b>2,951.8</b>  | <b>100.0</b>         |
| Oil                                                               | 2,473.0         | 2,412.1         | 2,524.9         | 2,646.7         | 2,614.2         | 2,629.1         | 2,516.5         | 2,272.7         | 2,290.6         | 2,396.8         | 81.2                 |
| Gas                                                               | 572.9           | 566.3           | 577.1           | 590.1           | 615.1           | 631.6           | 645.0           | 597.3           | 617.7           | 555.0           | 18.8                 |
| Gasoline                                                          | 73.8            | 78.2            | 88.1            | 96.1            | 91.0            | 97.2            | 92.2            | 87.5            | 88.3            | 88.8            | 3.0                  |
| Diesel                                                            | 156.9           | 165.8           | 179.5           | 199.4           | 204.5           | 220.0           | 208.3           | 195.2           | 203.1           | 192.9           | 6.5                  |
| Heating Oil                                                       | 189.5           | 179.2           | 185.6           | 169.7           | 173.9           | 175.9           | 158.3           | 144.7           | 155.4           | 153.0           | 5.2                  |
| Aviation Jet                                                      | 47.1            | 46.6            | 48.5            | 49.9            | 52.7            | 54.0            | 52.2            | 44.7            | 42.0            | 51.3            | 1.7                  |
| LPG                                                               | 62.5            | 60.3            | 64.6            | 70.9            | 71.0            | 74.2            | 67.4            | 59.7            | 66.5            | 73.3            | 2.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>19,357.8</b> | <b>19,630.4</b> | <b>19,584.4</b> | <b>19,632.8</b> | <b>20,173.0</b> | <b>20,789.5</b> | <b>20,993.3</b> | <b>20,482.7</b> | <b>21,719.8</b> | <b>22,526.1</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>367.0</b>    | <b>356.0</b>    | <b>341.4</b>    | <b>327.9</b>    | <b>321.8</b>    | <b>316.9</b>    | <b>308.5</b>    | <b>307.2</b>    | <b>306.3</b>    | <b>306.4</b>    | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>91.0</b>     | <b>89.3</b>     | <b>86.2</b>     | <b>83.4</b>     | <b>81.5</b>     | <b>80.1</b>     | <b>78.1</b>     | <b>78.9</b>     | <b>77.4</b>     | <b>77.2</b>     | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>145.1</b>    | <b>142.6</b>    | <b>137.2</b>    | <b>133.0</b>    | <b>130.9</b>    | <b>129.6</b>    | <b>128.0</b>    | <b>129.5</b>    | <b>127.9</b>    | <b>127.1</b>    | <b>-</b>             |

\*Heat is included

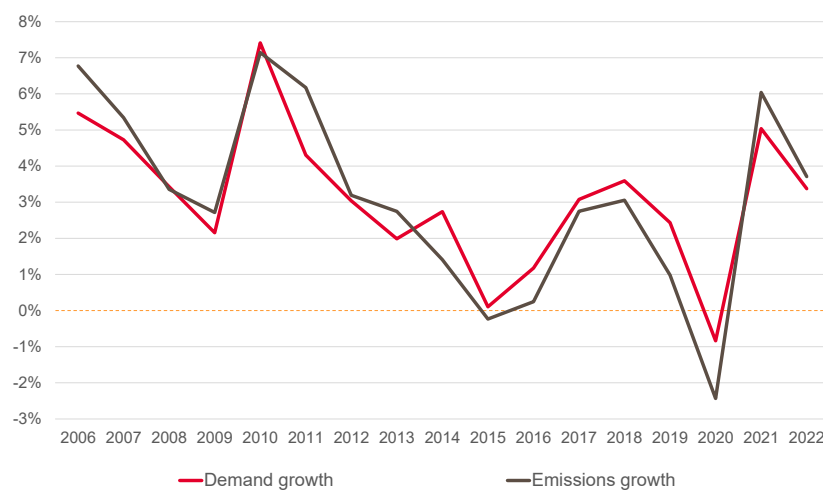
### Primary energy demand mix



### Electricity generation by source



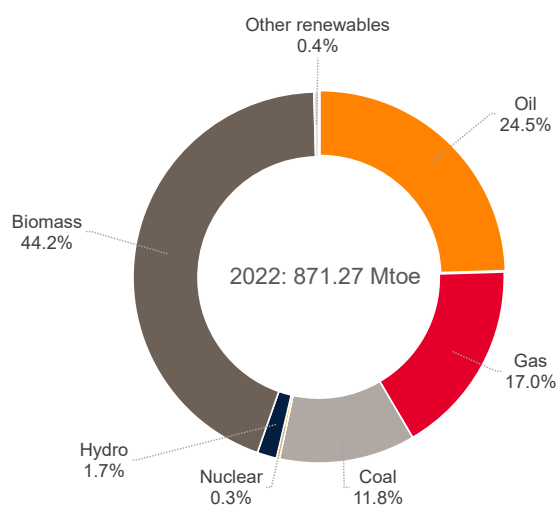
### Primary energy demand and CO<sub>2</sub> emissions growth



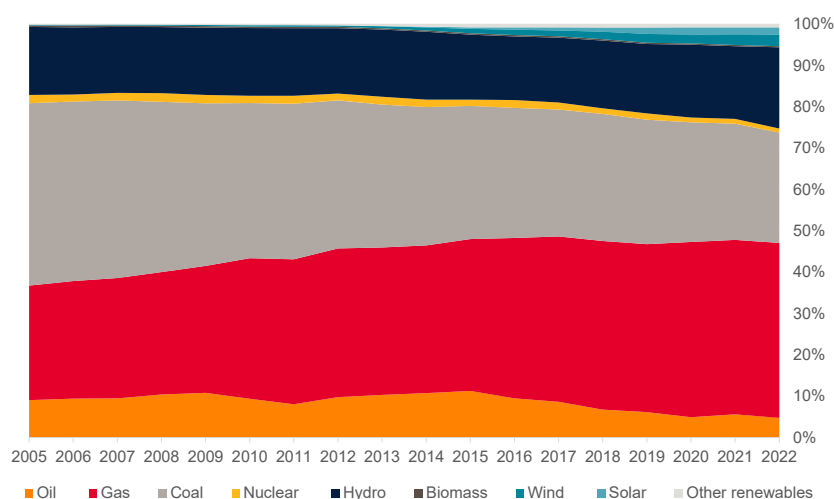
| <b>Africa</b><br>(Million toe)                                    | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>735.7</b>   | <b>771.4</b>   | <b>766.3</b>   | <b>786.8</b>   | <b>798.0</b>   | <b>808.5</b>   | <b>834.0</b>   | <b>816.0</b>   | <b>845.0</b>   | <b>871.3</b>   | <b>100.0</b>         |
| Oil                                                               | 172.0          | 193.4          | 184.0          | 186.7          | 182.9          | 181.3          | 192.3          | 177.3          | 187.9          | 212.6          | 24.4                 |
| Gas                                                               | 104.6          | 106.2          | 110.2          | 118.1          | 125.6          | 132.9          | 135.6          | 133.1          | 146.8          | 147.5          | 16.9                 |
| Coal                                                              | 112.2          | 119.4          | 113.2          | 117.0          | 118.7          | 116.4          | 118.2          | 112.4          | 110.3          | 102.7          | 11.8                 |
| Nuclear                                                           | 3.7            | 3.6            | 3.2            | 3.9            | 3.7            | 3.0            | 3.5            | 2.6            | 2.7            | 2.3            | 0.3                  |
| Hydro                                                             | 10.1           | 10.6           | 10.4           | 10.3           | 10.7           | 11.6           | 12.0           | 12.5           | 13.1           | 14.7           | 1.7                  |
| Biomass                                                           | 330.3          | 334.0          | 339.6          | 344.5          | 349.7          | 355.7          | 364.4          | 370.2          | 376.3          | 383.5          | 44.0                 |
| Other renewables                                                  | 0.3            | 0.6            | 1.0            | 1.5            | 1.7            | 2.4            | 3.2            | 3.3            | 3.3            | 3.5            | 0.4                  |
| Electricity balance of trade*                                     | 2.6            | 3.6            | 4.6            | 4.8            | 5.0            | 5.3            | 4.8            | 4.6            | 4.5            | 4.5            | 0.5                  |
| <b>Total final consumption, by source</b>                         | <b>523.7</b>   | <b>534.8</b>   | <b>540.4</b>   | <b>550.6</b>   | <b>564.7</b>   | <b>575.9</b>   | <b>582.1</b>   | <b>575.1</b>   | <b>597.0</b>   | <b>605.0</b>   | <b>100.0</b>         |
| Oil                                                               | 147.8          | 153.1          | 153.3          | 156.2          | 158.1          | 161.4          | 164.2          | 154.9          | 165.2          | 169.5          | 28.0                 |
| Gas                                                               | 33.2           | 32.3           | 35.4           | 35.8           | 38.0           | 42.2           | 42.6           | 41.0           | 45.2           | 45.5           | 7.5                  |
| Coal                                                              | 20.4           | 21.5           | 19.2           | 19.7           | 23.5           | 23.9           | 20.3           | 18.7           | 18.0           | 16.3           | 2.7                  |
| Electricity                                                       | 50.6           | 52.2           | 52.8           | 54.3           | 56.5           | 58.1           | 58.7           | 58.1           | 61.0           | 61.2           | 10.1                 |
| Heat                                                              | 0.1            | 0.1            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.0                  |
| Biomass                                                           | 271.4          | 275.6          | 279.5          | 284.3          | 288.5          | 290.0          | 296.2          | 302.1          | 307.4          | 312.3          | 51.6                 |
| <b>Electricity generation, by source</b>                          | <b>63.9</b>    | <b>66.0</b>    | <b>68.1</b>    | <b>69.0</b>    | <b>71.1</b>    | <b>73.0</b>    | <b>74.3</b>    | <b>73.5</b>    | <b>76.9</b>    | <b>76.9</b>    | <b>100.0</b>         |
| Oil                                                               | 6.6            | 7.1            | 7.7            | 6.5            | 6.1            | 4.9            | 4.6            | 3.6            | 4.3            | 3.7            | 4.8                  |
| Gas                                                               | 22.8           | 23.6           | 25.0           | 26.8           | 28.5           | 29.8           | 30.2           | 31.2           | 32.5           | 32.5           | 42.3                 |
| Coal                                                              | 22.1           | 22.1           | 22.0           | 21.8           | 21.8           | 22.5           | 22.4           | 21.3           | 21.6           | 20.5           | 26.7                 |
| Nuclear                                                           | 1.2            | 1.2            | 1.1            | 1.3            | 1.2            | 1.0            | 1.1            | 0.9            | 0.9            | 0.7            | 1.0                  |
| Hydro                                                             | 10.4           | 10.9           | 10.7           | 10.6           | 11.2           | 12.0           | 12.5           | 12.9           | 13.5           | 15.1           | 19.7                 |
| Biomass                                                           | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.3                  |
| Wind                                                              | 0.3            | 0.5            | 0.7            | 0.9            | 1.0            | 1.3            | 1.6            | 1.6            | 1.9            | 2.1            | 2.8                  |
| Solar                                                             | 0.0            | 0.1            | 0.2            | 0.4            | 0.5            | 0.8            | 1.2            | 1.3            | 1.4            | 1.4            | 1.8                  |
| Other renewables                                                  | 0.3            | 0.4            | 0.5            | 0.5            | 0.5            | 0.5            | 0.6            | 0.5            | 0.6            | 0.6            | 0.7                  |
| <b>Total final consumption, by sector</b>                         | <b>523.7</b>   | <b>534.8</b>   | <b>540.4</b>   | <b>550.6</b>   | <b>564.7</b>   | <b>575.9</b>   | <b>582.1</b>   | <b>575.1</b>   | <b>597.0</b>   | <b>605.0</b>   | <b>100.0</b>         |
| Industry                                                          | 90.1           | 87.5           | 86.1           | 86.0           | 85.2           | 89.5           | 87.4           | 84.6           | 90.2           | 89.6           | 14.8                 |
| Transport                                                         | 99.2           | 103.0          | 105.0          | 109.2          | 110.5          | 114.0          | 117.7          | 109.2          | 116.9          | 120.3          | 19.9                 |
| Residential/Commercial                                            | 306.0          | 315.2          | 319.2          | 324.4          | 337.0          | 339.1          | 344.4          | 349.1          | 355.8          | 360.6          | 59.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>147.8</b>   | <b>153.1</b>   | <b>153.3</b>   | <b>156.2</b>   | <b>158.1</b>   | <b>161.4</b>   | <b>164.2</b>   | <b>154.9</b>   | <b>165.2</b>   | <b>169.5</b>   | <b>100.0</b>         |
| Industry                                                          | 17.4           | 18.3           | 17.7           | 17.6           | 16.9           | 17.1           | 16.1           | 15.2           | 16.7           | 17.1           | 10.1                 |
| Transport                                                         | 98.3           | 102.2          | 104.2          | 108.4          | 109.7          | 113.1          | 116.7          | 108.3          | 115.7          | 119.2          | 70.3                 |
| Residential/Commercial                                            | 19.0           | 18.7           | 18.3           | 16.9           | 16.8           | 16.9           | 17.7           | 17.4           | 18.0           | 18.1           | 10.7                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>33.2</b>    | <b>32.3</b>    | <b>35.4</b>    | <b>35.8</b>    | <b>38.0</b>    | <b>42.2</b>    | <b>42.6</b>    | <b>41.0</b>    | <b>45.2</b>    | <b>45.5</b>    | <b>100.0</b>         |
| Industry                                                          | 17.2           | 15.8           | 16.6           | 16.1           | 17.8           | 18.3           | 18.2           | 17.6           | 19.9           | 19.9           | 43.8                 |
| Transport                                                         | 0.4            | 0.4            | 0.3            | 0.3            | 0.3            | 0.4            | 0.5            | 0.5            | 0.6            | 0.6            | 1.4                  |
| Residential/Commercial                                            | 7.5            | 8.1            | 8.9            | 9.3            | 10.0           | 12.0           | 12.4           | 12.3           | 12.8           | 13.0           | 28.6                 |
| <b>Refined products consumption</b>                               | <b>147.8</b>   | <b>153.1</b>   | <b>153.3</b>   | <b>156.2</b>   | <b>158.1</b>   | <b>161.4</b>   | <b>164.2</b>   | <b>154.9</b>   | <b>165.2</b>   | <b>169.5</b>   | <b>100.0</b>         |
| Gasoline                                                          | 42.9           | 44.2           | 45.7           | 48.1           | 48.8           | 50.4           | 51.7           | 49.3           | 52.6           | 55.0           | 32.5                 |
| Diesel                                                            | 69.5           | 71.8           | 72.9           | 74.7           | 74.9           | 76.6           | 78.9           | 72.3           | 76.7           | 76.9           | 45.4                 |
| Heating Oil                                                       | 6.8            | 7.3            | 6.0            | 5.6            | 5.3            | 5.4            | 4.5            | 4.3            | 5.0            | 5.4            | 3.2                  |
| Aviation Jet                                                      | 1.8            | 1.7            | 1.8            | 2.0            | 2.1            | 2.3            | 2.5            | 1.6            | 1.7            | 2.1            | 1.2                  |
| LPG                                                               | 13.1           | 13.0           | 13.4           | 13.6           | 14.0           | 14.4           | 15.1           | 15.5           | 16.6           | 16.4           | 9.7                  |
| <b>Imports</b>                                                    | <b>147.1</b>   | <b>160.2</b>   | <b>162.7</b>   | <b>169.9</b>   | <b>165.0</b>   | <b>157.2</b>   | <b>165.9</b>   | <b>158.0</b>   | <b>168.9</b>   | <b>166.4</b>   | <b>100.0</b>         |
| Oil                                                               | 140.3          | 153.0          | 149.7          | 154.7          | 150.4          | 146.3          | 157.5          | 148.2          | 157.3          | 151.5          | 91.0                 |
| Gas                                                               | 6.8            | 7.2            | 13.0           | 15.2           | 14.6           | 10.9           | 8.4            | 9.8            | 11.6           | 15.0           | 9.0                  |
| Gasoline                                                          | 30.9           | 32.9           | 32.3           | 37.1           | 36.9           | 32.0           | 39.8           | 39.3           | 41.9           | 43.3           | 26.0                 |
| Diesel                                                            | 43.7           | 48.0           | 53.1           | 51.5           | 51.8           | 51.5           | 51.6           | 48.2           | 51.5           | 57.9           | 34.8                 |
| Heating Oil                                                       | 7.8            | 9.6            | 9.3            | 8.1            | 7.5            | 6.3            | 6.1            | 5.9            | 6.0            | 15.8           | 9.5                  |
| Aviation Jet                                                      | 4.2            | 4.2            | 4.8            | 5.1            | 5.8            | 6.4            | 6.1            | 3.8            | 4.6            | 5.2            | 3.1                  |
| LPG                                                               | 6.5            | 7.0            | 7.5            | 7.8            | 7.9            | 8.4            | 8.5            | 9.0            | 8.9            | 7.6            | 4.6                  |
| <b>Exports</b>                                                    | <b>456.9</b>   | <b>428.7</b>   | <b>435.9</b>   | <b>415.6</b>   | <b>440.3</b>   | <b>443.7</b>   | <b>446.1</b>   | <b>364.0</b>   | <b>392.3</b>   | <b>351.5</b>   | <b>100.0</b>         |
| Oil                                                               | 383.9          | 356.1          | 363.5          | 336.5          | 354.5          | 359.0          | 365.8          | 289.7          | 303.5          | 270.5          | 77.0                 |
| Gas                                                               | 73.0           | 72.6           | 72.4           | 79.0           | 85.8           | 84.6           | 80.4           | 74.3           | 88.8           | 81.0           | 23.0                 |
| Gasoline                                                          | 1.5            | 1.5            | 1.7            | 2.1            | 2.0            | 1.9            | 1.6            | 1.6            | 1.3            | 1.1            | 0.3                  |
| Diesel                                                            | 2.3            | 2.6            | 2.7            | 3.3            | 3.1            | 3.0            | 2.8            | 2.1            | 1.7            | 1.7            | 0.5                  |
| Heating Oil                                                       | 10.7           | 9.5            | 10.0           | 10.7           | 9.8            | 12.1           | 11.9           | 12.3           | 12.8           | 10.0           | 2.8                  |
| Aviation Jet                                                      | 4.2            | 3.6            | 4.3            | 2.8            | 3.6            | 3.6            | 3.3            | 3.1            | 2.0            | 1.7            | 0.5                  |
| LPG                                                               | 7.2            | 9.5            | 9.8            | 9.5            | 9.3            | 8.9            | 8.2            | 7.6            | 9.1            | 9.2            | 2.6                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>1,133.7</b> | <b>1,179.1</b> | <b>1,171.6</b> | <b>1,185.8</b> | <b>1,216.4</b> | <b>1,239.4</b> | <b>1,258.4</b> | <b>1,166.5</b> | <b>1,245.7</b> | <b>1,272.9</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>208.9</b>   | <b>210.1</b>   | <b>202.4</b>   | <b>200.6</b>   | <b>198.6</b>   | <b>195.8</b>   | <b>193.6</b>   | <b>183.1</b>   | <b>186.7</b>   | <b>184.1</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>93.5</b>    | <b>92.4</b>    | <b>90.4</b>    | <b>90.1</b>    | <b>89.2</b>    | <b>87.9</b>    | <b>86.7</b>    | <b>87.3</b>    | <b>86.5</b>    | <b>84.6</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>135.5</b>   | <b>137.5</b>   | <b>132.4</b>   | <b>133.1</b>   | <b>130.3</b>   | <b>127.7</b>   | <b>128.3</b>   | <b>128.1</b>   | <b>126.7</b>   | <b>126.1</b>   | <b>-</b>             |

\*Heat is included

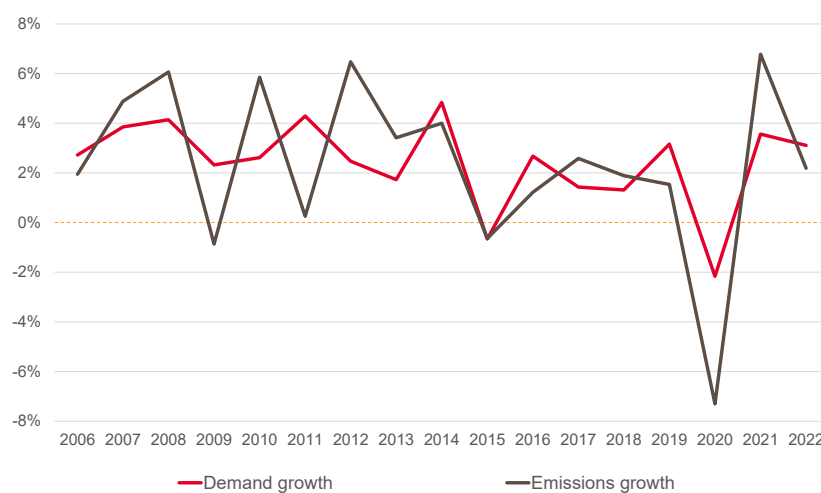
### Primary energy demand mix



### Electricity generation by source



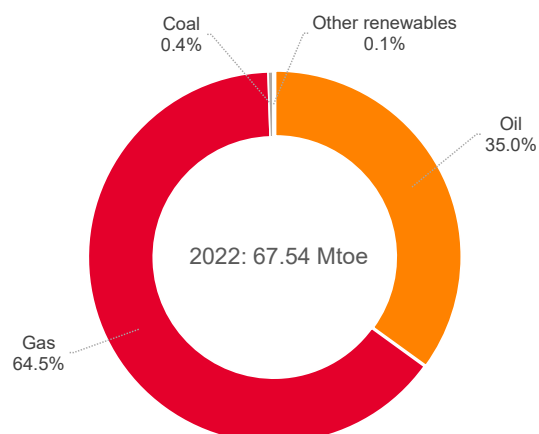
### Primary energy demand and CO<sub>2</sub> emissions growth



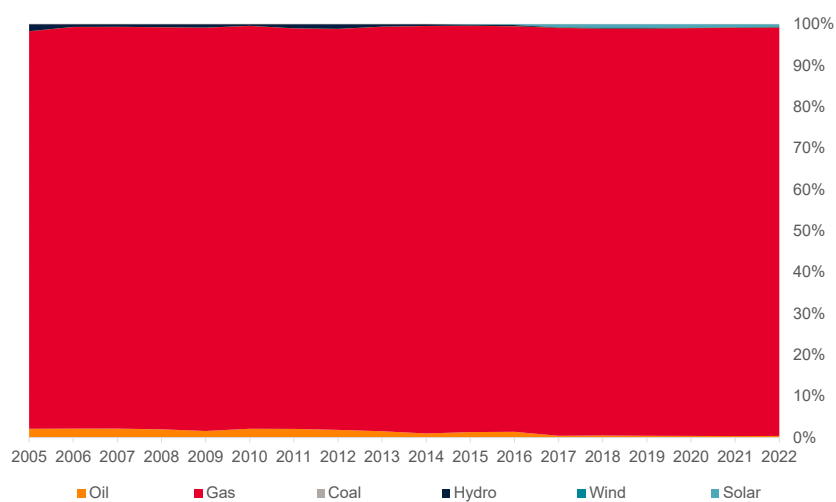
| <b>Algeria</b><br>(Million toe)                                   | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>49.1</b>  | <b>53.6</b>  | <b>56.0</b>  | <b>55.6</b>  | <b>57.2</b>  | <b>60.9</b>  | <b>63.0</b>  | <b>59.8</b>  | <b>63.6</b>  | <b>67.5</b>  | <b>100.0</b>         |
| Oil                                                               | 20.2         | 21.1         | 21.5         | 20.9         | 21.0         | 21.6         | 22.5         | 21.0         | 20.6         | 23.7         | 35.1                 |
| Gas                                                               | 28.6         | 32.3         | 34.4         | 34.7         | 35.9         | 38.9         | 40.1         | 38.6         | 42.8         | 43.8         | 64.8                 |
| Coal                                                              | 0.2          | 0.2          | 0.1          | 0.0          | 0.2          | 0.4          | 0.3          | 0.1          | 0.3          | 0.3          | 0.4                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1                  |
| Electricity balance of trade*                                     | -0.0         | -0.0         | -0.0         | -0.0         | -0.0         | -0.0         | -0.0         | -0.0         | -0.1         | -0.3         | -0.4                 |
| <b>Total final consumption, by source</b>                         | <b>32.4</b>  | <b>34.6</b>  | <b>36.9</b>  | <b>37.1</b>  | <b>37.7</b>  | <b>41.8</b>  | <b>43.2</b>  | <b>40.3</b>  | <b>43.4</b>  | <b>45.3</b>  | <b>100.0</b>         |
| Oil                                                               | 17.4         | 18.1         | 18.4         | 17.9         | 17.7         | 18.0         | 18.8         | 16.6         | 17.9         | 19.0         | 41.9                 |
| Gas                                                               | 11.0         | 12.5         | 14.1         | 14.8         | 15.0         | 18.5         | 18.9         | 18.4         | 19.7         | 20.3         | 44.9                 |
| Coal                                                              | 0.2          | 0.1          | 0.1          | 0.0          | 0.2          | 0.3          | 0.2          | 0.1          | 0.1          | 0.1          | 0.3                  |
| Electricity                                                       | 3.7          | 3.9          | 4.3          | 4.5          | 4.8          | 5.0          | 5.3          | 5.2          | 5.6          | 5.8          | 12.9                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Electricity generation, by source</b>                          | <b>5.2</b>   | <b>5.5</b>   | <b>5.9</b>   | <b>6.1</b>   | <b>6.5</b>   | <b>6.6</b>   | <b>7.0</b>   | <b>6.8</b>   | <b>7.3</b>   | <b>7.9</b>   | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| Gas                                                               | 5.0          | 5.4          | 5.8          | 6.0          | 6.5          | 6.5          | 6.9          | 6.7          | 7.3          | 7.8          | 98.9                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.7                  |
| Other renewables                                                  | 0.0          | 0.0          | -0.0         | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>32.4</b>  | <b>34.6</b>  | <b>36.9</b>  | <b>37.1</b>  | <b>37.7</b>  | <b>41.8</b>  | <b>43.2</b>  | <b>40.3</b>  | <b>43.4</b>  | <b>45.3</b>  | <b>100.0</b>         |
| Industry                                                          | 5.4          | 5.5          | 5.9          | 6.0          | 6.6          | 7.0          | 7.6          | 7.4          | 8.3          | 8.6          | 19.0                 |
| Transport                                                         | 13.0         | 14.1         | 15.0         | 14.5         | 14.4         | 14.6         | 14.8         | 13.2         | 14.4         | 15.2         | 33.6                 |
| Residential/Commercial                                            | 10.7         | 10.5         | 11.6         | 11.8         | 12.7         | 14.7         | 15.7         | 15.1         | 15.8         | 16.4         | 36.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>17.4</b>  | <b>18.1</b>  | <b>18.4</b>  | <b>17.9</b>  | <b>17.7</b>  | <b>18.0</b>  | <b>18.8</b>  | <b>16.6</b>  | <b>17.9</b>  | <b>19.0</b>  | <b>100.0</b>         |
| Industry                                                          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.6          | 0.6          | 0.5          | 0.5          | 0.5          | 2.6                  |
| Transport                                                         | 13.0         | 14.0         | 14.9         | 14.4         | 14.3         | 14.5         | 14.7         | 13.1         | 14.3         | 15.1         | 79.4                 |
| Residential/Commercial                                            | 2.6          | 1.9          | 2.0          | 1.9          | 2.1          | 2.3          | 2.8          | 2.5          | 2.7          | 2.9          | 15.2                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>11.0</b>  | <b>12.5</b>  | <b>14.1</b>  | <b>14.8</b>  | <b>15.0</b>  | <b>18.5</b>  | <b>18.9</b>  | <b>18.4</b>  | <b>19.7</b>  | <b>20.3</b>  | <b>100.0</b>         |
| Industry                                                          | 3.1          | 3.3          | 3.4          | 3.6          | 3.9          | 4.3          | 4.9          | 5.0          | 5.7          | 5.9          | 29.0                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 5.8          | 6.2          | 7.0          | 7.2          | 7.7          | 9.3          | 9.6          | 9.7          | 9.8          | 10.1         | 49.7                 |
| <b>Refined products consumption</b>                               | <b>17.4</b>  | <b>18.1</b>  | <b>18.4</b>  | <b>17.9</b>  | <b>17.7</b>  | <b>18.0</b>  | <b>18.8</b>  | <b>16.6</b>  | <b>17.9</b>  | <b>19.0</b>  | <b>100.0</b>         |
| Gasoline                                                          | 4.1          | 4.4          | 4.7          | 4.6          | 4.4          | 4.2          | 4.2          | 3.6          | 3.7          | 3.6          | 19.1                 |
| Diesel                                                            | 9.8          | 9.9          | 10.5         | 10.3         | 10.2         | 10.5         | 10.9         | 9.4          | 9.9          | 10.6         | 55.9                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.7                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.1          | 0.4                  |
| LPG                                                               | 2.4          | 2.2          | 2.2          | 2.2          | 2.3          | 2.6          | 2.8          | 2.9          | 3.7          | 4.0          | 21.1                 |
| <b>Imports</b>                                                    | <b>5.5</b>   | <b>3.5</b>   | <b>4.4</b>   | <b>3.9</b>   | <b>3.8</b>   | <b>1.0</b>   | <b>2.1</b>   | <b>1.1</b>   | <b>0.6</b>   | <b>0.6</b>   | <b>100.0</b>         |
| Oil                                                               | 5.5          | 3.5          | 4.4          | 3.9          | 3.8          | 1.0          | 2.1          | 1.1          | 0.6          | 0.6          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 1.7          | 1.1          | 1.7          | 1.7          | 1.7          | 0.1          | 0.6          | 0.4          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 2.8          | 1.1          | 1.8          | 1.5          | 1.5          | 0.3          | 0.9          | 0.3          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.2          | 0.2          | 0.2          | 0.1          | 0.2          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>96.9</b>  | <b>95.0</b>  | <b>95.0</b>  | <b>104.6</b> | <b>102.1</b> | <b>95.1</b>  | <b>87.3</b>  | <b>77.3</b>  | <b>91.4</b>  | <b>89.6</b>  | <b>100.0</b>         |
| Oil                                                               | 56.6         | 57.0         | 58.0         | 58.7         | 56.2         | 51.3         | 50.9         | 43.7         | 44.6         | 46.8         | 52.3                 |
| Gas                                                               | 40.3         | 38.0         | 37.0         | 45.9         | 45.9         | 43.7         | 36.4         | 33.6         | 46.8         | 42.8         | 47.7                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.6          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 5.1          | 6.2          | 6.4          | 6.7          | 6.1          | 5.6          | 5.5          | 5.6          | 5.2          | 5.4          | 6.0                  |
| Aviation Jet                                                      | 1.2          | 1.6          | 1.1          | 1.2          | 1.2          | 1.0          | 0.7          | 0.8          | 0.5          | 0.3          | 0.4                  |
| LPG                                                               | 6.3          | 8.5          | 8.9          | 8.6          | 8.2          | 7.8          | 7.4          | 6.6          | 8.2          | 8.3          | 9.3                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>118.4</b> | <b>127.3</b> | <b>135.5</b> | <b>133.4</b> | <b>134.7</b> | <b>143.4</b> | <b>147.9</b> | <b>139.4</b> | <b>151.5</b> | <b>158.6</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>266.9</b> | <b>276.6</b> | <b>283.8</b> | <b>270.9</b> | <b>270.0</b> | <b>284.3</b> | <b>290.3</b> | <b>288.2</b> | <b>301.8</b> | <b>306.9</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>67.2</b>  | <b>67.2</b>  | <b>69.6</b>  | <b>67.3</b>  | <b>69.2</b>  | <b>73.8</b>  | <b>76.8</b>  | <b>76.0</b>  | <b>78.7</b>  | <b>79.9</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>110.7</b> | <b>116.3</b> | <b>117.4</b> | <b>112.8</b> | <b>114.6</b> | <b>120.8</b> | <b>123.7</b> | <b>123.6</b> | <b>126.6</b> | <b>130.7</b> | <b>-</b>             |

\*Heat is included

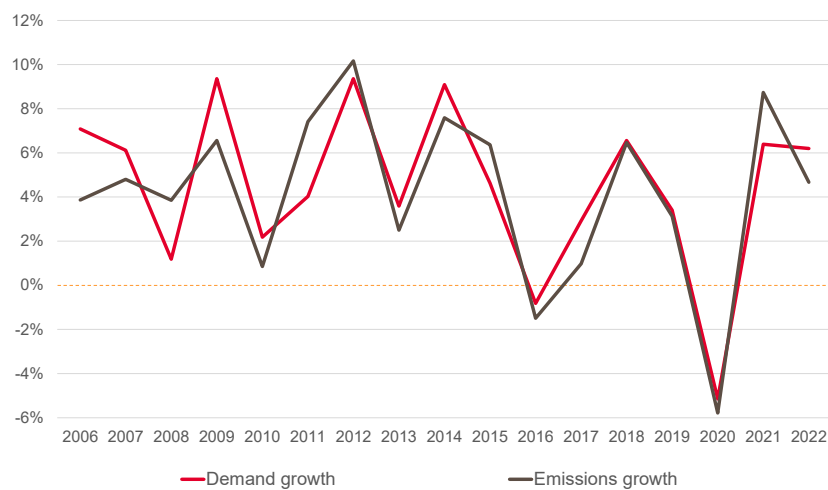
Primary energy demand mix



Electricity generation by source



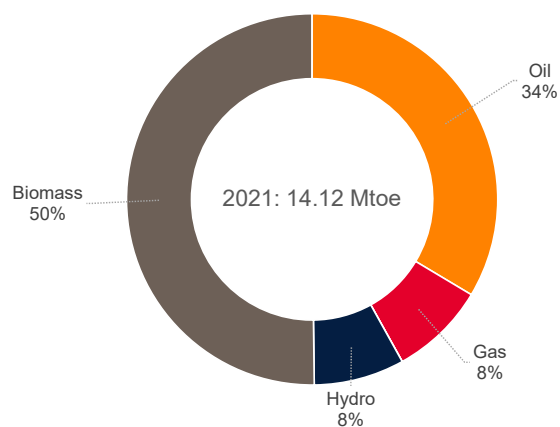
Primary energy demand and CO<sub>2</sub> emissions growth



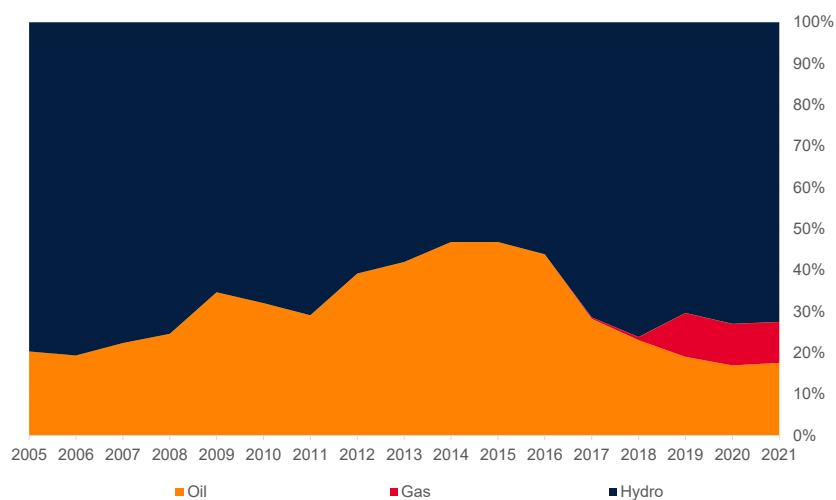
| <b>Angola</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016        | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        | Share in<br>2021 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>13.2</b>  | <b>17.4</b>  | <b>15.3</b>  | <b>13.6</b> | <b>13.0</b> | <b>15.4</b> | <b>14.9</b> | <b>13.0</b> | <b>14.1</b> | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 6.5          | 10.7         | 8.1          | 6.3         | 5.4         | 7.3         | 6.5         | 4.4         | 5.4         | n.d.        | 38.2                 |
| Gas                                                               | 0.3          | 0.2          | 0.6          | 0.7         | 0.7         | 0.9         | 1.1         | 1.1         | 1.1         | n.d.        | 7.6                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Hydro                                                             | 0.4          | 0.4          | 0.4          | 0.5         | 0.7         | 0.8         | 0.9         | 1.0         | 1.0         | n.d.        | 7.3                  |
| Biomass                                                           | 5.9          | 6.0          | 6.1          | 6.2         | 6.3         | 6.4         | 6.5         | 6.5         | 6.6         | n.d.        | 46.9                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Electricity balance of trade*                                     | -0.0         | -0.0         | -0.0         | 0.0         | 0.0         | 0.0         | 0.0         | -0.0        | 0.0         | n.d.        | 0.0                  |
| <b>Total final consumption, by source</b>                         | <b>10.4</b>  | <b>10.5</b>  | <b>10.7</b>  | <b>10.7</b> | <b>9.7</b>  | <b>10.1</b> | <b>10.7</b> | <b>9.8</b>  | <b>9.8</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 5.0          | 5.0          | 4.7          | 4.6         | 3.8         | 3.8         | 4.3         | 3.3         | 3.2         | n.d.        | 32.7                 |
| Gas                                                               | 0.3          | 0.2          | 0.6          | 0.6         | 0.3         | 0.6         | 0.4         | 0.3         | 0.3         | n.d.        | 3.3                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Electricity                                                       | 0.6          | 0.7          | 0.7          | 0.8         | 0.8         | 1.0         | 1.1         | 1.2         | 1.2         | n.d.        | 12.5                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Biomass                                                           | 4.5          | 4.6          | 4.6          | 4.7         | 4.8         | 4.8         | 4.9         | 5.0         | 5.0         | n.d.        | 51.4                 |
| <b>Electricity generation, by source</b>                          | <b>0.7</b>   | <b>0.8</b>   | <b>0.8</b>   | <b>0.9</b>  | <b>0.9</b>  | <b>1.1</b>  | <b>1.3</b>  | <b>1.4</b>  | <b>1.4</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 0.3          | 0.4          | 0.4          | 0.4         | 0.3         | 0.3         | 0.3         | 0.2         | 0.2         | n.d.        | 17.6                 |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.1         | 0.1         | 0.1         | n.d.        | 9.9                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Hydro                                                             | 0.4          | 0.4          | 0.4          | 0.5         | 0.7         | 0.8         | 0.9         | 1.0         | 1.0         | n.d.        | 72.5                 |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0         | -0.0        | -0.0        | 0.0         | -0.0        | 0.0         | n.d.        | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>10.4</b>  | <b>10.5</b>  | <b>10.7</b>  | <b>10.7</b> | <b>9.7</b>  | <b>10.1</b> | <b>10.7</b> | <b>9.8</b>  | <b>9.8</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 0.9          | 0.8          | 1.2          | 1.3         | 0.9         | 1.2         | 1.1         | 1.0         | 1.0         | n.d.        | 10.5                 |
| Transport                                                         | 2.6          | 2.7          | 2.7          | 2.7         | 2.3         | 2.3         | 2.7         | 1.9         | 1.9         | n.d.        | 19.1                 |
| Residential/Commercial                                            | 6.6          | 6.6          | 6.5          | 6.5         | 6.3         | 6.4         | 6.8         | 6.7         | 6.7         | n.d.        | 68.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>5.0</b>   | <b>5.0</b>   | <b>4.7</b>   | <b>4.6</b>  | <b>3.8</b>  | <b>3.8</b>  | <b>4.3</b>  | <b>3.3</b>  | <b>3.2</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 0.3          | 0.3          | 0.2          | 0.3         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | n.d.        | 5.5                  |
| Transport                                                         | 2.6          | 2.7          | 2.7          | 2.7         | 2.3         | 2.3         | 2.7         | 1.9         | 1.9         | n.d.        | 58.4                 |
| Residential/Commercial                                            | 1.8          | 1.7          | 1.5          | 1.4         | 1.1         | 1.1         | 1.2         | 1.0         | 1.0         | n.d.        | 30.6                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>0.3</b>   | <b>0.2</b>   | <b>0.6</b>   | <b>0.6</b>  | <b>0.3</b>  | <b>0.6</b>  | <b>0.4</b>  | <b>0.3</b>  | <b>0.3</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 0.3          | 0.2          | 0.6          | 0.6         | 0.3         | 0.6         | 0.4         | 0.3         | 0.3         | n.d.        | 100.0                |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| <b>Refined products consumption</b>                               | <b>5.0</b>   | <b>5.0</b>   | <b>4.7</b>   | <b>4.6</b>  | <b>3.8</b>  | <b>3.8</b>  | <b>4.3</b>  | <b>3.3</b>  | <b>3.2</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Gasoline                                                          | 1.0          | 1.1          | 1.0          | 0.9         | 0.7         | 0.7         | 0.7         | 0.5         | 0.5         | n.d.        | 17.0                 |
| Diesel                                                            | 3.2          | 3.2          | 3.1          | 3.0         | 2.4         | 2.4         | 2.8         | 2.0         | 1.9         | n.d.        | 60.2                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.0          | 0.2         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | n.d.        | 2.8                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| LPG                                                               | 0.3          | 0.3          | 0.3          | 0.3         | 0.4         | 0.4         | 0.4         | 0.5         | 0.4         | n.d.        | 13.7                 |
| <b>Imports</b>                                                    | <b>4.9</b>   | <b>5.8</b>   | <b>5.4</b>   | <b>4.4</b>  | <b>3.5</b>  | <b>3.4</b>  | <b>3.3</b>  | <b>2.2</b>  | <b>2.9</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 4.9          | 5.8          | 5.4          | 4.4         | 3.5         | 3.4         | 3.3         | 2.2         | 2.9         | n.d.        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Gasoline                                                          | 1.1          | 1.5          | 1.3          | 1.1         | 1.0         | 1.2         | 1.2         | 0.9         | 1.0         | n.d.        | 35.0                 |
| Diesel                                                            | 3.3          | 3.7          | 3.6          | 3.0         | 2.3         | 2.0         | 1.9         | 1.2         | 1.7         | n.d.        | 60.1                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.1          | 0.0         | 0.0         | 0.1         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| LPG                                                               | 0.1          | 0.1          | 0.2          | 0.1         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| <b>Exports</b>                                                    | <b>86.4</b>  | <b>83.2</b>  | <b>88.3</b>  | <b>85.4</b> | <b>81.5</b> | <b>74.2</b> | <b>69.2</b> | <b>65.3</b> | <b>56.2</b> | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 86.0         | 82.9         | 88.3         | 84.6        | 77.4        | 69.8        | 64.7        | 60.2        | 52.3        | n.d.        | 93.1                 |
| Gas                                                               | 0.4          | 0.4          | 0.0          | 0.7         | 4.1         | 4.4         | 4.5         | 5.1         | 3.9         | n.d.        | 6.9                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| Heating Oil                                                       | 0.4          | 0.4          | 0.6          | 0.6         | 0.6         | 0.4         | 0.3         | 0.3         | 0.2         | n.d.        | 0.4                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | n.d.        | 0.0                  |
| LPG                                                               | 0.1          | 0.2          | 0.1          | 0.0         | 0.2         | 0.4         | 0.1         | 0.2         | 0.2         | n.d.        | 0.4                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>19.4</b>  | <b>21.0</b>  | <b>21.7</b>  | <b>19.5</b> | <b>16.8</b> | <b>17.3</b> | <b>19.0</b> | <b>15.3</b> | <b>15.9</b> | <b>n.d.</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>100.4</b> | <b>103.7</b> | <b>105.9</b> | <b>97.7</b> | <b>84.6</b> | <b>88.2</b> | <b>97.6</b> | <b>82.8</b> | <b>85.8</b> | <b>n.d.</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>52.2</b>  | <b>50.4</b>  | <b>51.2</b>  | <b>52.5</b> | <b>47.7</b> | <b>50.6</b> | <b>53.7</b> | <b>52.0</b> | <b>51.7</b> | <b>n.d.</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>68.3</b>  | <b>85.9</b>  | <b>74.7</b>  | <b>68.2</b> | <b>65.5</b> | <b>78.7</b> | <b>76.5</b> | <b>70.7</b> | <b>76.1</b> | <b>n.d.</b> | <b>-</b>             |

\*Heat is included

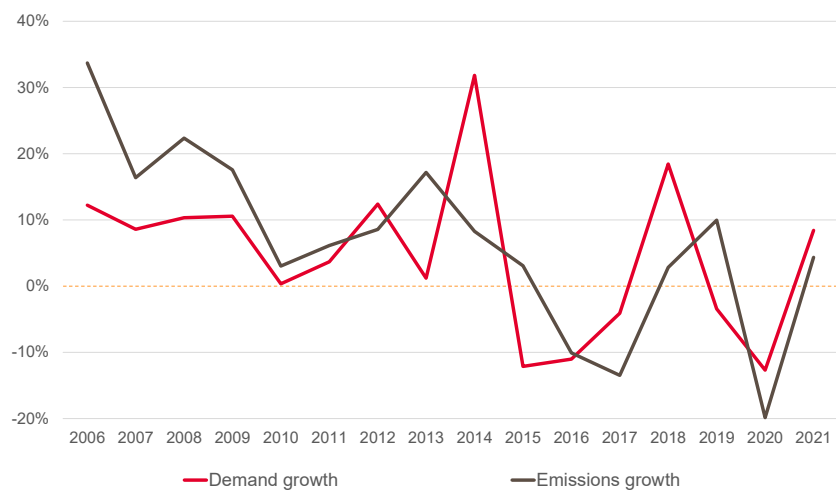
Primary energy demand mix



Electricity generation by source



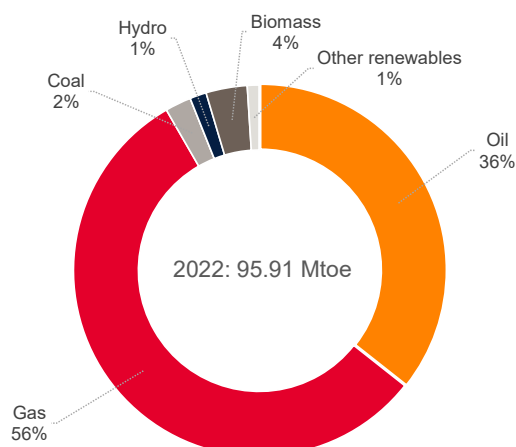
Primary energy demand and CO<sub>2</sub> emissions growth



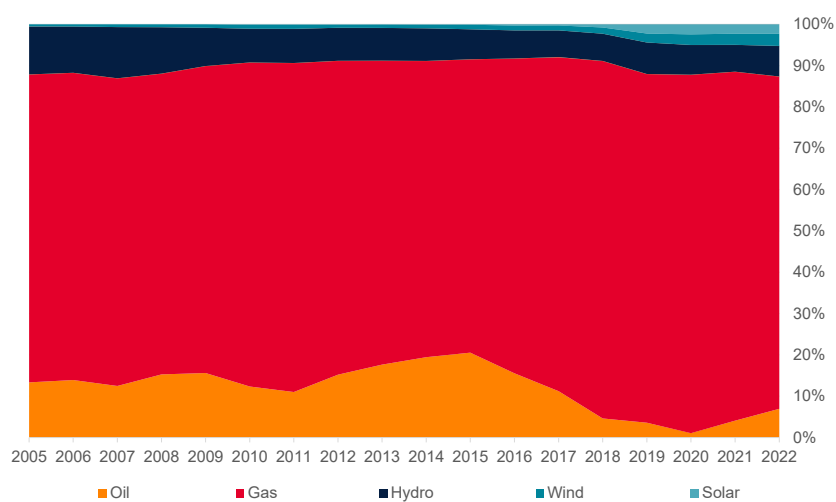
| <b>Egypt</b><br>(Million toe)                                     | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>78.6</b>  | <b>81.2</b>  | <b>80.6</b>  | <b>88.7</b>  | <b>92.9</b>  | <b>91.9</b>  | <b>91.8</b>  | <b>87.7</b>  | <b>95.0</b>  | <b>95.9</b>  | <b>100.0</b>         |
| Oil                                                               | 36.1         | 41.4         | 38.9         | 41.4         | 37.2         | 32.5         | 31.9         | 29.9         | 32.3         | 34.2         | 35.7                 |
| Gas                                                               | 37.6         | 34.9         | 36.8         | 41.5         | 48.9         | 51.8         | 52.7         | 51.0         | 54.8         | 53.8         | 56.1                 |
| Coal                                                              | 0.4          | 0.4          | 0.4          | 1.2          | 2.2          | 2.8          | 1.9          | 1.4          | 2.5          | 2.2          | 2.3                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.1          | 1.2          | 1.2          | 1.1          | 1.1          | 1.1          | 1.3          | 1.3          | 1.2          | 1.4          | 1.4                  |
| Biomass                                                           | 3.2          | 3.2          | 3.3          | 3.3          | 3.3          | 3.4          | 3.4          | 3.4          | 3.4          | 3.4          | 3.6                  |
| Other renewables                                                  | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.4          | 0.7          | 0.9          | 0.9          | 1.0          | 1.0                  |
| Electricity balance of trade*                                     | -0.0         | -0.1         | -0.1         | -0.0         | -0.0         | -0.0         | -0.1         | -0.2         | -0.1         | -0.1         | -0.1                 |
| <b>Total final consumption, by source</b>                         | <b>54.4</b>  | <b>53.8</b>  | <b>55.2</b>  | <b>57.2</b>  | <b>60.3</b>  | <b>61.8</b>  | <b>58.1</b>  | <b>57.4</b>  | <b>62.8</b>  | <b>63.1</b>  | <b>100.0</b>         |
| Oil                                                               | 28.7         | 30.1         | 30.0         | 31.0         | 29.7         | 29.7         | 27.2         | 27.0         | 29.4         | 29.9         | 47.3                 |
| Gas                                                               | 11.9         | 9.1          | 10.5         | 11.0         | 13.4         | 14.0         | 14.0         | 13.5         | 14.8         | 14.6         | 23.1                 |
| Coal                                                              | 0.4          | 0.4          | 0.3          | 1.2          | 2.1          | 2.8          | 1.9          | 1.4          | 2.5          | 2.2          | 3.5                  |
| Electricity                                                       | 11.9         | 12.7         | 12.9         | 12.4         | 13.4         | 13.6         | 13.4         | 13.9         | 14.5         | 14.8         | 23.5                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 1.5          | 1.5          | 1.5          | 1.5          | 1.6          | 1.6          | 1.6          | 1.6          | 1.6          | 1.6          | 2.5                  |
| <b>Electricity generation, by source</b>                          | <b>14.5</b>  | <b>15.1</b>  | <b>16.0</b>  | <b>16.3</b>  | <b>16.9</b>  | <b>17.2</b>  | <b>17.0</b>  | <b>17.6</b>  | <b>18.4</b>  | <b>18.8</b>  | <b>100.0</b>         |
| Oil                                                               | 2.5          | 2.9          | 3.3          | 2.5          | 1.9          | 0.8          | 0.6          | 0.2          | 0.7          | 1.3          | 6.9                  |
| Gas                                                               | 10.6         | 10.8         | 11.4         | 12.4         | 13.7         | 14.9         | 14.3         | 15.3         | 15.5         | 15.1         | 80.5                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.1          | 1.2          | 1.2          | 1.1          | 1.1          | 1.1          | 1.3          | 1.3          | 1.2          | 1.4          | 7.4                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.3          | 0.4          | 0.5          | 0.5          | 0.6          | 3.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.4          | 0.4          | 0.4          | 0.4          | 2.3                  |
| Other renewables                                                  | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | -0.0         | 0.0          | 0.0          | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>54.4</b>  | <b>53.8</b>  | <b>55.2</b>  | <b>57.2</b>  | <b>60.3</b>  | <b>61.8</b>  | <b>58.1</b>  | <b>57.4</b>  | <b>62.8</b>  | <b>63.1</b>  | <b>100.0</b>         |
| Industry                                                          | 14.6         | 13.3         | 13.5         | 14.3         | 16.5         | 17.3         | 14.6         | 14.1         | 16.6         | 16.3         | 25.9                 |
| Transport                                                         | 17.1         | 17.9         | 18.3         | 19.1         | 18.6         | 18.7         | 17.4         | 17.2         | 19.1         | 19.5         | 30.9                 |
| Residential/Commercial                                            | 15.6         | 16.5         | 16.8         | 16.2         | 17.2         | 17.3         | 17.2         | 17.4         | 17.9         | 17.9         | 28.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>28.7</b>  | <b>30.1</b>  | <b>30.0</b>  | <b>31.0</b>  | <b>29.7</b>  | <b>29.7</b>  | <b>27.2</b>  | <b>27.0</b>  | <b>29.4</b>  | <b>29.9</b>  | <b>100.0</b>         |
| Industry                                                          | 4.9          | 5.4          | 4.8          | 5.0          | 4.4          | 4.5          | 3.5          | 3.5          | 4.1          | 4.3          | 14.3                 |
| Transport                                                         | 16.7         | 17.5         | 18.0         | 18.8         | 18.2         | 18.3         | 16.9         | 16.7         | 18.4         | 18.8         | 63.0                 |
| Residential/Commercial                                            | 4.7          | 4.7          | 4.8          | 4.8          | 4.6          | 4.4          | 4.1          | 4.1          | 4.0          | 3.8          | 12.6                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>11.9</b>  | <b>9.1</b>   | <b>10.5</b>  | <b>11.0</b>  | <b>13.4</b>  | <b>14.0</b>  | <b>14.0</b>  | <b>13.5</b>  | <b>14.8</b>  | <b>14.6</b>  | <b>100.0</b>         |
| Industry                                                          | 6.1          | 4.3          | 5.1          | 4.5          | 6.2          | 6.2          | 5.7          | 5.5          | 6.0          | 5.9          | 40.4                 |
| Transport                                                         | 0.4          | 0.4          | 0.3          | 0.3          | 0.3          | 0.4          | 0.5          | 0.5          | 0.6          | 0.6          | 4.3                  |
| Residential/Commercial                                            | 1.3          | 1.5          | 1.5          | 1.7          | 1.9          | 2.2          | 2.3          | 2.2          | 2.4          | 2.4          | 16.5                 |
| <b>Refined products consumption</b>                               | <b>28.7</b>  | <b>30.1</b>  | <b>30.0</b>  | <b>31.0</b>  | <b>29.7</b>  | <b>29.7</b>  | <b>27.2</b>  | <b>27.0</b>  | <b>29.4</b>  | <b>29.9</b>  | <b>100.0</b>         |
| Gasoline                                                          | 6.3          | 6.8          | 7.3          | 7.8          | 7.6          | 7.7          | 7.1          | 7.0          | 7.5          | 7.9          | 26.5                 |
| Diesel                                                            | 12.9         | 13.3         | 13.3         | 14.0         | 13.5         | 13.5         | 12.5         | 12.6         | 13.9         | 13.9         | 46.7                 |
| Heating Oil                                                       | 2.6          | 3.1          | 2.4          | 2.3          | 1.8          | 1.9          | 1.0          | 1.0          | 1.4          | 1.6          | 5.3                  |
| Aviation Jet                                                      | 0.7          | 0.7          | 0.6          | 0.6          | 0.6          | 0.6          | 0.5          | 0.4          | 0.5          | 0.5          | 1.7                  |
| LPG                                                               | 4.7          | 4.7          | 4.8          | 4.8          | 4.6          | 4.4          | 4.1          | 4.1          | 4.0          | 3.8          | 12.7                 |
| <b>Imports</b>                                                    | <b>15.9</b>  | <b>20.6</b>  | <b>25.5</b>  | <b>30.3</b>  | <b>25.9</b>  | <b>20.5</b>  | <b>19.0</b>  | <b>21.0</b>  | <b>25.8</b>  | <b>20.5</b>  | <b>100.0</b>         |
| Oil                                                               | 15.9         | 20.6         | 19.8         | 22.5         | 19.3         | 18.0         | 19.0         | 19.3         | 22.4         | 15.1         | 73.4                 |
| Gas                                                               | 0.0          | 0.0          | 5.7          | 7.8          | 6.6          | 2.5          | 0.0          | 1.8          | 3.4          | 5.5          | 26.6                 |
| Gasoline                                                          | 1.7          | 2.3          | 2.7          | 3.1          | 2.9          | 2.9          | 1.5          | 1.5          | 1.7          | 1.4          | 6.8                  |
| Diesel                                                            | 6.0          | 6.5          | 7.3          | 8.1          | 7.0          | 7.1          | 3.5          | 2.5          | 2.1          | 2.5          | 12.1                 |
| Heating Oil                                                       | 2.9          | 4.1          | 3.7          | 2.2          | 0.5          | 0.0          | 0.0          | 0.0          | 0.0          | 0.5          | 2.5                  |
| Aviation Jet                                                      | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 2.3          | 2.5          | 2.6          | 2.8          | 2.6          | 2.5          | 2.2          | 2.2          | 2.0          | 1.8          | 8.6                  |
| <b>Exports</b>                                                    | <b>15.6</b>  | <b>14.3</b>  | <b>15.5</b>  | <b>14.5</b>  | <b>15.0</b>  | <b>18.7</b>  | <b>21.5</b>  | <b>20.3</b>  | <b>26.6</b>  | <b>18.1</b>  | <b>100.0</b>         |
| Oil                                                               | 13.9         | 14.0         | 15.3         | 13.4         | 14.0         | 16.7         | 17.4         | 18.6         | 19.0         | 10.2         | 56.5                 |
| Gas                                                               | 1.7          | 0.3          | 0.2          | 1.1          | 1.0          | 2.0          | 4.1          | 1.7          | 7.6          | 7.9          | 43.5                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.2          | 0.2          | 0.3          | 0.4          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.1          | 0.8          | 0.7          | 0.5          | 0.1          | 0.1          | 0.2          | 0.9                  |
| Heating Oil                                                       | 0.0          | 0.0          | 0.2          | 0.1          | 0.2          | 3.3          | 4.4          | 4.8          | 5.2          | 2.7          | 14.7                 |
| Aviation Jet                                                      | 0.5          | 0.5          | 1.0          | 0.9          | 1.0          | 1.3          | 1.5          | 1.5          | 0.9          | 0.6          | 3.5                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>195.8</b> | <b>198.1</b> | <b>205.1</b> | <b>214.4</b> | <b>225.9</b> | <b>220.9</b> | <b>202.6</b> | <b>198.4</b> | <b>216.9</b> | <b>216.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>197.6</b> | <b>194.3</b> | <b>192.8</b> | <b>193.1</b> | <b>195.3</b> | <b>181.3</b> | <b>157.5</b> | <b>148.9</b> | <b>157.6</b> | <b>147.5</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>49.2</b>  | <b>48.2</b>  | <b>47.2</b>  | <b>46.1</b>  | <b>46.5</b>  | <b>45.1</b>  | <b>39.4</b>  | <b>37.7</b>  | <b>40.0</b>  | <b>37.7</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>79.3</b>  | <b>79.6</b>  | <b>75.8</b>  | <b>79.8</b>  | <b>80.3</b>  | <b>75.5</b>  | <b>71.4</b>  | <b>65.8</b>  | <b>69.0</b>  | <b>65.4</b>  | <b>-</b>             |

\*Heat is included

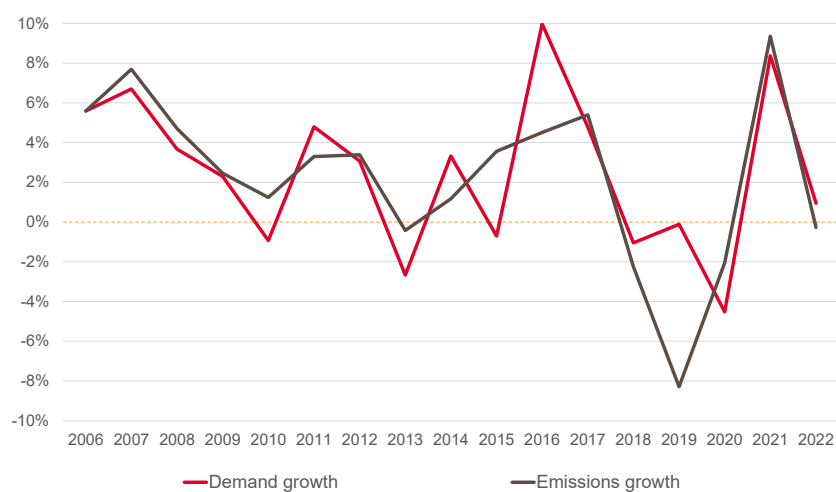
Primary energy demand mix



Electricity generation by source



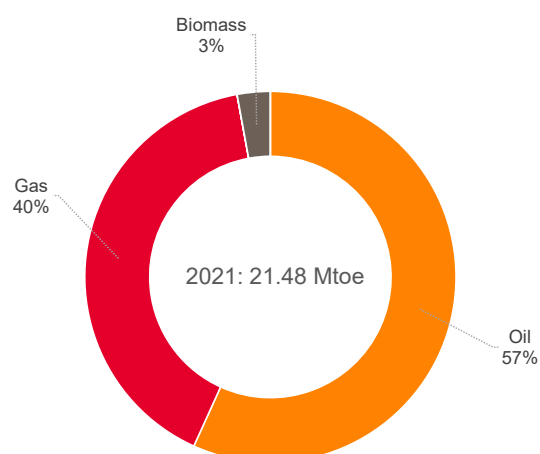
Primary energy demand and CO<sub>2</sub> emissions growth



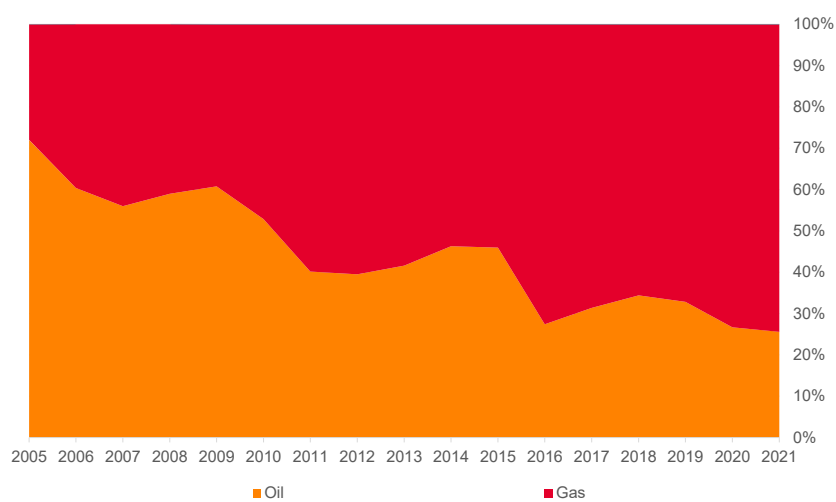
| Libya<br>(Million toe)                                            | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022        | Share in<br>2021 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>17.3</b>  | <b>22.8</b>  | <b>18.3</b>  | <b>18.2</b>  | <b>17.5</b>  | <b>17.2</b>  | <b>22.4</b>  | <b>16.3</b>  | <b>21.5</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 7.5          | 14.0         | 10.9         | 8.7          | 9.0          | 8.9          | 14.8         | 8.6          | 12.1         | n.d.        | 56.5                 |
| Gas                                                               | 9.2          | 8.2          | 6.8          | 8.8          | 7.9          | 7.7          | 6.9          | 6.9          | 8.6          | n.d.        | 40.2                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Biomass                                                           | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | n.d.        | 2.9                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Electricity balance of trade*                                     | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | n.d.        | 0.5                  |
| <b>Total final consumption, by source</b>                         | <b>11.1</b>  | <b>11.3</b>  | <b>9.1</b>   | <b>9.3</b>   | <b>8.8</b>   | <b>8.9</b>   | <b>9.0</b>   | <b>8.7</b>   | <b>9.0</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 7.4          | 7.9          | 6.0          | 7.1          | 6.8          | 6.7          | 6.6          | 6.4          | 6.5          | n.d.        | 72.6                 |
| Gas                                                               | 1.8          | 1.7          | 1.6          | 0.8          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | n.d.        | 6.5                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Electricity                                                       | 1.6          | 1.5          | 1.3          | 1.2          | 1.2          | 1.5          | 1.5          | 1.5          | 1.6          | n.d.        | 17.9                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Biomass                                                           | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | n.d.        | 3.0                  |
| <b>Electricity generation, by source</b>                          | <b>3.3</b>   | <b>3.2</b>   | <b>3.2</b>   | <b>2.7</b>   | <b>2.9</b>   | <b>2.9</b>   | <b>3.0</b>   | <b>2.5</b>   | <b>2.7</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 1.4          | 1.5          | 1.5          | 0.7          | 0.9          | 1.0          | 1.0          | 0.7          | 0.7          | n.d.        | 25.6                 |
| Gas                                                               | 1.9          | 1.7          | 1.7          | 2.0          | 2.0          | 1.9          | 2.0          | 1.9          | 2.0          | n.d.        | 74.4                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | -0.0         | n.d.        | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>11.1</b>  | <b>11.3</b>  | <b>9.1</b>   | <b>9.3</b>   | <b>8.8</b>   | <b>8.9</b>   | <b>9.0</b>   | <b>8.7</b>   | <b>9.0</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.9          | 1.9          | 1.2          | 1.0          | 0.8          | 0.9          | 0.8          | 0.7          | 0.7          | n.d.        | 8.3                  |
| Transport                                                         | 6.0          | 6.6          | 5.1          | 6.2          | 5.8          | 5.7          | 5.8          | 5.7          | 5.7          | n.d.        | 64.2                 |
| Residential/Commercial                                            | 2.3          | 2.0          | 1.7          | 1.7          | 1.7          | 2.0          | 2.0          | 2.0          | 2.1          | n.d.        | 23.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>7.4</b>   | <b>7.9</b>   | <b>6.0</b>   | <b>7.1</b>   | <b>6.8</b>   | <b>6.7</b>   | <b>6.6</b>   | <b>6.4</b>   | <b>6.5</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 0.7          | 0.7          | 0.4          | 0.4          | 0.4          | 0.5          | 0.4          | 0.3          | 0.3          | n.d.        | 5.3                  |
| Transport                                                         | 6.0          | 6.6          | 5.1          | 6.2          | 5.8          | 5.7          | 5.8          | 5.7          | 5.7          | n.d.        | 88.4                 |
| Residential/Commercial                                            | 0.7          | 0.6          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | n.d.        | 6.0                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>1.8</b>   | <b>1.7</b>   | <b>1.6</b>   | <b>0.8</b>   | <b>0.5</b>   | <b>0.5</b>   | <b>0.5</b>   | <b>0.5</b>   | <b>0.6</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.0          | 1.1          | 0.6          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | n.d.        | 60.4                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| <b>Refined products consumption</b>                               | <b>7.4</b>   | <b>7.9</b>   | <b>6.0</b>   | <b>7.1</b>   | <b>6.8</b>   | <b>6.7</b>   | <b>6.6</b>   | <b>6.4</b>   | <b>6.5</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Gasoline                                                          | 4.1          | 4.1          | 4.0          | 4.2          | 4.2          | 4.2          | 4.3          | 4.7          | 4.7          | n.d.        | 73.0                 |
| Diesel                                                            | 1.9          | 2.5          | 1.1          | 1.9          | 1.6          | 1.4          | 1.5          | 1.0          | 1.0          | n.d.        | 15.2                 |
| Heating Oil                                                       | 0.7          | 0.7          | 0.4          | 0.4          | 0.4          | 0.5          | 0.4          | 0.3          | 0.3          | n.d.        | 5.3                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.2                  |
| LPG                                                               | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | n.d.        | 5.2                  |
| <b>Imports</b>                                                    | <b>5.9</b>   | <b>8.2</b>   | <b>6.9</b>   | <b>6.2</b>   | <b>6.0</b>   | <b>5.8</b>   | <b>6.7</b>   | <b>7.0</b>   | <b>6.4</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 5.9          | 8.2          | 6.9          | 6.2          | 6.0          | 5.8          | 6.7          | 7.0          | 6.4          | n.d.        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Gasoline                                                          | 3.4          | 3.5          | 3.5          | 3.8          | 3.7          | 3.8          | 4.1          | 4.6          | 4.6          | n.d.        | 70.7                 |
| Diesel                                                            | 2.2          | 4.4          | 3.3          | 2.2          | 2.1          | 1.9          | 2.4          | 1.9          | 1.6          | n.d.        | 24.9                 |
| Heating Oil                                                       | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.5          | 0.2          | n.d.        | 3.4                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| <b>Exports</b>                                                    | <b>54.9</b>  | <b>25.1</b>  | <b>23.4</b>  | <b>21.8</b>  | <b>46.5</b>  | <b>58.0</b>  | <b>61.2</b>  | <b>22.8</b>  | <b>62.7</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 50.2         | 19.8         | 17.6         | 17.8         | 42.7         | 54.4         | 56.5         | 19.2         | 59.0         | n.d.        | 94.1                 |
| Gas                                                               | 4.7          | 5.3          | 5.8          | 3.9          | 3.8          | 3.7          | 4.7          | 3.7          | 3.7          | n.d.        | 5.9                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Heating Oil                                                       | 2.1          | 0.0          | 0.3          | 0.4          | 0.3          | 0.2          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Aviation Jet                                                      | 1.0          | 0.4          | 0.3          | 0.1          | 0.4          | 0.6          | 0.4          | 0.1          | 0.3          | n.d.        | 0.5                  |
| LPG                                                               | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.1          | n.d.        | 0.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>53.3</b>  | <b>52.7</b>  | <b>46.5</b>  | <b>43.7</b>  | <b>44.2</b>  | <b>44.9</b>  | <b>45.2</b>  | <b>39.5</b>  | <b>41.3</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>296.5</b> | <b>380.7</b> | <b>338.9</b> | <b>323.3</b> | <b>246.9</b> | <b>232.4</b> | <b>263.0</b> | <b>302.5</b> | <b>240.7</b> | <b>n.d.</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>56.9</b>  | <b>76.9</b>  | <b>59.4</b>  | <b>66.1</b>  | <b>47.4</b>  | <b>44.8</b>  | <b>50.9</b>  | <b>65.1</b>  | <b>50.7</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>96.3</b>  | <b>164.8</b> | <b>133.5</b> | <b>134.3</b> | <b>97.7</b>  | <b>88.7</b>  | <b>130.3</b> | <b>124.8</b> | <b>125.2</b> | <b>n.d.</b> | <b>-</b>             |

\*Heat is included

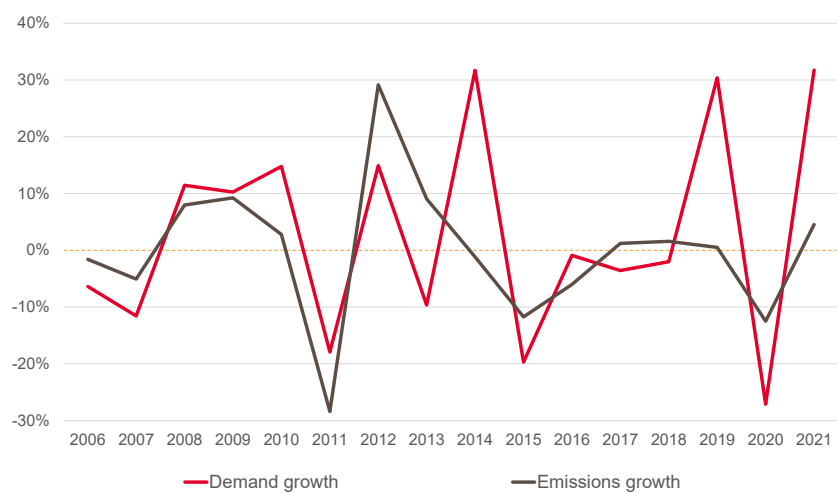
Primary energy demand mix



Electricity generation by source



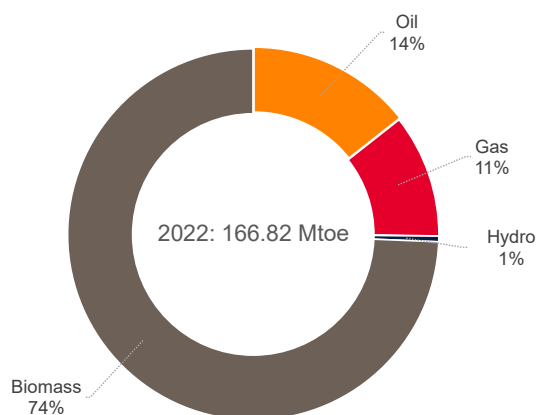
Primary energy demand and CO<sub>2</sub> emissions growth



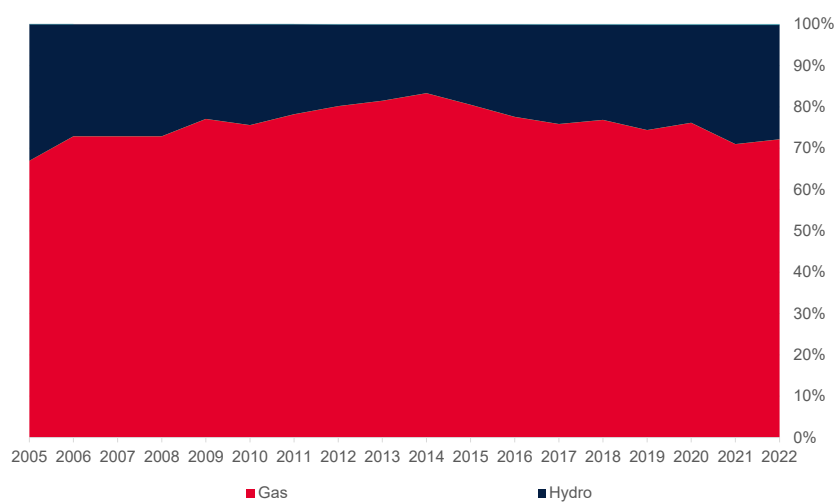
| <b>Nigeria</b><br>(Million toe)                                   | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>142.9</b> | <b>146.4</b> | <b>144.2</b> | <b>149.4</b> | <b>149.6</b> | <b>148.9</b> | <b>158.2</b> | <b>159.0</b> | <b>164.7</b> | <b>166.8</b> | <b>100.0</b>         |
| Oil                                                               | 21.4         | 23.2         | 19.0         | 21.3         | 20.5         | 17.1         | 24.0         | 22.7         | 23.4         | 24.0         | 14.4                 |
| Gas                                                               | 12.5         | 14.3         | 14.2         | 15.0         | 14.2         | 15.0         | 15.3         | 15.4         | 18.2         | 17.9         | 10.7                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.5          | 0.5          | 0.6          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 0.9          | 0.8          | 0.5                  |
| Biomass                                                           | 108.5        | 108.5        | 110.4        | 112.3        | 114.2        | 116.2        | 118.1        | 120.2        | 122.2        | 124.1        | 74.4                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity balance of trade*                                     | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | -0.0                 |
| <b>Total final consumption, by source</b>                         | <b>123.6</b> | <b>126.0</b> | <b>126.0</b> | <b>128.4</b> | <b>130.0</b> | <b>133.3</b> | <b>136.9</b> | <b>136.4</b> | <b>141.0</b> | <b>143.2</b> | <b>100.0</b>         |
| Oil                                                               | 18.0         | 20.1         | 18.2         | 19.0         | 18.9         | 20.2         | 21.9         | 19.4         | 20.9         | 21.5         | 15.0                 |
| Gas                                                               | 3.3          | 3.8          | 3.8          | 3.7          | 3.5          | 3.7          | 3.8          | 3.8          | 4.8          | 4.7          | 3.3                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity                                                       | 2.0          | 2.1          | 2.2          | 2.2          | 2.2          | 2.3          | 2.3          | 2.4          | 2.6          | 2.5          | 1.8                  |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 100.2        | 100.0        | 101.8        | 103.6        | 105.3        | 107.1        | 108.9        | 110.8        | 112.7        | 114.4        | 79.9                 |
| <b>Electricity generation, by source</b>                          | <b>2.5</b>   | <b>2.8</b>   | <b>2.9</b>   | <b>3.1</b>   | <b>2.8</b>   | <b>2.9</b>   | <b>2.8</b>   | <b>2.8</b>   | <b>3.1</b>   | <b>3.0</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gas                                                               | 2.0          | 2.3          | 2.3          | 2.4          | 2.1          | 2.2          | 2.1          | 2.1          | 2.2          | 2.1          | 72.2                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.5          | 0.5          | 0.6          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 0.9          | 0.8          | 27.7                 |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>123.6</b> | <b>126.0</b> | <b>126.0</b> | <b>128.4</b> | <b>130.0</b> | <b>133.3</b> | <b>136.9</b> | <b>136.4</b> | <b>141.0</b> | <b>143.2</b> | <b>100.0</b>         |
| Industry                                                          | 9.9          | 7.3          | 7.3          | 7.3          | 7.2          | 7.3          | 7.4          | 7.4          | 8.2          | 8.3          | 5.8                  |
| Transport                                                         | 15.3         | 16.7         | 15.2         | 17.4         | 17.4         | 18.7         | 20.2         | 17.3         | 18.6         | 19.2         | 13.4                 |
| Residential/Commercial                                            | 97.2         | 100.4        | 101.9        | 102.2        | 104.0        | 105.9        | 108.0        | 110.2        | 112.4        | 114.0        | 79.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>18.0</b>  | <b>20.1</b>  | <b>18.2</b>  | <b>19.0</b>  | <b>18.9</b>  | <b>20.2</b>  | <b>21.9</b>  | <b>19.4</b>  | <b>20.9</b>  | <b>21.5</b>  | <b>100.0</b>         |
| Industry                                                          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.4          | 0.5          | 0.5          | 2.3                  |
| Transport                                                         | 15.3         | 16.7         | 15.2         | 17.4         | 17.4         | 18.7         | 20.2         | 17.3         | 18.6         | 19.2         | 89.5                 |
| Residential/Commercial                                            | 2.3          | 2.7          | 2.3          | 0.8          | 0.9          | 0.9          | 1.2          | 1.5          | 1.7          | 1.7          | 7.9                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>3.3</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>3.7</b>   | <b>3.5</b>   | <b>3.7</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>4.8</b>   | <b>4.7</b>   | <b>100.0</b>         |
| Industry                                                          | 2.1          | 2.5          | 2.4          | 2.4          | 2.3          | 2.4          | 2.4          | 2.5          | 3.1          | 3.1          | 64.9                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Refined products consumption</b>                               | <b>18.0</b>  | <b>20.1</b>  | <b>18.2</b>  | <b>19.0</b>  | <b>18.9</b>  | <b>20.2</b>  | <b>21.9</b>  | <b>19.4</b>  | <b>20.9</b>  | <b>21.5</b>  | <b>100.0</b>         |
| Gasoline                                                          | 12.5         | 13.7         | 12.5         | 13.7         | 13.7         | 14.4         | 15.4         | 13.7         | 15.2         | 16.2         | 75.3                 |
| Diesel                                                            | 2.6          | 2.9          | 2.6          | 3.5          | 3.5          | 4.0          | 4.5          | 3.5          | 3.3          | 2.9          | 13.3                 |
| Heating Oil                                                       | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 2.2                  |
| Aviation Jet                                                      | 0.2          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.3          | 0.2          | 0.2          | 0.2          | 0.9                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.2          | 0.4          | 0.8          | 0.9          | 0.8          | 3.7                  |
| <b>Imports</b>                                                    | <b>17.7</b>  | <b>20.6</b>  | <b>17.3</b>  | <b>19.9</b>  | <b>18.5</b>  | <b>13.4</b>  | <b>22.8</b>  | <b>22.7</b>  | <b>23.7</b>  | <b>24.1</b>  | <b>100.0</b>         |
| Oil                                                               | 17.7         | 20.6         | 17.3         | 19.9         | 18.5         | 13.4         | 22.8         | 22.7         | 23.7         | 24.1         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 13.3         | 14.5         | 11.1         | 14.5         | 13.3         | 8.6          | 16.8         | 15.7         | 17.5         | 18.7         | 77.4                 |
| Diesel                                                            | 2.2          | 3.4          | 3.9          | 4.0          | 3.8          | 3.5          | 4.3          | 5.0          | 3.9          | 3.5          | 14.5                 |
| Heating Oil                                                       | 0.0          | 0.1          | 0.1          | 0.3          | 0.3          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.1                  |
| Aviation Jet                                                      | 0.4          | 0.4          | 0.4          | 0.6          | 0.7          | 0.9          | 0.8          | 0.6          | 0.9          | 0.7          | 2.9                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.6          | 0.5          | 0.4          | 1.5                  |
| <b>Exports</b>                                                    | <b>125.4</b> | <b>129.4</b> | <b>129.7</b> | <b>110.0</b> | <b>114.4</b> | <b>117.8</b> | <b>123.2</b> | <b>99.6</b>  | <b>82.5</b>  | <b>72.3</b>  | <b>100.0</b>         |
| Oil                                                               | 107.6        | 109.1        | 108.2        | 90.5         | 91.8         | 95.5         | 100.8        | 77.1         | 63.9         | 56.4         | 78.0                 |
| Gas                                                               | 17.8         | 20.4         | 21.5         | 19.4         | 22.7         | 22.3         | 22.4         | 22.5         | 18.5         | 15.9         | 22.0                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.3          | 0.3          | 0.1          | 0.2          | 0.5          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>84.2</b>  | <b>93.2</b>  | <b>87.3</b>  | <b>90.6</b>  | <b>88.5</b>  | <b>93.0</b>  | <b>97.7</b>  | <b>90.3</b>  | <b>100.5</b> | <b>101.8</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>93.5</b>  | <b>97.4</b>  | <b>88.8</b>  | <b>93.7</b>  | <b>90.8</b>  | <b>93.6</b>  | <b>96.2</b>  | <b>90.6</b>  | <b>97.2</b>  | <b>95.4</b>  | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>135.9</b> | <b>130.0</b> | <b>126.6</b> | <b>131.2</b> | <b>131.9</b> | <b>132.7</b> | <b>133.5</b> | <b>135.4</b> | <b>134.8</b> | <b>132.6</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>158.7</b> | <b>152.9</b> | <b>146.7</b> | <b>154.5</b> | <b>153.4</b> | <b>149.9</b> | <b>155.8</b> | <b>159.4</b> | <b>159.3</b> | <b>156.3</b> | <b>-</b>             |

\*Heat is included

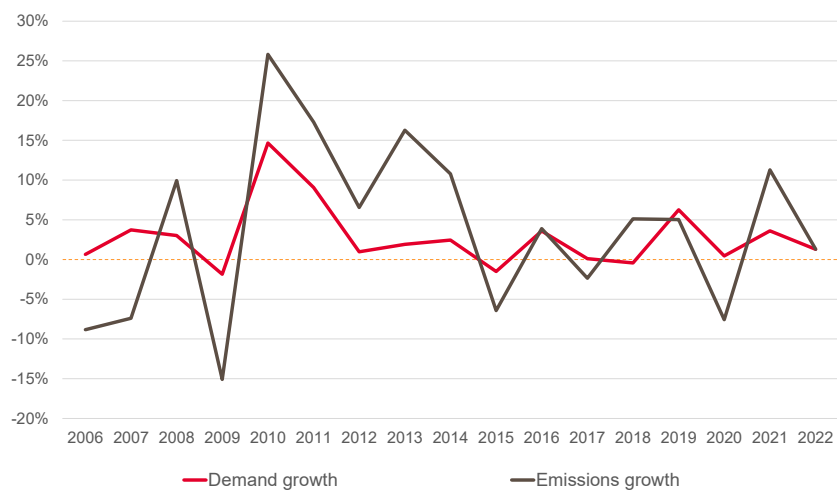
Primary energy demand mix



Electricity generation by source



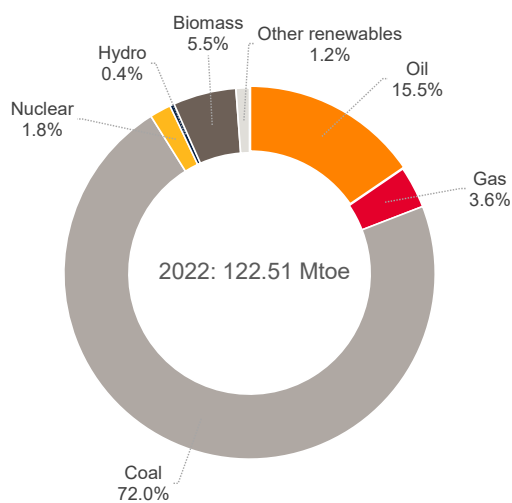
Primary energy demand and CO<sub>2</sub> emissions growth



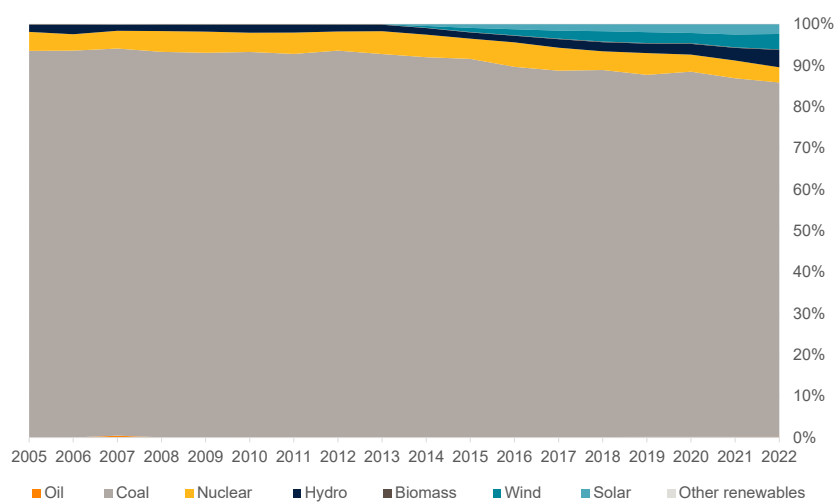
| South Africa<br>(Million toe)                                     | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>136.3</b> | <b>143.1</b> | <b>136.5</b> | <b>140.6</b> | <b>140.1</b> | <b>137.2</b> | <b>136.7</b> | <b>132.2</b> | <b>128.3</b> | <b>122.5</b> | <b>100.0</b>         |
| Oil                                                               | 18.2         | 20.0         | 20.1         | 20.4         | 19.7         | 21.7         | 19.0         | 19.3         | 19.4         | 19.0         | 15.5                 |
| Gas                                                               | 4.1          | 3.9          | 4.3          | 4.2          | 4.1          | 4.3          | 4.3          | 4.2          | 4.5          | 4.5          | 3.6                  |
| Coal                                                              | 103.7        | 109.1        | 102.5        | 105.7        | 105.8        | 101.5        | 102.9        | 98.6         | 93.7         | 88.2         | 72.0                 |
| Nuclear                                                           | 3.7          | 3.6          | 3.2          | 3.9          | 3.7          | 3.0          | 3.5          | 2.6          | 2.7          | 2.3          | 1.9                  |
| Hydro                                                             | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.5          | 0.4                  |
| Biomass                                                           | 6.8          | 6.4          | 6.1          | 6.0          | 6.3          | 5.9          | 6.0          | 6.3          | 6.4          | 6.7          | 5.5                  |
| Other renewables                                                  | 0.0          | 0.2          | 0.4          | 0.7          | 0.9          | 1.1          | 1.3          | 1.2          | 1.4          | 1.4          | 1.2                  |
| Electricity balance of trade*                                     | -0.3         | -0.1         | -0.0         | -0.4         | -0.4         | -0.3         | -0.3         | -0.2         | -0.2         | -0.0         | -0.0                 |
| <b>Total final consumption, by source</b>                         | <b>61.5</b>  | <b>60.7</b>  | <b>59.0</b>  | <b>58.3</b>  | <b>63.9</b>  | <b>62.6</b>  | <b>59.0</b>  | <b>56.2</b>  | <b>56.1</b>  | <b>55.0</b>  | <b>100.0</b>         |
| Oil                                                               | 19.4         | 18.4         | 19.7         | 18.3         | 21.0         | 20.5         | 19.8         | 18.9         | 20.5         | 20.8         | 37.7                 |
| Gas                                                               | 2.2          | 2.2          | 2.2          | 2.2          | 2.3          | 2.1          | 2.2          | 2.0          | 2.2          | 2.2          | 3.9                  |
| Coal                                                              | 18.0         | 18.6         | 16.4         | 16.1         | 18.6         | 18.2         | 15.3         | 14.4         | 11.9         | 10.9         | 19.7                 |
| Electricity                                                       | 16.9         | 16.8         | 16.4         | 17.6         | 17.5         | 17.5         | 17.1         | 16.3         | 16.8         | 16.5         | 29.9                 |
| Heat                                                              | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2                  |
| Biomass                                                           | 4.8          | 4.5          | 4.2          | 4.1          | 4.4          | 4.2          | 4.3          | 4.4          | 4.5          | 4.7          | 8.5                  |
| <b>Electricity generation, by source</b>                          | <b>22.0</b>  | <b>21.7</b>  | <b>21.5</b>  | <b>21.7</b>  | <b>21.9</b>  | <b>22.1</b>  | <b>21.7</b>  | <b>20.6</b>  | <b>21.0</b>  | <b>20.2</b>  | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Coal                                                              | 20.4         | 20.0         | 19.7         | 19.5         | 19.5         | 19.6         | 19.0         | 18.2         | 18.2         | 17.3         | 85.8                 |
| Nuclear                                                           | 1.2          | 1.2          | 1.1          | 1.3          | 1.2          | 1.0          | 1.1          | 0.9          | 0.9          | 0.7          | 3.7                  |
| Hydro                                                             | 0.3          | 0.3          | 0.3          | 0.3          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 0.8          | 4.2                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Wind                                                              | 0.0          | 0.1          | 0.2          | 0.3          | 0.4          | 0.6          | 0.6          | 0.5          | 0.6          | 0.8          | 3.7                  |
| Solar                                                             | 0.0          | 0.1          | 0.2          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 2.3                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | 0.0          | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>61.5</b>  | <b>60.7</b>  | <b>59.0</b>  | <b>58.3</b>  | <b>63.9</b>  | <b>62.6</b>  | <b>59.0</b>  | <b>56.2</b>  | <b>56.1</b>  | <b>55.0</b>  | <b>100.0</b>         |
| Industry                                                          | 26.0         | 26.2         | 24.4         | 24.1         | 23.3         | 25.4         | 24.6         | 23.0         | 21.9         | 21.1         | 38.3                 |
| Transport                                                         | 12.6         | 11.4         | 12.4         | 11.2         | 13.0         | 12.8         | 13.2         | 11.6         | 12.6         | 12.7         | 23.1                 |
| Residential/Commercial                                            | 16.3         | 16.2         | 15.6         | 16.2         | 19.6         | 17.2         | 15.2         | 14.9         | 14.5         | 14.3         | 25.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>19.4</b>  | <b>18.4</b>  | <b>19.7</b>  | <b>18.3</b>  | <b>21.0</b>  | <b>20.5</b>  | <b>19.8</b>  | <b>18.9</b>  | <b>20.5</b>  | <b>20.8</b>  | <b>100.0</b>         |
| Industry                                                          | 2.0          | 2.1          | 2.3          | 2.1          | 1.8          | 2.0          | 1.9          | 1.8          | 1.9          | 2.0          | 9.5                  |
| Transport                                                         | 12.2         | 11.1         | 12.1         | 10.9         | 12.7         | 12.6         | 12.9         | 11.4         | 12.4         | 12.5         | 60.1                 |
| Residential/Commercial                                            | 0.8          | 0.7          | 0.7          | 0.8          | 0.8          | 0.7          | 0.7          | 0.6          | 0.6          | 0.7          | 3.2                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>2.2</b>   | <b>2.2</b>   | <b>2.2</b>   | <b>2.2</b>   | <b>2.3</b>   | <b>2.1</b>   | <b>2.2</b>   | <b>2.0</b>   | <b>2.2</b>   | <b>2.2</b>   | <b>100.0</b>         |
| Industry                                                          | 2.2          | 2.2          | 2.2          | 2.2          | 2.3          | 2.1          | 2.2          | 2.0          | 2.2          | 2.1          | 98.5                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 1.5                  |
| <b>Refined products consumption</b>                               | <b>19.4</b>  | <b>18.4</b>  | <b>19.7</b>  | <b>18.3</b>  | <b>21.0</b>  | <b>20.5</b>  | <b>19.8</b>  | <b>18.9</b>  | <b>20.5</b>  | <b>20.8</b>  | <b>100.0</b>         |
| Gasoline                                                          | 3.5          | 2.4          | 3.0          | 2.6          | 3.2          | 3.1          | 2.9          | 2.7          | 2.9          | 2.8          | 13.7                 |
| Diesel                                                            | 11.4         | 11.4         | 12.0         | 10.8         | 11.8         | 11.7         | 12.0         | 10.9         | 12.1         | 11.9         | 57.1                 |
| Heating Oil                                                       | 0.6          | 0.6          | 0.6          | 0.5          | 0.5          | 0.4          | 0.3          | 0.4          | 0.4          | 0.5          | 2.4                  |
| Aviation Jet                                                      | 0.5          | 0.5          | 0.7          | 0.8          | 0.9          | 1.0          | 1.2          | 0.7          | 0.7          | 1.0          | 4.6                  |
| LPG                                                               | 0.3          | 0.3          | 0.3          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.9                  |
| <b>Imports</b>                                                    | <b>29.2</b>  | <b>31.5</b>  | <b>32.0</b>  | <b>31.8</b>  | <b>31.2</b>  | <b>34.5</b>  | <b>30.8</b>  | <b>28.1</b>  | <b>29.3</b>  | <b>27.2</b>  | <b>100.0</b>         |
| Oil                                                               | 26.1         | 28.4         | 28.7         | 28.4         | 27.8         | 31.1         | 27.4         | 24.8         | 25.7         | 23.6         | 87.0                 |
| Gas                                                               | 3.1          | 3.1          | 3.3          | 3.4          | 3.4          | 3.4          | 3.3          | 3.3          | 3.6          | 3.5          | 13.0                 |
| Gasoline                                                          | 1.2          | 0.9          | 1.5          | 1.1          | 1.6          | 1.7          | 1.2          | 1.3          | 1.3          | 1.1          | 4.2                  |
| Diesel                                                            | 4.4          | 4.5          | 5.8          | 3.9          | 5.4          | 5.4          | 5.2          | 6.3          | 9.0          | 10.9         | 40.2                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.5          | 1.0          | 3.6                  |
| Aviation Jet                                                      | 0.2          | 0.2          | 0.2          | 0.1          | 0.4          | 0.3          | 0.4          | 0.5          | 0.4          | 0.6          | 2.4                  |
| LPG                                                               | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.3                  |
| <b>Exports</b>                                                    | <b>3.6</b>   | <b>3.3</b>   | <b>4.4</b>   | <b>4.1</b>   | <b>4.1</b>   | <b>4.4</b>   | <b>3.7</b>   | <b>2.7</b>   | <b>2.5</b>   | <b>2.4</b>   | <b>100.0</b>         |
| Oil                                                               | 3.6          | 3.3          | 4.4          | 4.1          | 4.1          | 4.4          | 3.7          | 2.7          | 2.5          | 2.4          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.7          | 0.8          | 0.8          | 0.9          | 0.8          | 1.0          | 0.9          | 0.9          | 0.8          | 0.7          | 28.2                 |
| Diesel                                                            | 1.4          | 1.3          | 1.4          | 1.7          | 1.6          | 1.6          | 1.6          | 0.8          | 0.8          | 0.8          | 33.4                 |
| Heating Oil                                                       | 1.1          | 0.9          | 1.2          | 1.0          | 0.8          | 0.9          | 0.4          | 0.0          | 0.4          | 0.4          | 15.7                 |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.7          | 0.3          | 0.3          | 0.3          | 0.3          | 0.5          | 0.1          | 0.3          | 12.8                 |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 2.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>429.1</b> | <b>439.6</b> | <b>416.0</b> | <b>416.0</b> | <b>426.7</b> | <b>430.2</b> | <b>439.7</b> | <b>390.6</b> | <b>400.9</b> | <b>381.2</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>581.0</b> | <b>587.0</b> | <b>548.1</b> | <b>544.5</b> | <b>552.1</b> | <b>548.5</b> | <b>560.0</b> | <b>531.7</b> | <b>520.1</b> | <b>484.7</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>78.2</b>  | <b>75.6</b>  | <b>73.0</b>  | <b>71.1</b>  | <b>76.5</b>  | <b>74.3</b>  | <b>70.8</b>  | <b>70.6</b>  | <b>67.0</b>  | <b>64.4</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>184.6</b> | <b>191.0</b> | <b>179.9</b> | <b>184.0</b> | <b>181.3</b> | <b>175.0</b> | <b>174.2</b> | <b>179.9</b> | <b>166.4</b> | <b>155.8</b> | <b>-</b>             |

\*Heat is included

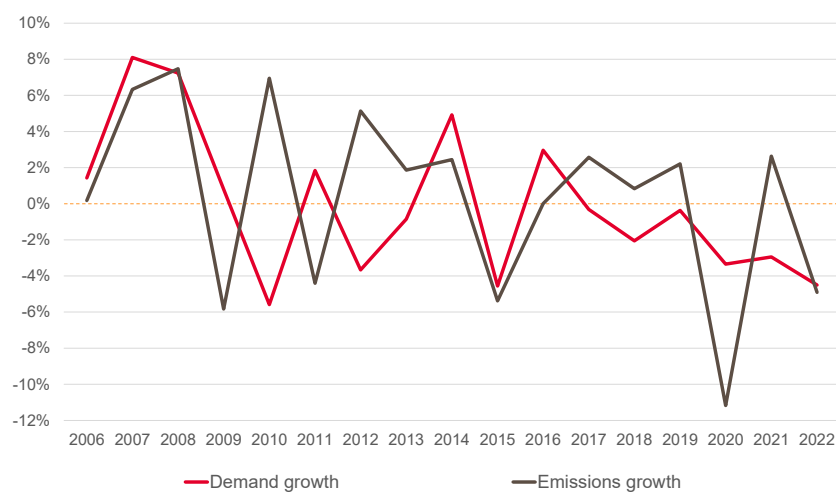
### Primary energy demand mix



### Electricity generation by source



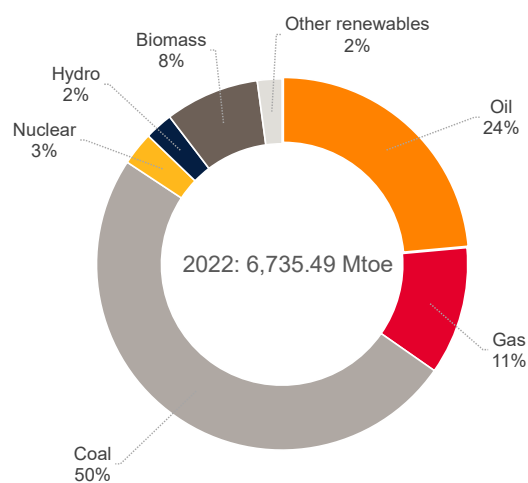
### Primary energy demand and CO<sub>2</sub> emissions growth



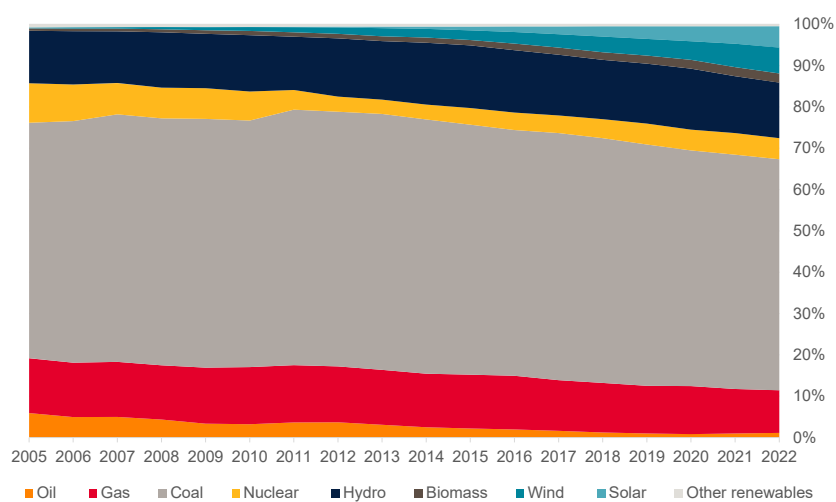
| Asia-Pacific<br>(Million toe)                                     | 2013            | 2014            | 2015            | 2016            | 2017            | 2018            | 2019            | 2020            | 2021            | 2022            | Share in<br>2022 (%) |
|-------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>5,400.5</b>  | <b>5,548.9</b>  | <b>5,581.1</b>  | <b>5,625.9</b>  | <b>5,818.7</b>  | <b>6,038.6</b>  | <b>6,206.9</b>  | <b>6,201.5</b>  | <b>6,494.6</b>  | <b>6,735.5</b>  | <b>100.0</b>         |
| Oil                                                               | 1,311.3         | 1,342.1         | 1,394.4         | 1,439.4         | 1,484.4         | 1,517.4         | 1,544.0         | 1,494.5         | 1,536.1         | 1,565.7         | 23.2                 |
| Gas                                                               | 572.3           | 588.1           | 587.1           | 608.3           | 638.3           | 679.3           | 703.4           | 713.2           | 748.8           | 741.2           | 11.0                 |
| Coal                                                              | 2,767.8         | 2,833.6         | 2,795.7         | 2,732.9         | 2,809.5         | 2,904.0         | 2,970.7         | 2,977.4         | 3,129.8         | 3,297.1         | 49.0                 |
| Nuclear                                                           | 88.8            | 97.3            | 110.4           | 122.5           | 130.3           | 148.1           | 168.8           | 169.7           | 190.3           | 192.5           | 2.9                  |
| Hydro                                                             | 118.3           | 131.5           | 135.0           | 140.2           | 144.5           | 148.9           | 155.3           | 159.9           | 160.4           | 163.3           | 2.4                  |
| Biomass                                                           | 468.6           | 475.2           | 468.5           | 479.0           | 490.9           | 501.7           | 510.0           | 516.6           | 527.9           | 545.9           | 8.1                  |
| Other renewables                                                  | 20.0            | 24.1            | 29.6            | 39.7            | 52.1            | 66.9            | 78.5            | 90.6            | 118.5           | 142.8           | 2.1                  |
| Electricity balance of trade*                                     | 53.3            | 57.0            | 60.5            | 64.0            | 68.7            | 72.3            | 76.3            | 79.7            | 82.8            | 86.9            | 1.3                  |
| <b>Total final consumption, by source</b>                         | <b>3,752.6</b>  | <b>3,853.5</b>  | <b>3,894.6</b>  | <b>3,933.8</b>  | <b>4,025.9</b>  | <b>4,147.7</b>  | <b>4,199.5</b>  | <b>4,191.8</b>  | <b>4,341.7</b>  | <b>4,478.1</b>  | <b>100.0</b>         |
| Oil                                                               | 1,147.2         | 1,177.6         | 1,235.4         | 1,261.8         | 1,307.1         | 1,356.1         | 1,362.4         | 1,323.3         | 1,369.1         | 1,405.1         | 31.4                 |
| Gas                                                               | 262.8           | 269.2           | 268.7           | 283.3           | 307.8           | 340.4           | 360.5           | 365.8           | 399.3           | 394.1           | 8.8                  |
| Coal                                                              | 1,115.6         | 1,131.8         | 1,104.7         | 1,058.8         | 1,016.7         | 978.0           | 960.7           | 957.2           | 937.8           | 977.8           | 21.8                 |
| Electricity                                                       | 709.8           | 750.4           | 762.2           | 800.8           | 853.1           | 914.8           | 949.8           | 966.6           | 1,042.5         | 1,082.3         | 24.2                 |
| Heat                                                              | 109.3           | 114.5           | 121.9           | 132.7           | 142.1           | 157.4           | 164.5           | 176.4           | 190.7           | 204.0           | 4.6                  |
| Biomass                                                           | 408.0           | 410.2           | 401.7           | 396.5           | 399.0           | 401.0           | 401.6           | 402.5           | 402.2           | 414.9           | 9.3                  |
| <b>Electricity generation, by source</b>                          | <b>849.2</b>    | <b>893.6</b>    | <b>905.9</b>    | <b>953.6</b>    | <b>1,010.5</b>  | <b>1,063.6</b>  | <b>1,100.7</b>  | <b>1,111.6</b>  | <b>1,197.9</b>  | <b>1,246.9</b>  | <b>100.0</b>         |
| Oil                                                               | 26.2            | 22.3            | 19.7            | 18.7            | 16.4            | 12.8            | 10.8            | 9.4             | 11.8            | 13.7            | 1.1                  |
| Gas                                                               | 112.7           | 115.5           | 118.2           | 123.8           | 123.8           | 127.5           | 127.0           | 129.1           | 128.7           | 128.8           | 10.3                 |
| Coal                                                              | 526.1           | 550.1           | 548.1           | 567.0           | 604.4           | 630.1           | 643.0           | 633.9           | 679.4           | 697.4           | 55.9                 |
| Nuclear                                                           | 29.3            | 32.1            | 36.4            | 40.4            | 43.0            | 48.9            | 55.7            | 56.0            | 62.8            | 63.5            | 5.1                  |
| Hydro                                                             | 120.3           | 133.7           | 137.3           | 144.1           | 148.6           | 153.0           | 159.3           | 164.1           | 164.7           | 167.6           | 13.4                 |
| Biomass                                                           | 10.0            | 11.2            | 11.9            | 15.1            | 17.2            | 19.6            | 21.7            | 23.8            | 26.4            | 27.6            | 2.2                  |
| Wind                                                              | 16.6            | 18.8            | 21.1            | 26.9            | 32.9            | 40.2            | 44.6            | 50.0            | 67.9            | 77.9            | 6.3                  |
| Solar                                                             | 3.4             | 5.3             | 8.4             | 12.9            | 19.2            | 26.6            | 33.7            | 40.3            | 50.6            | 64.8            | 5.2                  |
| Other renewables                                                  | 4.5             | 4.6             | 4.7             | 4.8             | 4.9             | 4.9             | 5.0             | 5.1             | 5.5             | 5.5             | 0.4                  |
| <b>Total final consumption, by sector</b>                         | <b>3,752.6</b>  | <b>3,853.5</b>  | <b>3,894.6</b>  | <b>3,933.8</b>  | <b>4,025.9</b>  | <b>4,147.7</b>  | <b>4,199.5</b>  | <b>4,191.8</b>  | <b>4,341.7</b>  | <b>4,478.1</b>  | <b>100.0</b>         |
| Industry                                                          | 1,704.9         | 1,758.2         | 1,727.5         | 1,708.3         | 1,730.4         | 1,791.2         | 1,813.1         | 1,841.5         | 1,887.4         | 1,936.0         | 43.2                 |
| Transport                                                         | 626.8           | 644.8           | 680.1           | 699.9           | 730.2           | 765.5           | 771.3           | 718.8           | 750.5           | 773.4           | 17.3                 |
| Residential/Commercial                                            | 938.7           | 952.0           | 969.0           | 995.1           | 1,028.4         | 1,050.7         | 1,063.8         | 1,073.3         | 1,125.1         | 1,181.1         | 26.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>1,147.2</b>  | <b>1,177.6</b>  | <b>1,235.4</b>  | <b>1,261.8</b>  | <b>1,307.1</b>  | <b>1,356.1</b>  | <b>1,362.4</b>  | <b>1,323.3</b>  | <b>1,369.1</b>  | <b>1,405.1</b>  | <b>100.0</b>         |
| Industry                                                          | 120.1           | 123.2           | 127.4           | 124.2           | 125.0           | 136.2           | 142.3           | 153.9           | 155.5           | 163.0           | 11.6                 |
| Transport                                                         | 588.8           | 602.3           | 635.2           | 651.1           | 676.7           | 708.1           | 705.8           | 650.3           | 678.1           | 700.2           | 49.8                 |
| Residential/Commercial                                            | 122.1           | 125.3           | 131.6           | 136.6           | 142.2           | 143.1           | 137.5           | 139.4           | 144.2           | 150.5           | 10.7                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>262.8</b>    | <b>269.2</b>    | <b>268.7</b>    | <b>283.3</b>    | <b>307.8</b>    | <b>340.4</b>    | <b>360.5</b>    | <b>365.8</b>    | <b>399.3</b>    | <b>394.1</b>    | <b>100.0</b>         |
| Industry                                                          | 106.1           | 108.8           | 104.2           | 112.1           | 127.8           | 154.0           | 164.5           | 168.6           | 185.6           | 179.6           | 45.6                 |
| Transport                                                         | 20.9            | 23.8            | 25.6            | 26.7            | 28.7            | 29.2            | 32.8            | 32.6            | 35.0            | 36.9            | 9.4                  |
| Residential/Commercial                                            | 85.0            | 86.7            | 89.4            | 93.2            | 99.7            | 104.7           | 108.4           | 110.6           | 121.2           | 120.8           | 30.6                 |
| <b>Refined products consumption</b>                               | <b>1,143.9</b>  | <b>1,171.9</b>  | <b>1,230.0</b>  | <b>1,256.6</b>  | <b>1,304.3</b>  | <b>1,353.4</b>  | <b>1,358.7</b>  | <b>1,318.9</b>  | <b>1,364.5</b>  | <b>1,400.4</b>  | <b>100.0</b>         |
| Gasoline                                                          | 251.9           | 257.4           | 281.9           | 293.9           | 304.2           | 320.7           | 329.4           | 306.0           | 319.8           | 321.8           | 23.0                 |
| Diesel                                                            | 414.5           | 417.4           | 427.4           | 422.2           | 434.3           | 443.9           | 425.3           | 396.7           | 407.5           | 442.7           | 31.6                 |
| Heating Oil                                                       | 34.3            | 32.9            | 32.0            | 32.0            | 32.5            | 29.8            | 30.8            | 29.5            | 33.9            | 38.9            | 2.8                  |
| Aviation Jet                                                      | 29.9            | 32.6            | 36.0            | 39.5            | 43.3            | 46.0            | 47.3            | 40.3            | 42.7            | 35.5            | 2.5                  |
| LPG                                                               | 100.4           | 107.2           | 112.4           | 124.2           | 131.7           | 140.8           | 142.6           | 140.8           | 148.1           | 154.5           | 11.0                 |
| <b>Imports</b>                                                    | <b>1,677.4</b>  | <b>1,710.9</b>  | <b>1,785.3</b>  | <b>1,893.6</b>  | <b>1,994.7</b>  | <b>2,062.9</b>  | <b>2,096.0</b>  | <b>2,030.3</b>  | <b>2,053.3</b>  | <b>2,098.9</b>  | <b>100.0</b>         |
| Oil                                                               | 1,422.3         | 1,450.0         | 1,526.3         | 1,616.8         | 1,691.7         | 1,731.6         | 1,756.7         | 1,683.7         | 1,681.0         | 1,742.3         | 83.0                 |
| Gas                                                               | 255.1           | 260.8           | 259.1           | 276.8           | 303.0           | 331.3           | 339.3           | 346.7           | 372.2           | 356.5           | 17.0                 |
| Gasoline                                                          | 53.8            | 56.4            | 60.7            | 62.7            | 62.4            | 66.3            | 71.2            | 67.7            | 68.1            | 78.4            | 3.7                  |
| Diesel                                                            | 67.1            | 75.0            | 74.2            | 83.5            | 91.7            | 89.0            | 92.1            | 86.0            | 84.9            | 98.9            | 4.7                  |
| Heating Oil                                                       | 124.7           | 116.4           | 117.8           | 116.2           | 119.5           | 109.6           | 103.4           | 94.4            | 103.5           | 94.1            | 4.5                  |
| Aviation Jet                                                      | 22.2            | 20.9            | 21.9            | 26.3            | 28.4            | 27.3            | 25.4            | 17.4            | 11.9            | 13.2            | 0.6                  |
| LPG                                                               | 45.4            | 50.8            | 57.1            | 67.2            | 70.7            | 74.5            | 80.2            | 81.1            | 86.0            | 94.5            | 4.5                  |
| <b>Exports</b>                                                    | <b>482.9</b>    | <b>485.9</b>    | <b>515.6</b>    | <b>555.4</b>    | <b>580.6</b>    | <b>571.9</b>    | <b>583.9</b>    | <b>551.0</b>    | <b>549.3</b>    | <b>559.7</b>    | <b>100.0</b>         |
| Oil                                                               | 377.9           | 377.0           | 399.6           | 426.2           | 431.8           | 417.1           | 414.9           | 380.1           | 379.4           | 377.9           | 67.5                 |
| Gas                                                               | 104.9           | 108.9           | 116.0           | 129.2           | 148.8           | 154.8           | 169.0           | 170.9           | 169.9           | 181.8           | 32.5                 |
| Gasoline                                                          | 59.9            | 64.8            | 68.9            | 71.1            | 71.1            | 71.2            | 75.7            | 68.5            | 74.4            | 72.2            | 12.9                 |
| Diesel                                                            | 103.8           | 104.3           | 108.7           | 120.7           | 125.2           | 128.4           | 131.8           | 123.4           | 120.4           | 114.9           | 20.5                 |
| Heating Oil                                                       | 61.3            | 56.2            | 56.6            | 57.5            | 61.7            | 57.8            | 50.9            | 43.8            | 48.9            | 49.7            | 8.9                  |
| Aviation Jet                                                      | 39.1            | 40.1            | 44.4            | 48.2            | 50.4            | 49.8            | 51.4            | 40.3            | 36.2            | 47.0            | 8.4                  |
| LPG                                                               | 4.2             | 4.4             | 4.1             | 4.5             | 4.8             | 5.4             | 6.4             | 7.3             | 7.1             | 7.4             | 1.3                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>15,097.1</b> | <b>15,291.8</b> | <b>15,294.0</b> | <b>15,369.9</b> | <b>15,807.0</b> | <b>16,314.5</b> | <b>16,436.2</b> | <b>16,181.2</b> | <b>17,000.2</b> | <b>17,727.2</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>391.2</b>    | <b>375.6</b>    | <b>355.9</b>    | <b>338.7</b>    | <b>329.8</b>    | <b>322.9</b>    | <b>312.0</b>    | <b>311.2</b>    | <b>307.5</b>    | <b>308.8</b>    | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>97.2</b>     | <b>94.6</b>     | <b>90.6</b>     | <b>86.7</b>     | <b>84.0</b>     | <b>82.1</b>     | <b>79.7</b>     | <b>80.6</b>     | <b>78.5</b>     | <b>78.0</b>     | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>139.9</b>    | <b>136.3</b>    | <b>129.9</b>    | <b>124.0</b>    | <b>121.4</b>    | <b>119.5</b>    | <b>117.8</b>    | <b>119.3</b>    | <b>117.5</b>    | <b>117.3</b>    | <b>-</b>             |

\*Heat is included

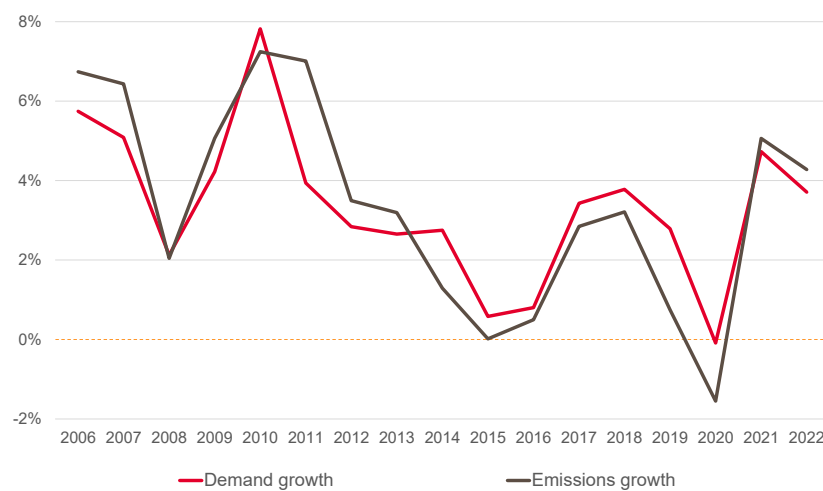
### Primary energy demand mix



### Electricity generation by source



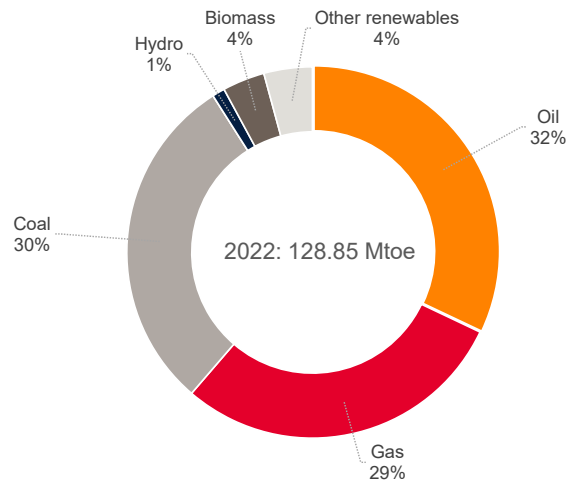
### Primary energy demand and CO<sub>2</sub> emissions growth



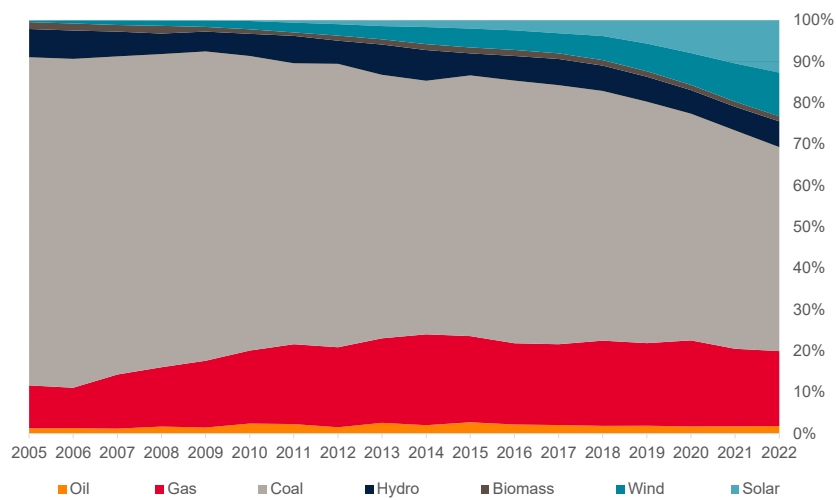
| <b>Australia</b><br>(Million toe)                                 | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>127.5</b> | <b>126.9</b> | <b>126.7</b> | <b>126.2</b> | <b>127.9</b> | <b>128.7</b> | <b>129.3</b> | <b>131.0</b> | <b>128.4</b> | <b>128.9</b> | <b>100.0</b>         |
| Oil                                                               | 45.1         | 44.5         | 42.5         | 42.8         | 42.9         | 44.1         | 43.9         | 44.1         | 41.2         | 41.1         | 31.9                 |
| Gas                                                               | 30.9         | 32.9         | 33.1         | 30.5         | 31.3         | 32.5         | 34.2         | 37.9         | 36.6         | 37.5         | 29.1                 |
| Coal                                                              | 43.7         | 41.5         | 42.9         | 44.5         | 44.7         | 42.9         | 41.7         | 38.9         | 39.6         | 38.1         | 29.6                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.6          | 1.6          | 1.1          | 1.3          | 1.4          | 1.4          | 1.3          | 1.3          | 1.3          | 1.4          | 1.1                  |
| Biomass                                                           | 4.9          | 4.9          | 5.2          | 5.1          | 5.5          | 5.2          | 4.9          | 4.7          | 4.8          | 4.7          | 3.7                  |
| Other renewables                                                  | 1.0          | 1.2          | 1.4          | 1.6          | 1.8          | 2.2          | 2.8          | 3.6          | 4.5          | 5.4          | 4.2                  |
| Electricity balance of trade*                                     | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.4                  |
| <b>Total final consumption, by source</b>                         | <b>81.8</b>  | <b>81.9</b>  | <b>81.5</b>  | <b>82.4</b>  | <b>82.2</b>  | <b>83.3</b>  | <b>81.2</b>  | <b>78.6</b>  | <b>78.2</b>  | <b>78.9</b>  | <b>100.0</b>         |
| Oil                                                               | 43.0         | 43.1         | 42.5         | 43.0         | 43.4         | 44.5         | 44.1         | 41.7         | 41.2         | 41.5         | 52.6                 |
| Gas                                                               | 12.9         | 13.2         | 13.0         | 12.9         | 12.1         | 12.0         | 10.5         | 10.6         | 10.7         | 10.7         | 13.6                 |
| Coal                                                              | 3.1          | 3.1          | 3.0          | 3.4          | 3.6          | 3.8          | 3.7          | 3.5          | 3.5          | 3.6          | 4.5                  |
| Electricity                                                       | 18.2         | 18.0         | 18.3         | 18.4         | 18.3         | 18.5         | 18.6         | 18.6         | 18.6         | 18.8         | 23.9                 |
| Heat                                                              | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.6                  |
| Biomass                                                           | 4.4          | 4.2          | 4.3          | 4.2          | 4.3          | 4.1          | 3.9          | 3.7          | 3.8          | 3.7          | 4.7                  |
| <b>Electricity generation, by source</b>                          | <b>21.4</b>  | <b>21.3</b>  | <b>21.6</b>  | <b>22.1</b>  | <b>22.2</b>  | <b>22.4</b>  | <b>22.7</b>  | <b>22.8</b>  | <b>22.8</b>  | <b>23.3</b>  | <b>100.0</b>         |
| Oil                                                               | 0.6          | 0.4          | 0.6          | 0.5          | 0.5          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 1.8                  |
| Gas                                                               | 4.4          | 4.7          | 4.5          | 4.3          | 4.3          | 4.6          | 4.5          | 4.7          | 4.3          | 4.2          | 18.1                 |
| Coal                                                              | 13.7         | 13.1         | 13.6         | 14.0         | 13.9         | 13.6         | 13.3         | 12.5         | 12.1         | 11.5         | 49.4                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.6          | 1.6          | 1.2          | 1.3          | 1.4          | 1.4          | 1.4          | 1.3          | 1.3          | 1.5          | 6.2                  |
| Biomass                                                           | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 1.2                  |
| Wind                                                              | 0.7          | 0.9          | 1.0          | 1.0          | 1.1          | 1.3          | 1.5          | 1.8          | 2.1          | 2.5          | 10.6                 |
| Solar                                                             | 0.3          | 0.3          | 0.4          | 0.5          | 0.7          | 0.9          | 1.3          | 1.8          | 2.4          | 2.9          | 12.7                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>81.8</b>  | <b>81.9</b>  | <b>81.5</b>  | <b>82.4</b>  | <b>82.2</b>  | <b>83.3</b>  | <b>81.2</b>  | <b>78.6</b>  | <b>78.2</b>  | <b>78.9</b>  | <b>100.0</b>         |
| Industry                                                          | 24.6         | 24.3         | 23.1         | 23.7         | 23.4         | 23.5         | 22.6         | 22.4         | 22.8         | 23.1         | 29.3                 |
| Transport                                                         | 31.3         | 31.4         | 32.2         | 32.4         | 32.8         | 33.5         | 33.4         | 31.1         | 30.3         | 30.5         | 38.6                 |
| Residential/Commercial                                            | 17.8         | 17.8         | 18.3         | 18.3         | 18.2         | 18.3         | 17.8         | 17.9         | 17.9         | 18.1         | 22.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>43.0</b>  | <b>43.1</b>  | <b>42.5</b>  | <b>43.0</b>  | <b>43.4</b>  | <b>44.5</b>  | <b>44.1</b>  | <b>41.7</b>  | <b>41.2</b>  | <b>41.5</b>  | <b>100.0</b>         |
| Industry                                                          | 4.6          | 4.5          | 3.9          | 3.8          | 3.8          | 4.1          | 4.2          | 4.3          | 4.5          | 4.7          | 11.3                 |
| Transport                                                         | 30.6         | 30.6         | 31.3         | 31.7         | 32.1         | 32.8         | 32.7         | 30.4         | 29.7         | 29.8         | 71.7                 |
| Residential/Commercial                                            | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.0          | 1.0          | 1.0          | 1.0          | 2.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>12.9</b>  | <b>13.2</b>  | <b>13.0</b>  | <b>12.9</b>  | <b>12.1</b>  | <b>12.0</b>  | <b>10.5</b>  | <b>10.6</b>  | <b>10.7</b>  | <b>10.7</b>  | <b>100.0</b>         |
| Industry                                                          | 7.1          | 7.0          | 6.7          | 6.8          | 6.4          | 6.2          | 5.5          | 5.5          | 5.5          | 5.5          | 51.2                 |
| Transport                                                         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.5                  |
| Residential/Commercial                                            | 4.4          | 4.6          | 4.7          | 4.7          | 4.5          | 4.5          | 4.1          | 4.1          | 4.1          | 4.2          | 38.6                 |
| <b>Refined products consumption</b>                               | <b>43.0</b>  | <b>43.1</b>  | <b>42.5</b>  | <b>43.0</b>  | <b>43.4</b>  | <b>44.5</b>  | <b>44.1</b>  | <b>41.7</b>  | <b>41.2</b>  | <b>41.5</b>  | <b>100.0</b>         |
| Gasoline                                                          | 14.8         | 14.3         | 14.4         | 14.3         | 14.5         | 14.3         | 14.0         | 12.4         | 12.6         | 11.8         | 28.5                 |
| Diesel                                                            | 17.3         | 17.8         | 18.4         | 19.0         | 19.8         | 21.3         | 21.3         | 21.2         | 21.6         | 22.3         | 53.6                 |
| Heating Oil                                                       | 0.8          | 0.6          | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.2          | 0.4                  |
| Aviation Jet                                                      | 2.9          | 3.0          | 3.0          | 3.0          | 3.1          | 3.1          | 2.9          | 2.3          | 1.6          | 2.0          | 4.9                  |
| LPG                                                               | 2.2          | 2.2          | 2.1          | 1.9          | 1.6          | 1.2          | 1.1          | 1.1          | 1.0          | 1.0          | 2.3                  |
| <b>Imports</b>                                                    | <b>49.0</b>  | <b>48.6</b>  | <b>47.6</b>  | <b>48.6</b>  | <b>49.7</b>  | <b>52.9</b>  | <b>52.5</b>  | <b>49.4</b>  | <b>46.8</b>  | <b>47.7</b>  | <b>100.0</b>         |
| Oil                                                               | 44.6         | 43.9         | 43.3         | 43.7         | 45.3         | 48.9         | 48.2         | 45.5         | 42.3         | 44.5         | 93.2                 |
| Gas                                                               | 4.4          | 4.7          | 4.3          | 4.9          | 4.4          | 4.0          | 4.3          | 3.9          | 4.5          | 3.3          | 6.8                  |
| Gasoline                                                          | 2.9          | 2.8          | 4.3          | 5.2          | 5.4          | 5.0          | 4.7          | 4.6          | 6.0          | 6.9          | 14.4                 |
| Diesel                                                            | 10.6         | 11.4         | 12.7         | 15.2         | 15.7         | 17.3         | 17.7         | 18.8         | 19.5         | 22.7         | 47.5                 |
| Heating Oil                                                       | 1.6          | 1.3          | 0.2          | 0.3          | 0.2          | 0.7          | 0.7          | 0.6          | 0.3          | 0.4          | 0.9                  |
| Aviation Jet                                                      | 2.7          | 2.9          | 3.6          | 4.7          | 4.9          | 5.2          | 4.9          | 4.1          | 2.3          | 3.2          | 6.7                  |
| LPG                                                               | 0.5          | 0.4          | 0.6          | 0.5          | 0.6          | 0.5          | 0.5          | 0.4          | 0.4          | 0.4          | 0.9                  |
| <b>Exports</b>                                                    | <b>43.0</b>  | <b>41.8</b>  | <b>44.0</b>  | <b>57.0</b>  | <b>74.5</b>  | <b>85.9</b>  | <b>103.1</b> | <b>111.4</b> | <b>107.9</b> | <b>115.6</b> | <b>100.0</b>         |
| Oil                                                               | 15.5         | 14.5         | 14.6         | 13.4         | 13.0         | 13.2         | 15.0         | 18.1         | 17.0         | 17.9         | 15.5                 |
| Gas                                                               | 27.5         | 27.2         | 29.4         | 43.5         | 61.4         | 72.7         | 88.0         | 93.3         | 90.9         | 97.7         | 84.5                 |
| Gasoline                                                          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.1          | 0.2          | 0.1          | 0.0          | 0.1          | 0.1                  |
| Diesel                                                            | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.2          | 0.0          | 0.1          | 0.2          | 0.3          | 0.2          | 0.2          | 0.3          | 0.4          | 0.1          | 0.1                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 1.5          | 1.5          | 1.3          | 1.2          | 1.4          | 1.4          | 1.8          | 3.2          | 2.9          | 3.4          | 2.9                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>393.1</b> | <b>383.0</b> | <b>388.8</b> | <b>398.4</b> | <b>397.7</b> | <b>394.6</b> | <b>384.7</b> | <b>369.2</b> | <b>356.5</b> | <b>351.9</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>374.0</b> | <b>355.3</b> | <b>353.0</b> | <b>352.1</b> | <b>343.6</b> | <b>331.3</b> | <b>316.4</b> | <b>303.7</b> | <b>288.9</b> | <b>275.1</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>72.2</b>  | <b>70.2</b>  | <b>69.0</b>  | <b>67.9</b>  | <b>66.5</b>  | <b>65.4</b>  | <b>62.6</b>  | <b>60.4</b>  | <b>59.3</b>  | <b>57.8</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>121.3</b> | <b>117.7</b> | <b>115.0</b> | <b>111.5</b> | <b>110.5</b> | <b>108.1</b> | <b>106.3</b> | <b>107.7</b> | <b>104.0</b> | <b>100.7</b> | -                    |

\*Heat is included

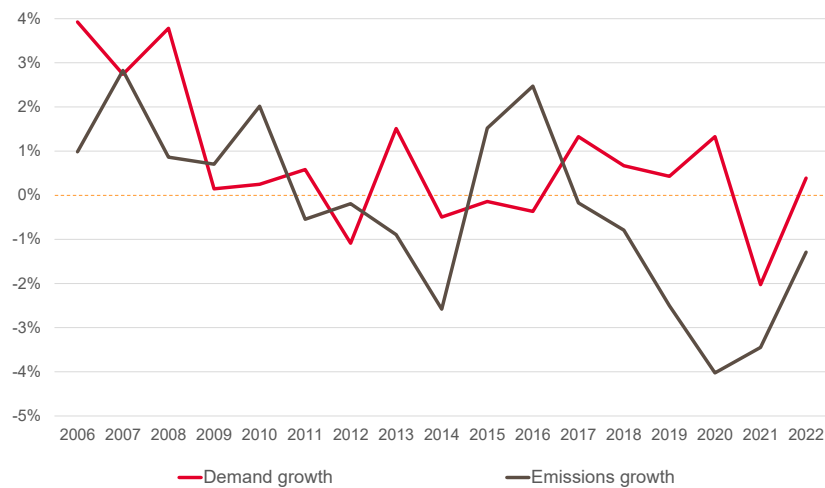
Primary energy demand mix



Electricity generation by source



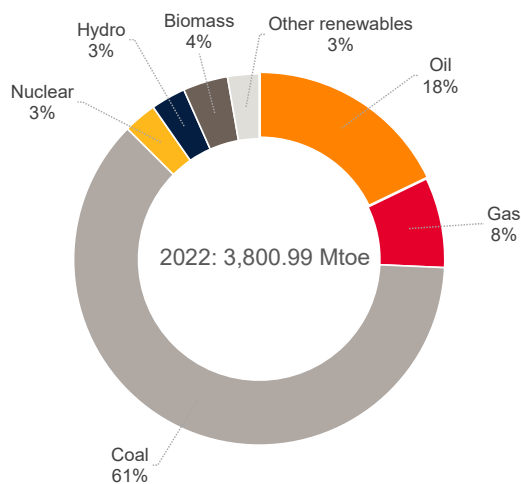
Primary energy demand and CO<sub>2</sub> emissions growth



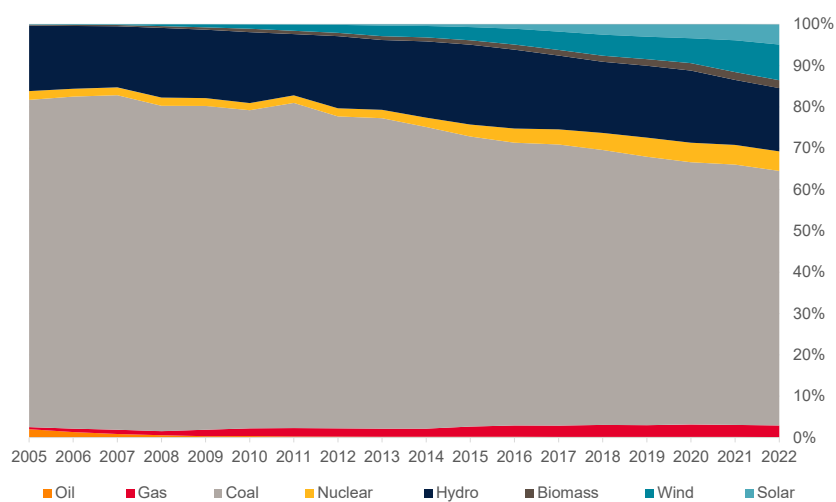
| China<br>(Million toe)                                            | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021            | 2022            | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>2,911.7</b> | <b>2,986.1</b> | <b>3,000.8</b> | <b>2,987.2</b> | <b>3,098.4</b> | <b>3,247.4</b> | <b>3,395.9</b> | <b>3,507.0</b> | <b>3,688.8</b>  | <b>3,801.0</b>  | <b>100.0</b>         |
| Oil                                                               | 486.8          | 508.3          | 540.7          | 561.0          | 591.9          | 621.5          | 656.2          | 669.7          | 680.7           | 669.7           | 17.6                 |
| Gas                                                               | 140.5          | 153.7          | 158.6          | 170.8          | 195.2          | 228.6          | 248.2          | 265.1          | 298.3           | 294.7           | 7.8                  |
| Coal                                                              | 2,025.1        | 2,041.5        | 1,999.4        | 1,929.8        | 1,958.4        | 2,013.2        | 2,069.6        | 2,123.8        | 2,221.5         | 2,317.0         | 61.0                 |
| Nuclear                                                           | 29.1           | 34.5           | 44.5           | 55.6           | 64.6           | 76.7           | 90.8           | 95.4           | 106.1           | 108.7           | 2.9                  |
| Hydro                                                             | 78.2           | 91.1           | 95.8           | 99.2           | 100.2          | 103.1          | 109.4          | 113.7          | 112.3           | 113.4           | 3.0                  |
| Biomass                                                           | 114.2          | 114.8          | 113.6          | 112.3          | 116.9          | 119.8          | 126.6          | 133.8          | 140.0           | 146.5           | 3.9                  |
| Other renewables                                                  | 13.5           | 15.8           | 19.4           | 26.1           | 35.7           | 46.8           | 54.5           | 63.0           | 85.0            | 103.1           | 2.7                  |
| Electricity balance of trade*                                     | 24.3           | 26.4           | 28.7           | 32.3           | 35.5           | 37.6           | 40.6           | 42.4           | 44.9            | 47.8            | 1.3                  |
| <b>Total final consumption, by source</b>                         | <b>2,007.1</b> | <b>2,074.3</b> | <b>2,092.9</b> | <b>2,099.1</b> | <b>2,123.0</b> | <b>2,200.1</b> | <b>2,241.4</b> | <b>2,315.8</b> | <b>2,416.3</b>  | <b>2,465.8</b>  | <b>100.0</b>         |
| Oil                                                               | 432.7          | 453.8          | 484.8          | 499.2          | 517.5          | 559.1          | 565.0          | 577.3          | 598.7           | 606.0           | 24.6                 |
| Gas                                                               | 98.8           | 108.0          | 108.1          | 117.0          | 134.2          | 162.2          | 182.4          | 195.2          | 222.9           | 219.8           | 8.9                  |
| Coal                                                              | 892.3          | 897.7          | 877.8          | 831.4          | 770.9          | 718.5          | 696.1          | 707.2          | 685.7           | 691.3           | 28.0                 |
| Electricity                                                       | 387.0          | 415.8          | 418.9          | 443.7          | 484.5          | 531.3          | 561.0          | 587.2          | 647.7           | 671.0           | 27.2                 |
| Heat                                                              | 100.7          | 105.5          | 112.9          | 123.3          | 132.2          | 146.1          | 153.3          | 165.0          | 178.5           | 191.0           | 7.7                  |
| Biomass                                                           | 95.8           | 93.5           | 90.3           | 84.6           | 83.6           | 82.9           | 83.6           | 83.9           | 82.8            | 86.7            | 3.5                  |
| <b>Electricity generation, by source</b>                          | <b>468.5</b>   | <b>500.3</b>   | <b>503.5</b>   | <b>533.2</b>   | <b>577.5</b>   | <b>614.3</b>   | <b>645.4</b>   | <b>667.8</b>   | <b>732.6</b>    | <b>759.6</b>    | <b>100.0</b>         |
| Oil                                                               | 0.9            | 0.8            | 0.8            | 0.9            | 0.8            | 0.9            | 0.9            | 1.0            | 1.0             | 0.9             | 0.1                  |
| Gas                                                               | 9.2            | 9.8            | 12.5           | 14.7           | 15.7           | 17.8           | 18.3           | 20.2           | 21.3            | 21.3            | 2.8                  |
| Coal                                                              | 352.0          | 365.2          | 353.4          | 364.8          | 392.8          | 408.7          | 419.3          | 423.8          | 461.5           | 467.9           | 61.6                 |
| Nuclear                                                           | 9.6            | 11.4           | 14.7           | 18.3           | 21.3           | 25.3           | 30.0           | 31.5           | 35.0            | 35.9            | 4.7                  |
| Hydro                                                             | 79.1           | 92.3           | 97.2           | 101.8          | 103.0          | 105.9          | 112.2          | 116.5          | 115.1           | 116.3           | 15.3                 |
| Biomass                                                           | 4.2            | 4.9            | 5.5            | 6.5            | 8.0            | 8.9            | 10.4           | 12.1           | 14.0            | 14.6            | 1.9                  |
| Wind                                                              | 12.1           | 13.8           | 16.0           | 20.4           | 25.6           | 31.5           | 34.9           | 40.1           | 56.4            | 65.5            | 8.6                  |
| Solar                                                             | 1.3            | 2.0            | 3.4            | 5.7            | 10.1           | 15.2           | 19.4           | 22.5           | 28.2            | 37.2            | 4.9                  |
| Other renewables                                                  | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0             | 0.0             | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>2,007.1</b> | <b>2,074.3</b> | <b>2,092.9</b> | <b>2,099.1</b> | <b>2,123.0</b> | <b>2,200.1</b> | <b>2,241.4</b> | <b>2,315.8</b> | <b>2,416.3</b>  | <b>2,465.8</b>  | <b>100.0</b>         |
| Industry                                                          | 1,143.6        | 1,173.2        | 1,140.8        | 1,113.1        | 1,102.7        | 1,134.6        | 1,152.9        | 1,206.5        | 1,240.9         | 1,244.3         | 50.5                 |
| Transport                                                         | 257.9          | 268.8          | 289.8          | 297.3          | 309.7          | 335.0          | 335.8          | 322.3          | 336.7           | 333.7           | 13.5                 |
| Residential/Commercial                                            | 398.7          | 410.1          | 429.3          | 447.7          | 472.9          | 495.1          | 507.5          | 524.8          | 568.5           | 606.2           | 24.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>432.7</b>   | <b>453.8</b>   | <b>484.8</b>   | <b>499.2</b>   | <b>517.5</b>   | <b>559.1</b>   | <b>565.0</b>   | <b>577.3</b>   | <b>598.7</b>    | <b>606.0</b>    | <b>100.0</b>         |
| Industry                                                          | 48.7           | 48.9           | 48.1           | 46.2           | 45.7           | 61.4           | 69.0           | 85.6           | 86.8            | 87.7            | 14.5                 |
| Transport                                                         | 236.3          | 243.6          | 262.2          | 267.2          | 276.4          | 299.6          | 294.0          | 278.4          | 290.9           | 288.7           | 47.6                 |
| Residential/Commercial                                            | 42.7           | 45.9           | 51.7           | 54.8           | 58.1           | 58.0           | 53.2           | 53.1           | 57.9            | 62.0            | 10.2                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>98.8</b>    | <b>108.0</b>   | <b>108.1</b>   | <b>117.0</b>   | <b>134.2</b>   | <b>162.2</b>   | <b>182.4</b>   | <b>195.2</b>   | <b>222.9</b>    | <b>219.8</b>    | <b>100.0</b>         |
| Industry                                                          | 39.2           | 42.1           | 40.2           | 45.7           | 58.3           | 81.7           | 93.9           | 100.5          | 116.0           | 112.2           | 51.1                 |
| Transport                                                         | 11.9           | 15.1           | 16.8           | 17.9           | 20.0           | 20.3           | 24.5           | 25.7           | 28.0            | 29.9            | 13.6                 |
| Residential/Commercial                                            | 36.4           | 38.7           | 41.0           | 43.0           | 47.2           | 51.9           | 55.2           | 60.0           | 68.5            | 67.5            | 30.7                 |
| <b>Refined products consumption</b>                               | <b>431.2</b>   | <b>449.9</b>   | <b>481.4</b>   | <b>496.1</b>   | <b>516.8</b>   | <b>558.4</b>   | <b>564.4</b>   | <b>575.6</b>   | <b>596.7</b>    | <b>604.1</b>    | <b>100.0</b>         |
| Gasoline                                                          | 96.5           | 100.7          | 117.1          | 122.2          | 126.6          | 140.9          | 146.0          | 136.2          | 143.9           | 137.3           | 22.7                 |
| Diesel                                                            | 170.8          | 171.4          | 173.1          | 167.7          | 167.5          | 172.2          | 154.5          | 147.2          | 147.9           | 165.5           | 27.4                 |
| Heating Oil                                                       | 12.2           | 12.1           | 11.1           | 10.3           | 11.6           | 10.5           | 12.9           | 11.8           | 15.3            | 18.6            | 3.1                  |
| Aviation Jet                                                      | 14.0           | 15.7           | 18.0           | 20.4           | 23.1           | 25.3           | 27.3           | 27.1           | 28.7            | 17.8            | 2.9                  |
| LPG                                                               | 30.6           | 35.4           | 40.5           | 47.6           | 53.4           | 58.2           | 57.7           | 57.0           | 63.5            | 66.6            | 11.0                 |
| <b>Imports</b>                                                    | <b>376.1</b>   | <b>401.9</b>   | <b>437.7</b>   | <b>495.9</b>   | <b>556.7</b>   | <b>628.2</b>   | <b>675.5</b>   | <b>714.7</b>   | <b>703.3</b>    | <b>688.1</b>    | <b>100.0</b>         |
| Oil                                                               | 334.5          | 354.9          | 389.1          | 436.8          | 482.4          | 530.8          | 571.8          | 606.3          | 573.4           | 571.1           | 83.0                 |
| Gas                                                               | 41.7           | 46.9           | 48.7           | 59.1           | 74.3           | 97.4           | 103.7          | 108.4          | 129.9           | 117.0           | 17.0                 |
| Gasoline                                                          | 0.0            | 0.0            | 0.2            | 0.2            | 0.0            | 0.5            | 0.3            | 0.5            | 0.4             | 0.0             | 0.0                  |
| Diesel                                                            | 0.3            | 0.5            | 0.4            | 0.9            | 0.8            | 0.7            | 1.2            | 1.2            | 0.8             | 0.4             | 0.1                  |
| Heating Oil                                                       | 23.5           | 17.8           | 15.4           | 11.7           | 13.6           | 16.7           | 14.9           | 12.5           | 13.6            | 12.7            | 1.8                  |
| Aviation Jet                                                      | 5.5            | 4.0            | 3.6            | 3.6            | 3.8            | 4.2            | 2.9            | 2.6            | 1.4             | 0.9             | 0.1                  |
| LPG                                                               | 5.4            | 8.9            | 14.9           | 20.1           | 23.1           | 23.6           | 25.3           | 24.1           | 29.8            | 32.3            | 4.7                  |
| <b>Exports</b>                                                    | <b>36.8</b>    | <b>37.2</b>    | <b>46.8</b>    | <b>59.4</b>    | <b>65.2</b>    | <b>69.7</b>    | <b>76.6</b>    | <b>72.6</b>    | <b>72.0</b>     | <b>65.1</b>     | <b>100.0</b>         |
| Oil                                                               | 34.5           | 35.0           | 44.1           | 56.6           | 62.2           | 66.9           | 73.6           | 68.2           | 67.5            | 59.6            | 91.5                 |
| Gas                                                               | 2.3            | 2.2            | 2.7            | 2.8            | 3.0            | 2.8            | 3.0            | 4.3            | 4.5             | 5.5             | 8.5                  |
| Gasoline                                                          | 4.8            | 5.2            | 6.1            | 10.0           | 10.8           | 13.3           | 16.9           | 16.5           | 15.0            | 12.9            | 19.9                 |
| Diesel                                                            | 2.8            | 4.2            | 7.3            | 15.7           | 17.5           | 18.9           | 21.8           | 20.2           | 17.6            | 11.1            | 17.1                 |
| Heating Oil                                                       | 11.3           | 9.5            | 10.5           | 9.9            | 11.1           | 12.3           | 11.2           | 15.8           | 19.6            | 17.7            | 27.2                 |
| Aviation Jet                                                      | 9.5            | 11.0           | 12.7           | 13.5           | 13.5           | 15.1           | 18.1           | 10.3           | 8.8             | 11.2            | 17.2                 |
| LPG                                                               | 1.5            | 1.7            | 1.7            | 1.6            | 1.6            | 1.4            | 1.7            | 1.1            | 1.2             | 1.0             | 1.6                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>9,163.5</b> | <b>9,166.1</b> | <b>9,116.3</b> | <b>9,090.1</b> | <b>9,279.0</b> | <b>9,600.9</b> | <b>9,720.7</b> | <b>9,859.0</b> | <b>10,397.1</b> | <b>10,504.3</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>592.1</b>   | <b>551.3</b>   | <b>512.2</b>   | <b>478.0</b>   | <b>456.3</b>   | <b>442.3</b>   | <b>422.6</b>   | <b>419.2</b>   | <b>409.0</b>    | <b>401.2</b>    | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>120.5</b>   | <b>115.3</b>   | <b>108.3</b>   | <b>101.3</b>   | <b>96.0</b>    | <b>93.4</b>    | <b>89.5</b>    | <b>90.0</b>    | <b>87.0</b>     | <b>86.2</b>     | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>188.1</b>   | <b>179.6</b>   | <b>168.6</b>   | <b>157.1</b>   | <b>152.4</b>   | <b>149.6</b>   | <b>147.6</b>   | <b>149.1</b>   | <b>145.1</b>    | <b>145.2</b>    | <b>-</b>             |

\*Heat is included

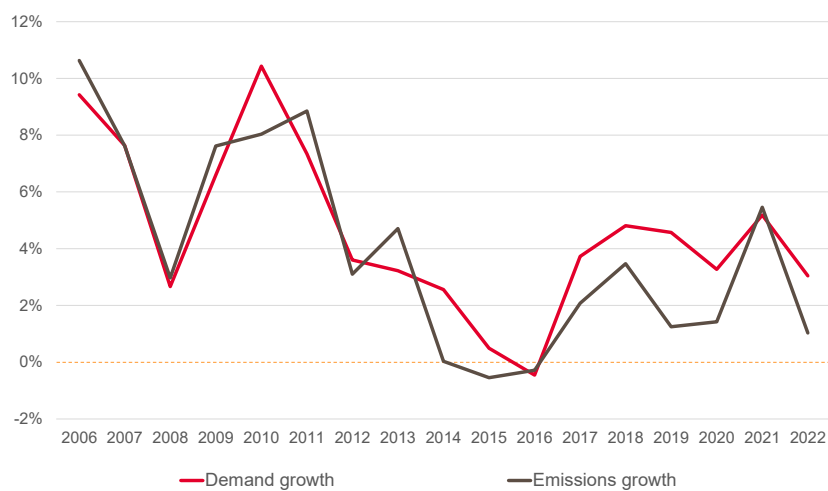
### Primary energy demand mix



### Electricity generation by source



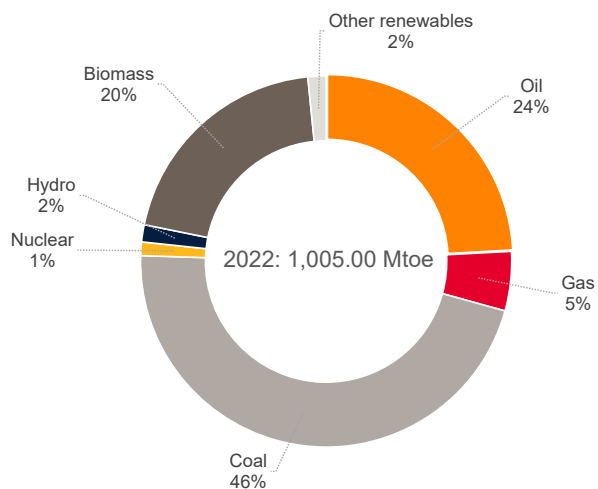
### Primary energy demand and CO<sub>2</sub> emissions growth



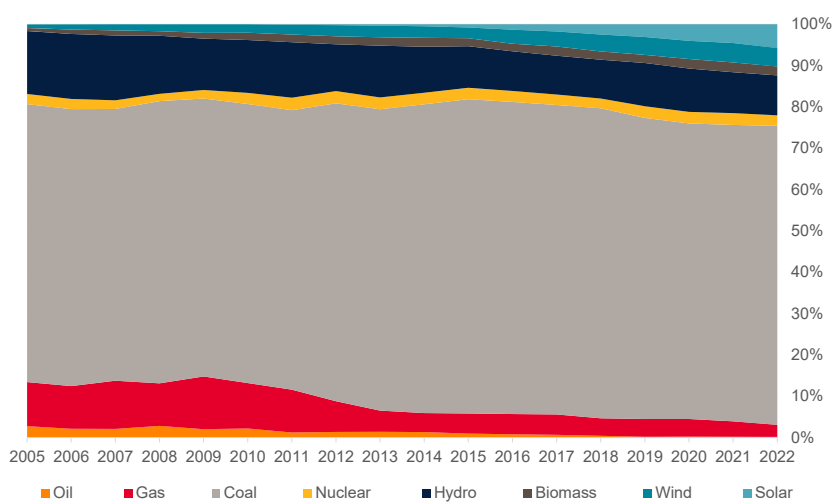
| India<br>(Million toe)                                            | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>753.0</b>   | <b>803.9</b>   | <b>823.7</b>   | <b>840.0</b>   | <b>882.5</b>   | <b>926.6</b>   | <b>927.2</b>   | <b>872.2</b>   | <b>936.4</b>   | <b>1,005.0</b> | <b>100.0</b>         |
| Oil                                                               | 176.4          | 184.3          | 206.4          | 216.7          | 223.0          | 235.3          | 235.5          | 207.4          | 215.9          | 242.2          | 24.1                 |
| Gas                                                               | 44.4           | 44.0           | 45.1           | 48.0           | 51.0           | 52.4           | 55.5           | 52.6           | 55.1           | 51.9           | 5.2                  |
| Coal                                                              | 345.0          | 384.1          | 376.9          | 371.2          | 394.0          | 417.0          | 407.3          | 379.0          | 425.1          | 463.8          | 46.2                 |
| Nuclear                                                           | 8.9            | 9.4            | 9.8            | 9.9            | 10.0           | 9.9            | 12.1           | 11.2           | 12.3           | 12.0           | 1.2                  |
| Hydro                                                             | 12.8           | 12.3           | 11.7           | 11.8           | 12.2           | 13.0           | 14.8           | 13.8           | 14.0           | 15.0           | 1.5                  |
| Biomass                                                           | 161.6          | 165.5          | 169.1          | 175.9          | 184.7          | 189.3          | 190.7          | 195.9          | 199.8          | 203.2          | 20.2                 |
| Other renewables                                                  | 3.2            | 3.6            | 3.9            | 5.8            | 7.0            | 9.1            | 10.5           | 11.1           | 13.0           | 15.8           | 1.6                  |
| Electricity balance of trade*                                     | 0.8            | 0.6            | 0.7            | 0.6            | 0.7            | 0.7            | 0.8            | 1.3            | 1.3            | 1.2            | 0.1                  |
| <b>Total final consumption, by source</b>                         | <b>508.1</b>   | <b>533.3</b>   | <b>557.1</b>   | <b>576.9</b>   | <b>604.8</b>   | <b>630.9</b>   | <b>634.9</b>   | <b>609.9</b>   | <b>633.1</b>   | <b>672.1</b>   | <b>100.0</b>         |
| Oil                                                               | 154.7          | 161.7          | 179.6          | 188.6          | 199.6          | 206.8          | 208.0          | 193.5          | 202.0          | 222.0          | 33.0                 |
| Gas                                                               | 26.1           | 25.9           | 27.7           | 29.6           | 30.4           | 31.0           | 33.5           | 32.3           | 34.3           | 33.1           | 4.9                  |
| Coal                                                              | 107.2          | 113.7          | 108.8          | 109.4          | 115.5          | 121.1          | 116.8          | 109.8          | 113.8          | 120.4          | 17.9                 |
| Electricity                                                       | 74.2           | 83.0           | 87.5           | 93.1           | 98.4           | 105.6          | 108.9          | 101.7          | 108.5          | 118.5          | 17.6                 |
| Heat                                                              | 0.4            | 0.6            | 0.7            | 0.7            | 0.8            | 1.0            | 1.1            | 1.3            | 1.5            | 1.6            | 0.2                  |
| Biomass                                                           | 145.5          | 148.5          | 152.8          | 155.4          | 160.1          | 165.4          | 166.6          | 171.3          | 173.0          | 176.6          | 26.3                 |
| <b>Electricity generation, by source</b>                          | <b>101.9</b>   | <b>110.9</b>   | <b>116.7</b>   | <b>123.1</b>   | <b>129.8</b>   | <b>138.3</b>   | <b>141.6</b>   | <b>131.9</b>   | <b>141.3</b>   | <b>155.0</b>   | <b>100.0</b>         |
| Oil                                                               | 1.4            | 1.4            | 1.1            | 0.9            | 0.8            | 0.6            | 0.3            | 0.3            | 0.3            | 0.2            | 0.1                  |
| Gas                                                               | 5.2            | 5.1            | 5.7            | 6.1            | 6.4            | 5.9            | 6.1            | 5.7            | 5.3            | 4.5            | 2.9                  |
| Coal                                                              | 74.3           | 82.9           | 88.8           | 93.0           | 97.2           | 103.8          | 103.2          | 94.3           | 101.4          | 112.2          | 72.4                 |
| Nuclear                                                           | 2.9            | 3.1            | 3.2            | 3.3            | 3.3            | 3.3            | 4.0            | 3.7            | 4.1            | 3.9            | 2.5                  |
| Hydro                                                             | 12.8           | 12.3           | 11.7           | 11.8           | 12.2           | 13.0           | 14.8           | 13.8           | 14.0           | 15.0           | 9.6                  |
| Biomass                                                           | 2.0            | 2.4            | 2.3            | 2.3            | 2.9            | 2.8            | 2.8            | 3.0            | 3.4            | 3.3            | 2.1                  |
| Wind                                                              | 2.9            | 3.1            | 3.0            | 4.2            | 4.7            | 5.7            | 6.1            | 5.8            | 6.6            | 6.9            | 4.5                  |
| Solar                                                             | 0.4            | 0.5            | 0.9            | 1.6            | 2.2            | 3.4            | 4.4            | 5.3            | 6.4            | 8.9            | 5.7                  |
| Other renewables                                                  | -0.0           | 0.0            | -0.0           | 0.0            | -0.0           | 0.0            | 0.0            | -0.0           | 0.0            | -0.0           | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>508.1</b>   | <b>533.3</b>   | <b>557.1</b>   | <b>576.9</b>   | <b>604.8</b>   | <b>630.9</b>   | <b>634.9</b>   | <b>609.9</b>   | <b>633.1</b>   | <b>672.1</b>   | <b>100.0</b>         |
| Industry                                                          | 190.4          | 205.5          | 210.4          | 220.3          | 234.8          | 246.9          | 245.8          | 235.4          | 241.0          | 256.7          | 38.2                 |
| Transport                                                         | 75.9           | 79.4           | 87.0           | 90.6           | 98.4           | 103.5          | 104.4          | 92.2           | 100.9          | 114.1          | 17.0                 |
| Residential/Commercial                                            | 165.3          | 170.0          | 175.1          | 179.3          | 182.5          | 185.8          | 189.7          | 185.0          | 190.3          | 196.8          | 29.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>154.7</b>   | <b>161.7</b>   | <b>179.6</b>   | <b>188.6</b>   | <b>199.6</b>   | <b>206.8</b>   | <b>208.0</b>   | <b>193.5</b>   | <b>202.0</b>   | <b>222.0</b>   | <b>100.0</b>         |
| Industry                                                          | 16.5           | 18.9           | 23.7           | 27.8           | 29.1           | 26.0           | 26.2           | 21.9           | 20.8           | 25.1           | 11.3                 |
| Transport                                                         | 72.7           | 75.8           | 83.0           | 86.7           | 93.7           | 98.1           | 98.9           | 86.8           | 94.0           | 106.9          | 48.1                 |
| Residential/Commercial                                            | 25.0           | 26.7           | 28.2           | 29.0           | 29.4           | 30.8           | 31.5           | 32.4           | 33.3           | 33.6           | 15.1                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>26.1</b>    | <b>25.9</b>    | <b>27.7</b>    | <b>29.6</b>    | <b>30.4</b>    | <b>31.0</b>    | <b>33.5</b>    | <b>32.3</b>    | <b>34.3</b>    | <b>33.1</b>    | <b>100.0</b>         |
| Industry                                                          | 3.2            | 3.3            | 3.3            | 4.5            | 5.4            | 5.7            | 6.3            | 5.2            | 5.5            | 5.3            | 16.1                 |
| Transport                                                         | 1.7            | 1.8            | 2.0            | 2.2            | 2.4            | 2.8            | 3.0            | 2.4            | 2.5            | 2.4            | 7.3                  |
| Residential/Commercial                                            | 2.0            | 1.8            | 1.8            | 2.5            | 2.9            | 3.1            | 3.7            | 3.2            | 3.4            | 3.3            | 9.8                  |
| <b>Refined products consumption</b>                               | <b>154.7</b>   | <b>161.7</b>   | <b>179.6</b>   | <b>188.6</b>   | <b>199.6</b>   | <b>206.8</b>   | <b>208.0</b>   | <b>193.5</b>   | <b>202.0</b>   | <b>222.0</b>   | <b>100.0</b>         |
| Gasoline                                                          | 18.3           | 20.4           | 23.4           | 25.4           | 28.0           | 30.3           | 32.1           | 29.9           | 33.0           | 37.4           | 16.9                 |
| Diesel                                                            | 67.9           | 69.0           | 73.6           | 75.0           | 80.1           | 82.5           | 81.6           | 72.1           | 76.2           | 85.3           | 38.4                 |
| Heating Oil                                                       | 5.2            | 5.1            | 5.9            | 6.5            | 6.2            | 6.0            | 5.7            | 6.1            | 6.8            | 7.6            | 3.4                  |
| Aviation Jet                                                      | 2.6            | 2.8            | 3.1            | 3.6            | 4.1            | 4.4            | 4.3            | 2.6            | 3.5            | 5.1            | 2.3                  |
| LPG                                                               | 18.4           | 20.3           | 22.2           | 24.4           | 26.4           | 28.1           | 29.7           | 31.1           | 32.0           | 32.3           | 14.5                 |
| <b>Imports</b>                                                    | <b>225.5</b>   | <b>231.1</b>   | <b>254.7</b>   | <b>275.2</b>   | <b>283.7</b>   | <b>290.2</b>   | <b>305.2</b>   | <b>273.2</b>   | <b>283.7</b>   | <b>305.2</b>   | <b>100.0</b>         |
| Oil                                                               | 210.1          | 214.5          | 235.7          | 253.1          | 259.2          | 264.6          | 275.1          | 243.9          | 256.4          | 281.8          | 92.3                 |
| Gas                                                               | 15.4           | 16.6           | 19.0           | 22.1           | 24.4           | 25.5           | 30.1           | 29.3           | 27.3           | 23.4           | 7.7                  |
| Gasoline                                                          | 0.3            | 0.4            | 1.1            | 0.5            | 0.2            | 0.7            | 2.3            | 1.4            | 0.7            | 1.1            | 0.4                  |
| Diesel                                                            | 0.1            | 0.1            | 0.2            | 1.0            | 1.4            | 0.6            | 2.9            | 0.7            | 0.0            | 0.3            | 0.1                  |
| Heating Oil                                                       | 1.3            | 0.9            | 1.1            | 0.9            | 1.2            | 1.4            | 4.4            | 6.2            | 8.6            | 8.2            | 2.7                  |
| Aviation Jet                                                      | 0.0            | 0.1            | 0.3            | 0.4            | 0.3            | 0.3            | 0.1            | 0.0            | 0.0            | 0.0            | 0.0                  |
| LPG                                                               | 7.4            | 9.4            | 10.1           | 12.5           | 12.9           | 15.0           | 16.7           | 18.6           | 19.3           | 20.7           | 6.8                  |
| <b>Exports</b>                                                    | <b>71.7</b>    | <b>68.6</b>    | <b>65.2</b>    | <b>70.6</b>    | <b>71.9</b>    | <b>65.2</b>    | <b>71.0</b>    | <b>61.0</b>    | <b>67.6</b>    | <b>65.4</b>    | <b>100.0</b>         |
| Oil                                                               | 71.7           | 68.6           | 65.2           | 70.6           | 71.9           | 65.2           | 71.0           | 61.0           | 67.6           | 65.4           | 100.0                |
| Gas                                                               | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| Gasoline                                                          | 16.3           | 17.2           | 18.0           | 16.5           | 15.0           | 13.8           | 13.6           | 12.4           | 14.4           | 14.0           | 21.4                 |
| Diesel                                                            | 27.4           | 26.4           | 24.9           | 28.4           | 30.8           | 28.9           | 32.7           | 31.6           | 33.5           | 29.5           | 45.1                 |
| Heating Oil                                                       | 5.9            | 4.6            | 2.7            | 2.2            | 2.4            | 2.1            | 1.5            | 1.1            | 1.7            | 1.8            | 2.7                  |
| Aviation Jet                                                      | 6.1            | 5.9            | 6.1            | 7.7            | 7.7            | 7.9            | 7.4            | 3.8            | 5.5            | 7.7            | 11.8                 |
| LPG                                                               | 0.3            | 0.3            | 0.2            | 0.4            | 0.4            | 0.5            | 0.5            | 0.5            | 0.6            | 0.6            | 0.9                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>1,859.3</b> | <b>2,024.3</b> | <b>2,034.6</b> | <b>2,058.7</b> | <b>2,176.1</b> | <b>2,302.9</b> | <b>2,265.6</b> | <b>2,067.5</b> | <b>2,280.9</b> | <b>2,480.9</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>301.2</b>   | <b>305.3</b>   | <b>284.2</b>   | <b>265.6</b>   | <b>262.9</b>   | <b>261.4</b>   | <b>247.9</b>   | <b>242.1</b>   | <b>245.2</b>   | <b>249.6</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>75.0</b>    | <b>73.7</b>    | <b>70.8</b>    | <b>67.9</b>    | <b>66.9</b>    | <b>65.4</b>    | <b>63.3</b>    | <b>64.5</b>    | <b>61.5</b>    | <b>61.5</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>122.0</b>   | <b>121.3</b>   | <b>115.0</b>   | <b>108.4</b>   | <b>106.6</b>   | <b>105.2</b>   | <b>101.4</b>   | <b>102.2</b>   | <b>100.7</b>   | <b>101.1</b>   | <b>-</b>             |

\*Heat is included

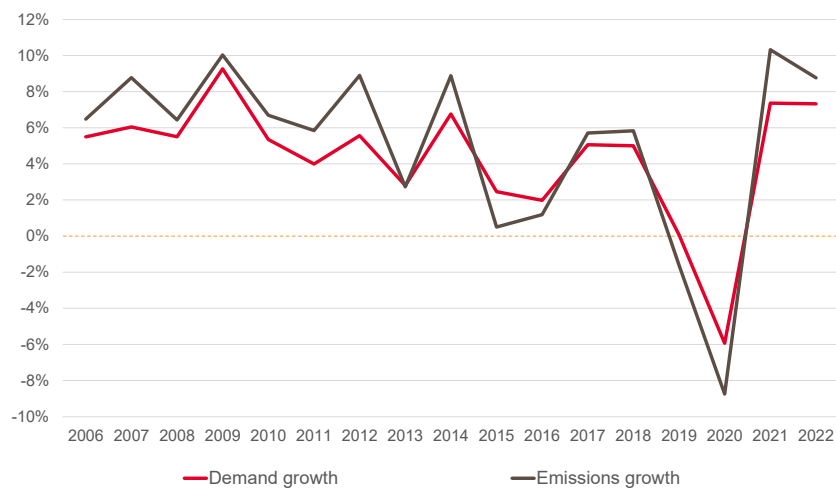
### Primary energy demand mix



### Electricity generation by source



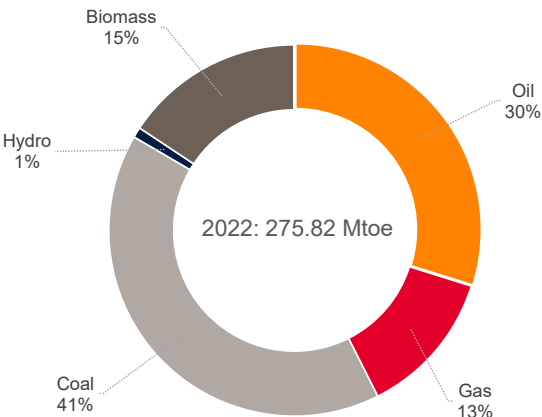
### Primary energy demand and CO<sub>2</sub> emissions growth



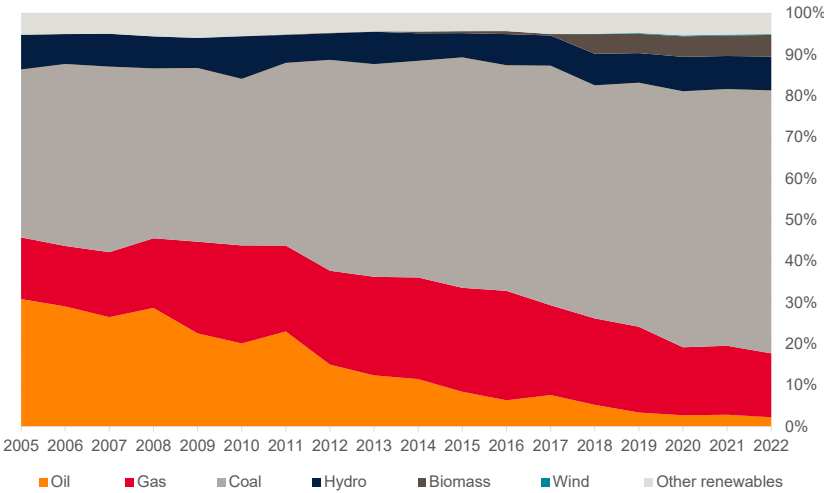
| <b>Indonesia</b><br>(Million toe)                                 | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>191.2</b> | <b>199.0</b> | <b>195.7</b> | <b>199.9</b> | <b>208.0</b> | <b>223.2</b> | <b>231.8</b> | <b>220.0</b> | <b>227.9</b> | <b>275.8</b> | <b>100.0</b>         |
| Oil                                                               | 74.1         | 74.7         | 71.2         | 70.2         | 74.6         | 79.4         | 76.6         | 68.4         | 71.8         | 78.0         | 28.3                 |
| Gas                                                               | 36.5         | 36.6         | 37.9         | 39.1         | 38.7         | 38.9         | 39.2         | 34.1         | 33.9         | 33.3         | 12.1                 |
| Coal                                                              | 28.5         | 36.1         | 39.7         | 43.3         | 48.4         | 55.6         | 68.8         | 68.3         | 70.3         | 106.7        | 38.7                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.5          | 1.3          | 1.2          | 1.6          | 1.6          | 1.9          | 1.8          | 2.1          | 2.1          | 2.3          | 0.9                  |
| Biomass                                                           | 42.5         | 41.6         | 37.1         | 36.5         | 33.7         | 35.2         | 33.1         | 33.5         | 36.0         | 40.9         | 14.8                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0                  |
| Electricity balance of trade*                                     | 8.1          | 8.6          | 8.6          | 9.2          | 11.1         | 12.2         | 12.3         | 13.5         | 13.8         | 14.4         | 5.2                  |
| <b>Total final consumption, by source</b>                         | <b>151.0</b> | <b>153.0</b> | <b>148.7</b> | <b>142.2</b> | <b>146.3</b> | <b>156.0</b> | <b>162.6</b> | <b>151.5</b> | <b>152.4</b> | <b>195.2</b> | <b>100.0</b>         |
| Oil                                                               | 71.0         | 71.4         | 70.0         | 64.5         | 68.3         | 73.0         | 71.8         | 63.7         | 65.3         | 71.9         | 36.8                 |
| Gas                                                               | 17.5         | 17.4         | 17.2         | 14.6         | 15.5         | 16.7         | 16.5         | 16.8         | 16.5         | 14.6         | 7.5                  |
| Coal                                                              | 4.6          | 6.5          | 8.3          | 9.5          | 11.1         | 14.7         | 24.5         | 20.3         | 16.8         | 49.0         | 25.1                 |
| Electricity                                                       | 16.1         | 17.1         | 17.4         | 18.6         | 19.2         | 22.9         | 23.3         | 23.7         | 25.2         | 27.1         | 13.9                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 41.7         | 40.6         | 35.8         | 35.1         | 32.2         | 28.7         | 26.5         | 27.1         | 28.7         | 32.7         | 16.7                 |
| <b>Electricity generation, by source</b>                          | <b>18.6</b>  | <b>19.6</b>  | <b>20.1</b>  | <b>21.3</b>  | <b>21.9</b>  | <b>24.4</b>  | <b>25.4</b>  | <b>25.1</b>  | <b>26.6</b>  | <b>28.7</b>  | <b>100.0</b>         |
| Oil                                                               | 2.3          | 2.2          | 1.7          | 1.4          | 1.7          | 1.3          | 0.9          | 0.7          | 0.8          | 0.7          | 2.3                  |
| Gas                                                               | 4.4          | 4.8          | 5.1          | 5.7          | 4.8          | 5.1          | 5.3          | 4.1          | 4.4          | 4.4          | 15.4                 |
| Coal                                                              | 9.6          | 10.3         | 11.2         | 11.6         | 12.7         | 13.8         | 15.0         | 15.6         | 16.5         | 18.3         | 63.7                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.5          | 1.3          | 1.2          | 1.6          | 1.6          | 1.9          | 1.8          | 2.1          | 2.1          | 2.3          | 8.2                  |
| Biomass                                                           | 0.0          | 0.1          | 0.1          | 0.2          | 0.1          | 1.2          | 1.2          | 1.2          | 1.3          | 1.5          | 5.2                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Other renewables                                                  | 0.8          | 0.9          | 0.9          | 0.9          | 1.1          | 1.2          | 1.2          | 1.3          | 1.4          | 1.4          | 5.0                  |
| <b>Total final consumption, by sector</b>                         | <b>151.0</b> | <b>153.0</b> | <b>148.7</b> | <b>142.2</b> | <b>146.3</b> | <b>156.0</b> | <b>162.6</b> | <b>151.5</b> | <b>152.4</b> | <b>195.2</b> | <b>100.0</b>         |
| Industry                                                          | 39.5         | 42.4         | 45.4         | 39.6         | 44.0         | 49.7         | 58.1         | 55.3         | 52.8         | 86.5         | 44.3                 |
| Transport                                                         | 46.3         | 47.0         | 44.8         | 45.1         | 47.1         | 53.2         | 54.7         | 48.9         | 52.1         | 57.2         | 29.3                 |
| Residential/Commercial                                            | 53.2         | 52.5         | 48.9         | 47.7         | 45.9         | 43.5         | 39.9         | 38.3         | 39.9         | 43.3         | 22.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>71.0</b>  | <b>71.4</b>  | <b>70.0</b>  | <b>64.5</b>  | <b>68.3</b>  | <b>73.0</b>  | <b>71.8</b>  | <b>63.7</b>  | <b>65.3</b>  | <b>71.9</b>  | <b>100.0</b>         |
| Industry                                                          | 9.5          | 10.5         | 12.2         | 7.3          | 8.1          | 7.3          | 6.1          | 6.2          | 7.0          | 9.0          | 12.5                 |
| Transport                                                         | 45.5         | 45.7         | 44.2         | 43.0         | 45.3         | 50.5         | 50.1         | 42.4         | 44.9         | 49.2         | 68.4                 |
| Residential/Commercial                                            | 8.2          | 8.4          | 8.3          | 8.4          | 9.0          | 9.3          | 9.3          | 9.6          | 10.0         | 10.0         | 13.9                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>17.5</b>  | <b>17.4</b>  | <b>17.2</b>  | <b>14.6</b>  | <b>15.5</b>  | <b>16.7</b>  | <b>16.5</b>  | <b>16.8</b>  | <b>16.5</b>  | <b>14.6</b>  | <b>100.0</b>         |
| Industry                                                          | 13.3         | 13.2         | 12.9         | 10.4         | 12.0         | 12.9         | 12.8         | 13.3         | 12.2         | 10.1         | 69.1                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Residential/Commercial                                            | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.2          | 1.1                  |
| <b>Refined products consumption</b>                               | <b>70.0</b>  | <b>70.3</b>  | <b>68.9</b>  | <b>63.2</b>  | <b>67.1</b>  | <b>71.7</b>  | <b>69.3</b>  | <b>61.5</b>  | <b>63.1</b>  | <b>69.6</b>  | <b>100.0</b>         |
| Gasoline                                                          | 24.1         | 24.4         | 24.9         | 25.7         | 26.5         | 27.2         | 28.1         | 24.6         | 26.0         | 28.2         | 40.6                 |
| Diesel                                                            | 29.7         | 28.5         | 26.6         | 20.8         | 21.5         | 24.2         | 21.7         | 18.3         | 20.4         | 21.4         | 30.7                 |
| Heating Oil                                                       | 1.8          | 1.7          | 1.5          | 1.8          | 1.9          | 2.0          | 1.5          | 1.2          | 1.2          | 2.6          | 3.7                  |
| Aviation Jet                                                      | 2.2          | 2.2          | 2.3          | 2.6          | 2.9          | 3.2          | 2.8          | 1.9          | 1.4          | 2.2          | 3.2                  |
| LPG                                                               | 6.3          | 6.9          | 7.2          | 7.5          | 8.1          | 8.5          | 8.8          | 9.1          | 9.4          | 9.7          | 13.9                 |
| <b>Imports</b>                                                    | <b>53.1</b>  | <b>55.4</b>  | <b>52.2</b>  | <b>49.8</b>  | <b>54.3</b>  | <b>53.1</b>  | <b>44.8</b>  | <b>40.7</b>  | <b>48.0</b>  | <b>52.9</b>  | <b>100.0</b>         |
| Oil                                                               | 53.1         | 55.4         | 52.2         | 49.8         | 54.3         | 53.1         | 44.8         | 40.7         | 48.0         | 52.9         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 14.7         | 15.4         | 14.7         | 13.3         | 13.9         | 14.8         | 15.1         | 12.8         | 14.7         | 17.3         | 32.7                 |
| Diesel                                                            | 10.4         | 10.0         | 6.1          | 4.3          | 6.1          | 5.7          | 3.4          | 2.8          | 2.8          | 4.6          | 8.7                  |
| Heating Oil                                                       | 0.1          | 0.2          | 0.4          | 0.5          | 0.4          | 0.8          | 0.3          | 0.2          | 0.2          | 0.1          | 0.3                  |
| Aviation Jet                                                      | 0.8          | 0.8          | 1.0          | 0.9          | 1.5          | 1.3          | 0.2          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 3.7          | 4.1          | 4.8          | 5.1          | 6.2          | 6.3          | 6.5          | 7.2          | 7.2          | 7.6          | 14.4                 |
| <b>Exports</b>                                                    | <b>50.5</b>  | <b>49.1</b>  | <b>47.3</b>  | <b>46.4</b>  | <b>42.0</b>  | <b>37.6</b>  | <b>26.4</b>  | <b>25.0</b>  | <b>25.4</b>  | <b>22.6</b>  | <b>100.0</b>         |
| Oil                                                               | 20.3         | 20.0         | 19.7         | 20.9         | 18.2         | 13.9         | 7.5          | 7.9          | 8.3          | 6.2          | 27.4                 |
| Gas                                                               | 30.2         | 29.1         | 27.6         | 25.5         | 23.8         | 23.7         | 18.9         | 17.1         | 17.1         | 16.4         | 72.6                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 4.0          | 4.3          | 3.8          | 3.9          | 4.3          | 3.6          | 3.8          | 3.1          | 2.1          | 4.0          | 17.9                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.4          | 0.1          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>428.9</b> | <b>464.4</b> | <b>469.8</b> | <b>461.3</b> | <b>492.4</b> | <b>544.7</b> | <b>586.2</b> | <b>546.0</b> | <b>576.2</b> | <b>738.6</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>178.4</b> | <b>183.9</b> | <b>177.4</b> | <b>165.9</b> | <b>168.5</b> | <b>177.2</b> | <b>181.7</b> | <b>172.8</b> | <b>175.8</b> | <b>214.0</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>59.3</b>  | <b>57.5</b>  | <b>53.5</b>  | <b>48.4</b>  | <b>47.6</b>  | <b>48.2</b>  | <b>47.7</b>  | <b>45.4</b>  | <b>44.6</b>  | <b>54.6</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>79.5</b>  | <b>78.8</b>  | <b>73.9</b>  | <b>71.9</b>  | <b>71.2</b>  | <b>72.6</b>  | <b>71.8</b>  | <b>69.6</b>  | <b>69.5</b>  | <b>79.9</b>  | <b>-</b>             |

\*Heat is included

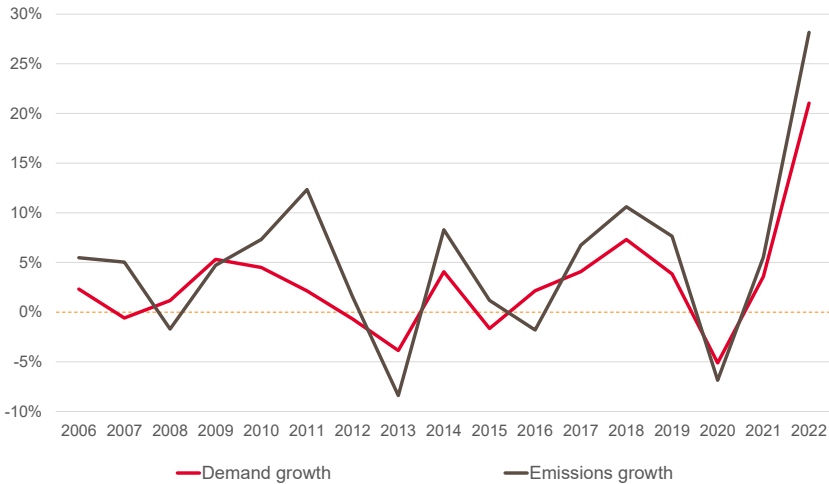
Primary energy demand mix



Electricity generation by source



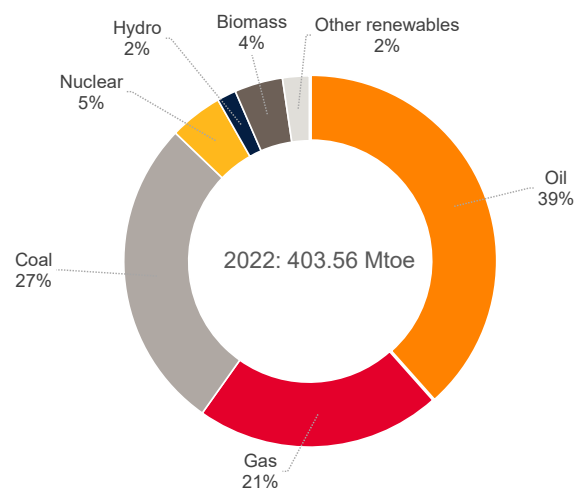
Primary energy demand and CO<sub>2</sub> emissions growth



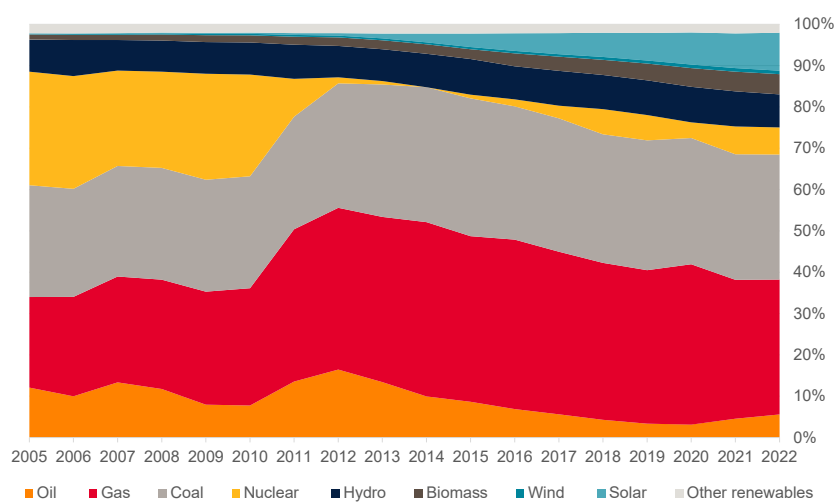
| Japan<br>(Million toe)                                            | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020         | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>456.6</b>   | <b>440.5</b>   | <b>434.2</b>   | <b>430.7</b>   | <b>433.2</b>   | <b>426.4</b>   | <b>415.2</b>   | <b>386.5</b> | <b>404.3</b>   | <b>403.6</b>   | <b>100.0</b>         |
| Oil                                                               | 200.9          | 190.6          | 184.2          | 177.7          | 176.9          | 166.8          | 161.1          | 148.3        | 153.6          | 153.3          | 38.0                 |
| Gas                                                               | 105.3          | 105.7          | 100.5          | 102.9          | 100.0          | 95.8           | 92.0           | 92.2         | 86.2           | 85.3           | 21.1                 |
| Coal                                                              | 122.5          | 117.8          | 119.1          | 116.4          | 116.5          | 114.3          | 111.9          | 102.1        | 109.9          | 109.3          | 27.1                 |
| Nuclear                                                           | 2.4            | 0.0            | 2.5            | 4.7            | 8.6            | 16.9           | 16.6           | 10.1         | 18.5           | 18.5           | 4.6                  |
| Hydro                                                             | 6.8            | 7.2            | 7.5            | 6.8            | 7.2            | 7.0            | 6.9            | 6.8          | 6.9            | 6.6            | 1.6                  |
| Biomass                                                           | 12.5           | 12.3           | 12.7           | 13.3           | 14.6           | 15.5           | 15.8           | 15.3         | 16.3           | 16.8           | 4.2                  |
| Other renewables                                                  | 1.6            | 2.4            | 3.5            | 4.5            | 5.3            | 6.0            | 6.6            | 7.6          | 8.4            | 9.3            | 2.3                  |
| Electricity balance of trade*                                     | 4.6            | 4.5            | 4.4            | 4.3            | 4.2            | 4.1            | 4.4            | 4.3          | 4.6            | 4.5            | 1.1                  |
| <b>Total final consumption, by source</b>                         | <b>326.5</b>   | <b>317.3</b>   | <b>313.0</b>   | <b>308.2</b>   | <b>311.3</b>   | <b>303.9</b>   | <b>297.9</b>   | <b>278.0</b> | <b>282.1</b>   | <b>276.5</b>   | <b>100.0</b>         |
| Oil                                                               | 161.5          | 155.2          | 154.1          | 150.1          | 150.6          | 146.0          | 142.7          | 132.5        | 131.6          | 129.5          | 46.8                 |
| Gas                                                               | 28.6           | 28.2           | 28.5           | 28.1           | 29.3           | 28.9           | 28.8           | 26.6         | 27.8           | 27.7           | 10.0                 |
| Coal                                                              | 44.1           | 43.3           | 41.9           | 41.2           | 41.3           | 40.5           | 39.5           | 33.9         | 36.9           | 34.6           | 12.5                 |
| Electricity                                                       | 85.1           | 83.7           | 81.7           | 81.8           | 83.0           | 81.3           | 79.7           | 78.0         | 78.9           | 77.6           | 28.1                 |
| Heat                                                              | 1.0            | 0.9            | 0.9            | 0.9            | 0.9            | 0.9            | 0.9            | 0.8          | 0.8            | 0.8            | 0.3                  |
| Biomass                                                           | 6.2            | 5.9            | 6.0            | 6.1            | 6.2            | 6.4            | 6.3            | 6.0          | 6.1            | 6.2            | 2.2                  |
| <b>Electricity generation, by source</b>                          | <b>95.0</b>    | <b>92.5</b>    | <b>91.0</b>    | <b>92.1</b>    | <b>93.0</b>    | <b>91.9</b>    | <b>89.5</b>    | <b>87.5</b>  | <b>90.9</b>    | <b>92.7</b>    | <b>100.0</b>         |
| Oil                                                               | 12.7           | 9.2            | 7.9            | 6.3            | 5.2            | 3.9            | 3.0            | 2.7          | 4.1            | 5.2            | 5.6                  |
| Gas                                                               | 38.0           | 39.0           | 36.5           | 37.8           | 36.6           | 34.9           | 33.2           | 34.0         | 30.6           | 30.2           | 32.6                 |
| Coal                                                              | 30.4           | 30.2           | 30.4           | 29.7           | 30.0           | 28.6           | 28.1           | 26.7         | 27.6           | 28.0           | 30.2                 |
| Nuclear                                                           | 0.8            | 0.0            | 0.8            | 1.6            | 2.8            | 5.6            | 5.5            | 3.3          | 6.1            | 6.1            | 6.6                  |
| Hydro                                                             | 7.3            | 7.5            | 7.8            | 7.4            | 7.8            | 7.6            | 7.5            | 7.5          | 7.7            | 7.4            | 8.0                  |
| Biomass                                                           | 2.1            | 2.1            | 2.2            | 2.9            | 3.2            | 3.4            | 3.6            | 3.9          | 4.3            | 4.5            | 4.9                  |
| Wind                                                              | 0.4            | 0.4            | 0.5            | 0.5            | 0.6            | 0.6            | 0.7            | 0.8          | 0.8            | 0.8            | 0.8                  |
| Solar                                                             | 1.1            | 2.0            | 3.0            | 3.9            | 4.7            | 5.4            | 6.0            | 6.8          | 7.7            | 8.5            | 9.2                  |
| Other renewables                                                  | 2.1            | 2.1            | 2.0            | 2.0            | 2.0            | 1.9            | 1.9            | 1.7          | 2.0            | 1.9            | 2.0                  |
| <b>Total final consumption, by sector</b>                         | <b>326.5</b>   | <b>317.3</b>   | <b>313.0</b>   | <b>308.2</b>   | <b>311.3</b>   | <b>303.9</b>   | <b>297.9</b>   | <b>278.0</b> | <b>282.1</b>   | <b>276.5</b>   | <b>100.0</b>         |
| Industry                                                          | 103.3          | 100.7          | 96.8           | 96.3           | 95.9           | 96.4           | 92.8           | 84.3         | 88.6           | 85.2           | 30.8                 |
| Transport                                                         | 75.8           | 74.0           | 74.0           | 73.0           | 72.2           | 71.2           | 69.9           | 63.0         | 63.5           | 63.4           | 22.9                 |
| Residential/Commercial                                            | 99.3           | 96.4           | 93.4           | 92.5           | 95.3           | 92.1           | 90.5           | 89.9         | 89.3           | 89.6           | 32.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>161.5</b>   | <b>155.2</b>   | <b>154.1</b>   | <b>150.1</b>   | <b>150.6</b>   | <b>146.0</b>   | <b>142.7</b>   | <b>132.5</b> | <b>131.6</b>   | <b>129.5</b>   | <b>100.0</b>         |
| Industry                                                          | 14.9           | 14.1           | 12.6           | 12.4           | 11.6           | 12.0           | 10.8           | 10.5         | 10.9           | 10.0           | 7.7                  |
| Transport                                                         | 74.0           | 72.1           | 72.1           | 71.0           | 70.3           | 69.2           | 68.0           | 61.0         | 61.6           | 61.5           | 47.5                 |
| Residential/Commercial                                            | 26.7           | 24.9           | 22.7           | 22.3           | 22.9           | 22.4           | 21.1           | 22.0         | 20.3           | 21.5           | 16.6                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>28.6</b>    | <b>28.2</b>    | <b>28.5</b>    | <b>28.1</b>    | <b>29.3</b>    | <b>28.9</b>    | <b>28.8</b>    | <b>26.6</b>  | <b>27.8</b>    | <b>27.7</b>    | <b>100.0</b>         |
| Industry                                                          | 10.7           | 10.4           | 10.4           | 10.7           | 10.7           | 11.3           | 10.8           | 10.0         | 10.4           | 10.4           | 37.6                 |
| Transport                                                         | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.0            | 0.0            | 0.0          | 0.0            | 0.0            | 0.1                  |
| Residential/Commercial                                            | 17.5           | 17.5           | 17.8           | 17.1           | 18.3           | 17.3           | 17.8           | 16.3         | 17.1           | 17.1           | 61.6                 |
| <b>Refined products consumption</b>                               | <b>161.2</b>   | <b>154.9</b>   | <b>153.8</b>   | <b>150.0</b>   | <b>150.3</b>   | <b>145.9</b>   | <b>142.7</b>   | <b>132.5</b> | <b>131.6</b>   | <b>129.5</b>   | <b>100.0</b>         |
| Gasoline                                                          | 43.1           | 41.1           | 41.1           | 40.6           | 39.9           | 39.0           | 37.8           | 34.8         | 34.0           | 33.8           | 26.1                 |
| Diesel                                                            | 40.0           | 38.7           | 38.4           | 38.0           | 38.1           | 37.9           | 36.8           | 35.5         | 35.2           | 35.3           | 27.3                 |
| Heating Oil                                                       | 5.6            | 5.2            | 4.5            | 4.7            | 4.7            | 4.4            | 4.3            | 4.0          | 4.3            | 3.2            | 2.5                  |
| Aviation Jet                                                      | 4.2            | 4.4            | 4.5            | 4.4            | 4.3            | 4.1            | 4.3            | 2.3          | 2.8            | 3.3            | 2.5                  |
| LPG                                                               | 14.5           | 14.1           | 12.5           | 11.8           | 11.6           | 12.5           | 11.8           | 11.1         | 11.4           | 12.2           | 9.4                  |
| <b>Imports</b>                                                    | <b>329.8</b>   | <b>317.4</b>   | <b>309.4</b>   | <b>304.3</b>   | <b>302.4</b>   | <b>291.0</b>   | <b>280.9</b>   | <b>251.2</b> | <b>259.7</b>   | <b>263.1</b>   | <b>100.0</b>         |
| Oil                                                               | 227.1          | 213.1          | 211.6          | 205.1          | 204.2          | 196.3          | 190.9          | 161.4        | 175.6          | 179.2          | 68.1                 |
| Gas                                                               | 102.7          | 104.3          | 97.8           | 99.2           | 98.2           | 94.7           | 90.0           | 89.8         | 84.1           | 83.9           | 31.9                 |
| Gasoline                                                          | 1.3            | 1.2            | 1.3            | 0.7            | 1.0            | 1.7            | 1.9            | 2.4          | 2.2            | 1.8            | 0.7                  |
| Diesel                                                            | 0.3            | 0.6            | 0.5            | 0.4            | 0.5            | 0.6            | 0.8            | 1.3          | 1.6            | 0.4            | 0.2                  |
| Heating Oil                                                       | 6.4            | 4.4            | 3.2            | 2.3            | 2.2            | 1.8            | 0.5            | 0.6          | 1.2            | 1.8            | 0.7                  |
| Aviation Jet                                                      | 0.8            | 0.5            | 0.7            | 0.7            | 1.3            | 1.3            | 1.2            | 0.5          | 0.8            | 0.8            | 0.3                  |
| LPG                                                               | 13.7           | 13.3           | 12.4           | 12.0           | 12.2           | 12.1           | 11.9           | 11.5         | 11.6           | 11.7           | 4.4                  |
| <b>Exports</b>                                                    | <b>17.0</b>    | <b>15.8</b>    | <b>18.5</b>    | <b>18.5</b>    | <b>17.7</b>    | <b>17.7</b>    | <b>19.1</b>    | <b>9.6</b>   | <b>12.2</b>    | <b>14.9</b>    | <b>100.0</b>         |
| Oil                                                               | 17.0           | 15.8           | 18.5           | 18.5           | 17.7           | 17.7           | 19.1           | 9.6          | 12.2           | 14.9           | 100.0                |
| Gas                                                               | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0          | 0.0            | 0.0            | 0.0                  |
| Gasoline                                                          | 1.4            | 2.4            | 3.1            | 2.4            | 3.0            | 2.6            | 2.4            | 1.9          | 3.1            | 3.4            | 23.0                 |
| Diesel                                                            | 9.2            | 7.8            | 8.8            | 8.3            | 8.7            | 8.0            | 9.2            | 3.5          | 5.4            | 7.8            | 52.6                 |
| Heating Oil                                                       | 1.9            | 1.7            | 2.2            | 3.1            | 2.5            | 2.8            | 3.0            | 1.4          | 1.5            | 1.6            | 11.1                 |
| Aviation Jet                                                      | 2.9            | 2.4            | 2.8            | 2.9            | 2.2            | 2.7            | 2.6            | 0.8          | 1.2            | 1.5            | 10.1                 |
| LPG                                                               | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1          | 0.0            | 0.0            | 0.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>1,221.6</b> | <b>1,172.5</b> | <b>1,136.2</b> | <b>1,123.2</b> | <b>1,107.5</b> | <b>1,070.2</b> | <b>1,032.9</b> | <b>980.6</b> | <b>1,002.5</b> | <b>1,000.5</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>239.3</b>   | <b>229.0</b>   | <b>218.5</b>   | <b>214.4</b>   | <b>207.9</b>   | <b>199.7</b>   | <b>193.2</b>   | <b>192.1</b> | <b>193.3</b>   | <b>190.8</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>55.5</b>    | <b>53.9</b>    | <b>51.9</b>    | <b>51.1</b>    | <b>50.5</b>    | <b>49.3</b>    | <b>48.3</b>    | <b>47.5</b>  | <b>47.5</b>    | <b>46.4</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>89.4</b>    | <b>86.0</b>    | <b>83.5</b>    | <b>82.2</b>    | <b>81.3</b>    | <b>79.6</b>    | <b>77.7</b>    | <b>75.7</b>  | <b>78.0</b>    | <b>77.0</b>    | <b>-</b>             |

\*Heat is included

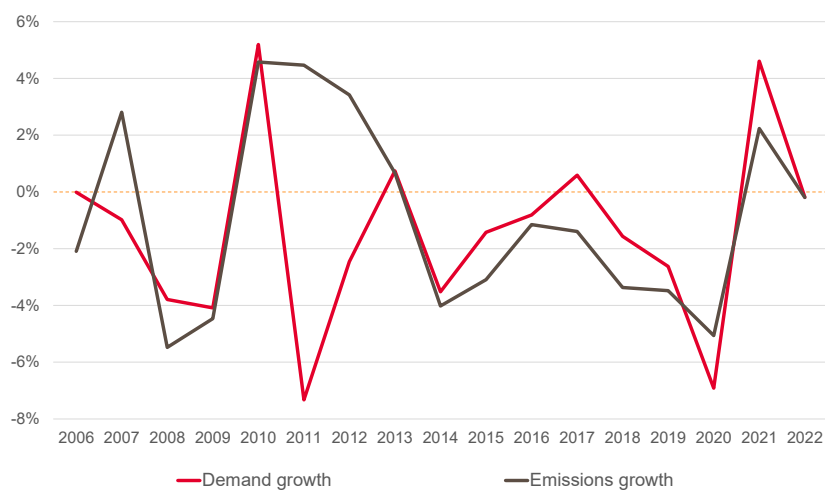
### Primary energy demand mix



### Electricity generation by source



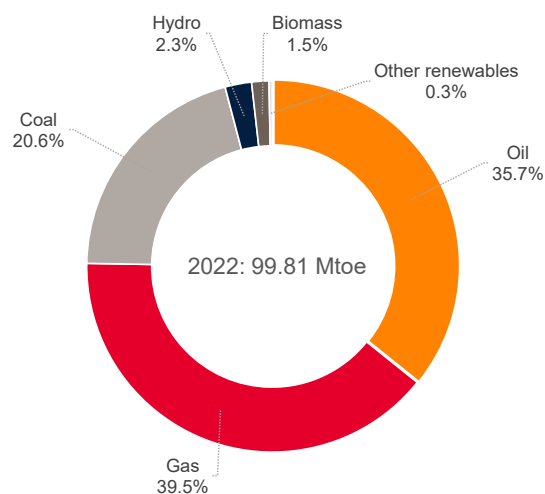
### Primary energy demand and CO<sub>2</sub> emissions growth



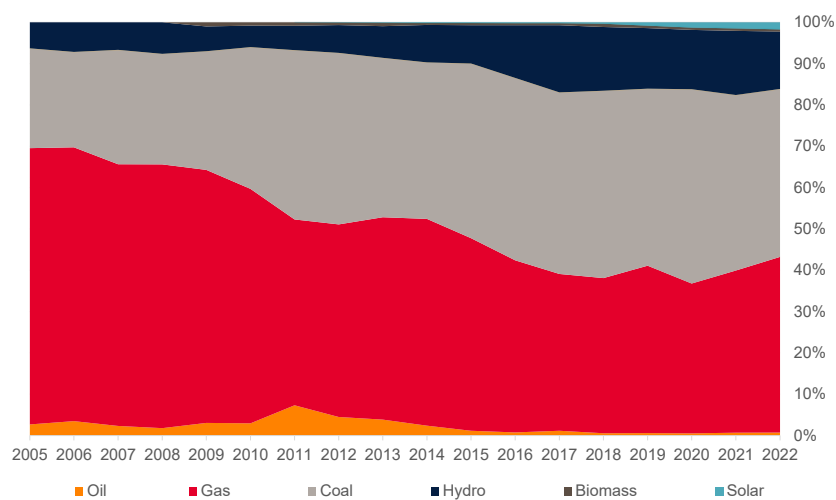
| <b>Malaysia</b><br>(Million toe)                                  | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>87.2</b>  | <b>88.9</b>  | <b>85.0</b>  | <b>88.4</b>  | <b>92.2</b>  | <b>94.0</b>  | <b>96.7</b>  | <b>92.7</b>  | <b>96.5</b>  | <b>99.8</b>  | <b>100.0</b>         |
| Oil                                                               | 32.1         | 33.5         | 28.1         | 31.4         | 29.5         | 29.5         | 33.1         | 31.7         | 34.7         | 35.7         | 35.8                 |
| Gas                                                               | 38.1         | 38.4         | 37.5         | 35.8         | 39.2         | 38.8         | 39.2         | 35.9         | 37.1         | 39.5         | 39.6                 |
| Coal                                                              | 15.3         | 15.3         | 17.5         | 18.8         | 20.7         | 22.6         | 21.1         | 21.7         | 20.7         | 20.6         | 20.7                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.9          | 1.2          | 1.2          | 1.7          | 2.3          | 2.3          | 2.3          | 2.3          | 2.5          | 2.3          | 2.3                  |
| Biomass                                                           | 0.8          | 0.7          | 0.7          | 0.7          | 0.6          | 0.9          | 1.0          | 1.1          | 1.2          | 1.5          | 1.5                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.2          | 0.3          | 0.3                  |
| Electricity balance of trade*                                     | 0.0          | 0.0          | 0.0          | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1                 |
| <b>Total final consumption, by source</b>                         | <b>52.8</b>  | <b>52.0</b>  | <b>50.7</b>  | <b>55.2</b>  | <b>60.1</b>  | <b>62.5</b>  | <b>64.4</b>  | <b>60.6</b>  | <b>63.8</b>  | <b>67.8</b>  | <b>100.0</b>         |
| Oil                                                               | 28.1         | 29.3         | 27.5         | 28.3         | 28.5         | 28.3         | 29.8         | 27.6         | 30.3         | 32.9         | 48.5                 |
| Gas                                                               | 12.0         | 9.6          | 9.6          | 12.3         | 16.8         | 18.9         | 18.6         | 17.6         | 17.4         | 17.9         | 26.4                 |
| Coal                                                              | 1.5          | 1.7          | 1.8          | 1.8          | 1.8          | 1.8          | 1.7          | 1.6          | 1.8          | 1.9          | 2.8                  |
| Electricity                                                       | 11.0         | 11.0         | 11.4         | 12.4         | 12.6         | 13.2         | 13.6         | 13.1         | 13.4         | 14.2         | 20.9                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.6          | 0.7          | 0.8          | 1.0          | 1.4                  |
| <b>Electricity generation, by source</b>                          | <b>11.9</b>  | <b>12.7</b>  | <b>12.9</b>  | <b>13.5</b>  | <b>14.1</b>  | <b>14.7</b>  | <b>15.3</b>  | <b>15.7</b>  | <b>16.1</b>  | <b>16.7</b>  | <b>100.0</b>         |
| Oil                                                               | 0.5          | 0.3          | 0.1          | 0.1          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.7                  |
| Gas                                                               | 5.8          | 6.3          | 6.0          | 5.6          | 5.3          | 5.5          | 6.2          | 5.7          | 6.3          | 7.1          | 42.5                 |
| Coal                                                              | 4.6          | 4.8          | 5.5          | 5.9          | 6.2          | 6.6          | 6.6          | 7.4          | 6.8          | 6.8          | 40.7                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.9          | 1.2          | 1.2          | 1.7          | 2.3          | 2.3          | 2.3          | 2.3          | 2.5          | 2.3          | 13.9                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.6                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.2          | 0.3          | 1.7                  |
| Other renewables                                                  | -0.0         | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>52.8</b>  | <b>52.0</b>  | <b>50.7</b>  | <b>55.2</b>  | <b>60.1</b>  | <b>62.5</b>  | <b>64.4</b>  | <b>60.6</b>  | <b>63.8</b>  | <b>67.8</b>  | <b>100.0</b>         |
| Industry                                                          | 15.0         | 14.8         | 15.0         | 16.2         | 17.6         | 19.4         | 19.3         | 18.2         | 18.8         | 19.7         | 29.1                 |
| Transport                                                         | 20.1         | 22.5         | 21.2         | 21.7         | 21.6         | 21.1         | 22.6         | 20.8         | 23.4         | 25.6         | 37.8                 |
| Residential/Commercial                                            | 7.5          | 7.5          | 7.6          | 8.1          | 7.8          | 7.8          | 8.0          | 7.8          | 7.8          | 8.0          | 11.8                 |
| <b>Oil final consumption, by sector</b>                           | <b>28.1</b>  | <b>29.3</b>  | <b>27.5</b>  | <b>28.3</b>  | <b>28.5</b>  | <b>28.3</b>  | <b>29.8</b>  | <b>27.6</b>  | <b>30.3</b>  | <b>32.9</b>  | <b>100.0</b>         |
| Industry                                                          | 3.8          | 3.1          | 3.2          | 2.6          | 2.8          | 2.8          | 3.1          | 2.9          | 3.1          | 3.2          | 9.8                  |
| Transport                                                         | 19.6         | 21.9         | 20.5         | 21.1         | 21.0         | 20.5         | 21.8         | 20.0         | 22.4         | 24.5         | 74.5                 |
| Residential/Commercial                                            | 1.7          | 1.5          | 1.5          | 1.5          | 1.4          | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          | 3.7                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>12.0</b>  | <b>9.6</b>   | <b>9.6</b>   | <b>12.3</b>  | <b>16.8</b>  | <b>18.9</b>  | <b>18.6</b>  | <b>17.6</b>  | <b>17.4</b>  | <b>17.9</b>  | <b>100.0</b>         |
| Industry                                                          | 4.5          | 4.9          | 4.8          | 6.0          | 6.8          | 8.3          | 7.7          | 7.3          | 7.2          | 7.4          | 41.3                 |
| Transport                                                         | 0.3          | 0.3          | 0.3          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.5                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| <b>Refined products consumption</b>                               | <b>28.1</b>  | <b>29.3</b>  | <b>27.5</b>  | <b>28.3</b>  | <b>28.5</b>  | <b>28.3</b>  | <b>29.8</b>  | <b>27.6</b>  | <b>30.3</b>  | <b>32.9</b>  | <b>100.0</b>         |
| Gasoline                                                          | 12.7         | 12.7         | 12.8         | 13.4         | 13.4         | 13.0         | 13.8         | 13.0         | 14.3         | 15.8         | 47.9                 |
| Diesel                                                            | 9.6          | 10.6         | 9.4          | 9.3          | 9.4          | 9.8          | 10.6         | 10.0         | 11.6         | 12.6         | 38.4                 |
| Heating Oil                                                       | 0.3          | 0.3          | 0.7          | 0.5          | 0.6          | 0.4          | 0.4          | 0.4          | 0.4          | 0.3          | 0.8                  |
| Aviation Jet                                                      | 0.5          | 0.5          | 0.6          | 0.6          | 0.6          | 0.5          | 0.8          | 0.2          | 0.2          | 0.1          | 0.4                  |
| LPG                                                               | 2.9          | 2.6          | 2.3          | 3.5          | 3.5          | 3.3          | 3.0          | 2.9          | 2.7          | 2.9          | 8.9                  |
| <b>Imports</b>                                                    | <b>37.1</b>  | <b>37.8</b>  | <b>30.5</b>  | <b>33.1</b>  | <b>30.5</b>  | <b>36.0</b>  | <b>35.3</b>  | <b>35.7</b>  | <b>30.0</b>  | <b>41.5</b>  | <b>100.0</b>         |
| Oil                                                               | 28.6         | 29.3         | 22.7         | 26.2         | 23.5         | 29.0         | 28.1         | 28.9         | 23.7         | 33.8         | 81.4                 |
| Gas                                                               | 8.5          | 8.5          | 7.8          | 6.8          | 7.0          | 7.0          | 7.3          | 6.9          | 6.3          | 7.7          | 18.6                 |
| Gasoline                                                          | 8.8          | 8.3          | 7.6          | 8.6          | 5.1          | 10.6         | 8.8          | 8.8          | 8.7          | 10.3         | 24.7                 |
| Diesel                                                            | 5.1          | 6.2          | 4.6          | 3.9          | 5.2          | 6.9          | 6.2          | 6.2          | 6.4          | 6.5          | 15.6                 |
| Heating Oil                                                       | 3.0          | 3.1          | 1.0          | 0.1          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.3                  |
| Aviation Jet                                                      | 0.9          | 0.5          | 0.6          | 1.4          | 1.2          | 0.5          | 0.6          | 1.3          | 0.9          | 0.9          | 2.1                  |
| LPG                                                               | 0.4          | 0.5          | 0.4          | 0.5          | 0.4          | 0.5          | 0.4          | 0.5          | 0.6          | 1.0          | 2.4                  |
| <b>Exports</b>                                                    | <b>51.4</b>  | <b>52.5</b>  | <b>54.5</b>  | <b>57.2</b>  | <b>56.9</b>  | <b>58.4</b>  | <b>53.8</b>  | <b>53.1</b>  | <b>51.1</b>  | <b>56.2</b>  | <b>100.0</b>         |
| Oil                                                               | 22.8         | 23.5         | 26.3         | 28.9         | 26.0         | 31.0         | 24.3         | 25.4         | 21.4         | 23.4         | 41.7                 |
| Gas                                                               | 28.6         | 29.0         | 28.1         | 28.3         | 30.9         | 27.3         | 29.5         | 27.7         | 29.8         | 32.7         | 58.3                 |
| Gasoline                                                          | 0.1          | 0.0          | 0.4          | 0.5          | 0.3          | 3.1          | 0.3          | 0.3          | 0.5          | 0.5          | 0.9                  |
| Diesel                                                            | 5.3          | 5.3          | 5.4          | 4.8          | 5.1          | 7.2          | 5.2          | 5.2          | 4.7          | 5.9          | 10.4                 |
| Heating Oil                                                       | 3.0          | 4.3          | 1.4          | 0.6          | 0.6          | 1.4          | 0.4          | 0.4          | 0.5          | 0.6          | 1.0                  |
| Aviation Jet                                                      | 0.6          | 0.5          | 0.5          | 1.1          | 1.3          | 0.8          | 0.7          | 1.8          | 1.8          | 1.6          | 2.9                  |
| LPG                                                               | 0.3          | 0.3          | 0.3          | 0.4          | 0.2          | 0.5          | 0.6          | 0.5          | 0.9          | 1.1          | 1.9                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>221.3</b> | <b>228.3</b> | <b>228.2</b> | <b>227.5</b> | <b>243.2</b> | <b>246.1</b> | <b>249.8</b> | <b>246.8</b> | <b>253.5</b> | <b>265.4</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>328.4</b> | <b>319.6</b> | <b>304.0</b> | <b>290.1</b> | <b>293.1</b> | <b>282.9</b> | <b>275.0</b> | <b>287.9</b> | <b>286.7</b> | <b>276.1</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>64.7</b>  | <b>64.1</b>  | <b>59.6</b>  | <b>59.2</b>  | <b>57.4</b>  | <b>56.6</b>  | <b>55.9</b>  | <b>55.6</b>  | <b>57.6</b>  | <b>56.8</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>129.5</b> | <b>124.5</b> | <b>113.3</b> | <b>112.7</b> | <b>111.2</b> | <b>108.1</b> | <b>106.5</b> | <b>108.2</b> | <b>109.1</b> | <b>103.9</b> | -                    |

\*Heat is included

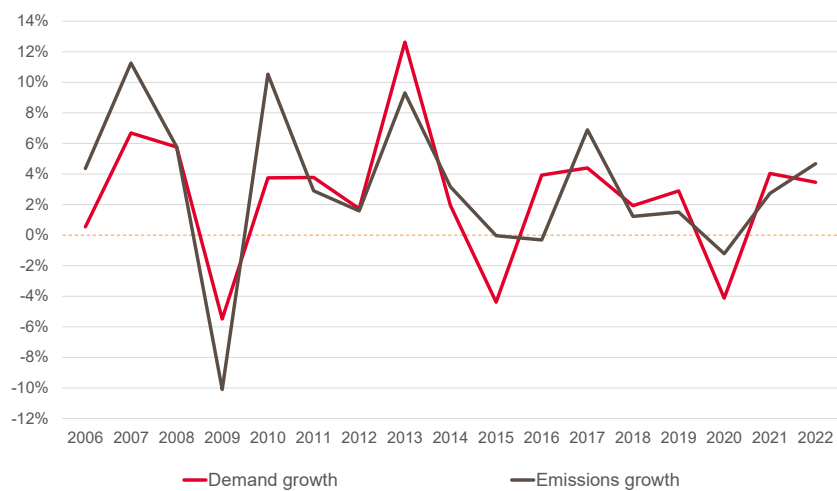
Primary energy demand mix



Electricity generation by source



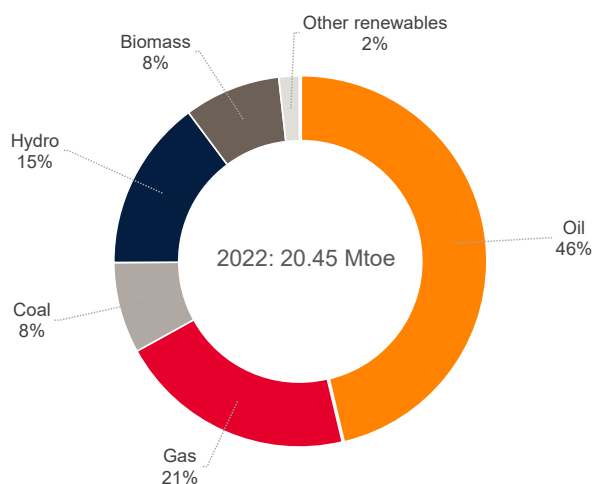
Primary energy demand and CO<sub>2</sub> emissions growth



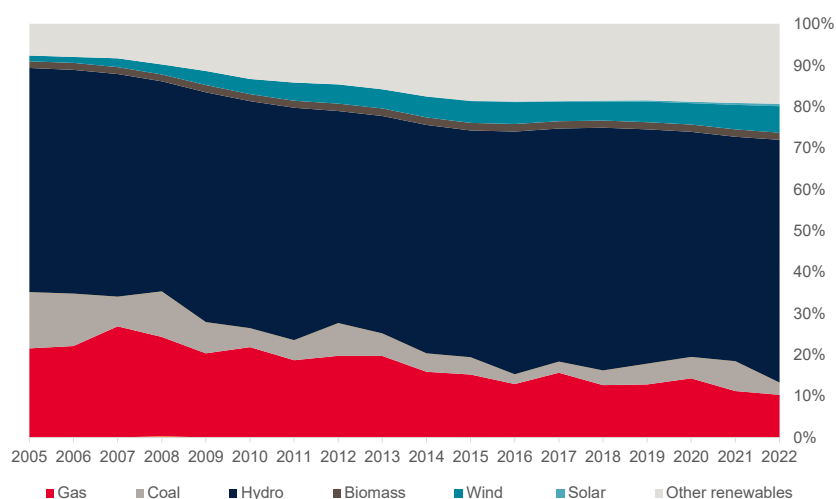
| <b>New Zealand</b><br>(Million toe)                               | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>20.0</b>  | <b>21.0</b>  | <b>21.2</b>  | <b>20.9</b>  | <b>20.8</b>  | <b>20.3</b>  | <b>21.1</b>  | <b>20.3</b>  | <b>20.1</b>  | <b>20.4</b>  | <b>100.0</b>         |
| Oil                                                               | 6.4          | 6.6          | 6.8          | 6.6          | 6.6          | 6.4          | 6.8          | 6.1          | 6.2          | 7.0          | 34.3                 |
| Gas                                                               | 4.0          | 4.4          | 4.1          | 4.2          | 4.2          | 3.8          | 4.0          | 3.9          | 3.3          | 3.1          | 15.3                 |
| Coal                                                              | 1.5          | 1.3          | 1.4          | 1.1          | 1.2          | 1.3          | 1.5          | 1.6          | 1.8          | 1.2          | 5.9                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 2.0          | 2.1          | 2.1          | 2.2          | 2.2          | 2.3          | 2.2          | 2.1          | 2.1          | 2.3          | 11.0                 |
| Biomass                                                           | 1.3          | 1.3          | 1.3          | 1.4          | 1.3          | 1.3          | 1.3          | 1.2          | 1.2          | 1.3          | 6.2                  |
| Other renewables                                                  | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 1.3                  |
| Electricity balance of trade*                                     | 4.7          | 5.1          | 5.3          | 5.1          | 5.1          | 5.1          | 5.1          | 5.1          | 5.2          | 5.3          | 25.9                 |
| <b>Total final consumption, by source</b>                         | <b>13.5</b>  | <b>14.4</b>  | <b>14.3</b>  | <b>14.7</b>  | <b>14.8</b>  | <b>14.5</b>  | <b>15.1</b>  | <b>13.9</b>  | <b>13.8</b>  | <b>13.6</b>  | <b>100.0</b>         |
| Oil                                                               | 5.9          | 6.1          | 6.2          | 6.4          | 6.6          | 6.7          | 6.9          | 6.1          | 6.4          | 6.4          | 47.1                 |
| Gas                                                               | 2.3          | 3.0          | 2.7          | 2.9          | 2.8          | 2.5          | 2.8          | 2.6          | 2.2          | 2.1          | 15.2                 |
| Coal                                                              | 1.0          | 0.9          | 1.0          | 0.9          | 0.9          | 1.0          | 0.9          | 0.8          | 0.8          | 0.8          | 5.9                  |
| Electricity                                                       | 3.3          | 3.4          | 3.4          | 3.4          | 3.4          | 3.4          | 3.4          | 3.3          | 3.3          | 3.3          | 24.3                 |
| Heat                                                              | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 1.4                  |
| Biomass                                                           | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.7          | 0.8          | 0.8          | 6.1                  |
| <b>Electricity generation, by source</b>                          | <b>3.8</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>3.9</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>3.8</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gas                                                               | 0.7          | 0.6          | 0.6          | 0.5          | 0.6          | 0.5          | 0.5          | 0.5          | 0.4          | 0.4          | 10.3                 |
| Coal                                                              | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.3          | 0.1          | 3.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 2.0          | 2.1          | 2.1          | 2.2          | 2.2          | 2.3          | 2.2          | 2.1          | 2.1          | 2.3          | 58.7                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 1.7                  |
| Wind                                                              | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 6.4                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.6                  |
| Other renewables                                                  | 0.6          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 0.7          | 19.2                 |
| <b>Total final consumption, by sector</b>                         | <b>13.5</b>  | <b>14.4</b>  | <b>14.3</b>  | <b>14.7</b>  | <b>14.8</b>  | <b>14.5</b>  | <b>15.1</b>  | <b>13.9</b>  | <b>13.8</b>  | <b>13.6</b>  | <b>100.0</b>         |
| Industry                                                          | 4.3          | 4.6          | 4.5          | 4.6          | 4.5          | 4.4          | 4.6          | 4.3          | 4.1          | 4.0          | 29.4                 |
| Transport                                                         | 4.6          | 4.6          | 4.8          | 4.9          | 5.3          | 5.4          | 5.4          | 4.6          | 4.9          | 4.9          | 36.0                 |
| Residential/Commercial                                            | 2.7          | 2.8          | 2.8          | 2.8          | 2.8          | 2.8          | 2.8          | 2.9          | 2.9          | 2.9          | 21.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>5.9</b>   | <b>6.1</b>   | <b>6.2</b>   | <b>6.4</b>   | <b>6.6</b>   | <b>6.7</b>   | <b>6.9</b>   | <b>6.1</b>   | <b>6.4</b>   | <b>6.4</b>   | <b>100.0</b>         |
| Industry                                                          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.4          | 0.5          | 0.5          | 7.1                  |
| Transport                                                         | 4.6          | 4.6          | 4.8          | 4.9          | 5.2          | 5.4          | 5.4          | 4.6          | 4.9          | 4.9          | 76.3                 |
| Residential/Commercial                                            | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 4.9                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>2.3</b>   | <b>3.0</b>   | <b>2.7</b>   | <b>2.9</b>   | <b>2.8</b>   | <b>2.5</b>   | <b>2.8</b>   | <b>2.6</b>   | <b>2.2</b>   | <b>2.1</b>   | <b>100.0</b>         |
| Industry                                                          | 1.1          | 1.4          | 1.2          | 1.3          | 1.3          | 1.2          | 1.4          | 1.2          | 1.1          | 1.0          | 47.6                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 14.8                 |
| <b>Refined products consumption</b>                               | <b>5.9</b>   | <b>6.1</b>   | <b>6.2</b>   | <b>6.4</b>   | <b>6.6</b>   | <b>6.7</b>   | <b>6.9</b>   | <b>6.1</b>   | <b>6.4</b>   | <b>6.4</b>   | <b>100.0</b>         |
| Gasoline                                                          | 2.4          | 2.4          | 2.5          | 2.5          | 2.6          | 2.6          | 2.6          | 2.3          | 2.3          | 2.3          | 35.4                 |
| Diesel                                                            | 2.7          | 2.8          | 2.9          | 2.9          | 3.1          | 3.2          | 3.3          | 3.0          | 3.2          | 3.3          | 51.1                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.0          | 0.3                  |
| Aviation Jet                                                      | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.2          | 0.3          | 0.3          | 5.2                  |
| LPG                                                               | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 3.4                  |
| <b>Imports</b>                                                    | <b>7.6</b>   | <b>7.6</b>   | <b>7.6</b>   | <b>8.2</b>   | <b>8.1</b>   | <b>8.3</b>   | <b>8.1</b>   | <b>6.9</b>   | <b>6.5</b>   | <b>7.7</b>   | <b>100.0</b>         |
| Oil                                                               | 7.6          | 7.6          | 7.6          | 8.2          | 8.1          | 8.3          | 8.1          | 6.9          | 6.5          | 7.7          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 1.2          | 1.2          | 1.1          | 1.0          | 1.1          | 1.0          | 1.0          | 1.2          | 1.3          | 2.3          | 29.4                 |
| Diesel                                                            | 0.7          | 0.8          | 0.7          | 1.1          | 1.0          | 1.3          | 1.3          | 1.5          | 1.6          | 3.4          | 43.4                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2          | 3.1                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.1          | 0.2          | 0.3          | 0.3          | 0.2          | 0.1          | 0.1          | 0.7          | 8.8                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| <b>Exports</b>                                                    | <b>1.8</b>   | <b>2.0</b>   | <b>2.0</b>   | <b>1.8</b>   | <b>1.6</b>   | <b>1.3</b>   | <b>1.3</b>   | <b>0.9</b>   | <b>0.8</b>   | <b>0.8</b>   | <b>100.0</b>         |
| Oil                                                               | 1.8          | 2.0          | 2.0          | 1.8          | 1.6          | 1.3          | 1.3          | 0.9          | 0.8          | 0.8          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 5.4                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| Heating Oil                                                       | 0.2          | 0.2          | 0.1          | 0.2          | 0.2          | 0.2          | 0.1          | 0.0          | 0.1          | 0.0          | 5.8                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.1          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 3.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>31.3</b>  | <b>32.0</b>  | <b>31.8</b>  | <b>31.3</b>  | <b>32.8</b>  | <b>32.4</b>  | <b>34.1</b>  | <b>31.3</b>  | <b>30.9</b>  | <b>30.2</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>195.4</b> | <b>192.3</b> | <b>184.1</b> | <b>174.5</b> | <b>176.6</b> | <b>169.0</b> | <b>173.8</b> | <b>161.5</b> | <b>152.7</b> | <b>145.6</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>77.0</b>  | <b>77.0</b>  | <b>74.8</b>  | <b>72.7</b>  | <b>71.6</b>  | <b>68.9</b>  | <b>69.1</b>  | <b>64.8</b>  | <b>62.5</b>  | <b>60.7</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>124.5</b> | <b>126.1</b> | <b>122.6</b> | <b>116.3</b> | <b>112.2</b> | <b>105.9</b> | <b>107.5</b> | <b>104.7</b> | <b>99.1</b>  | <b>98.5</b>  | <b>-</b>             |

\*Heat is included

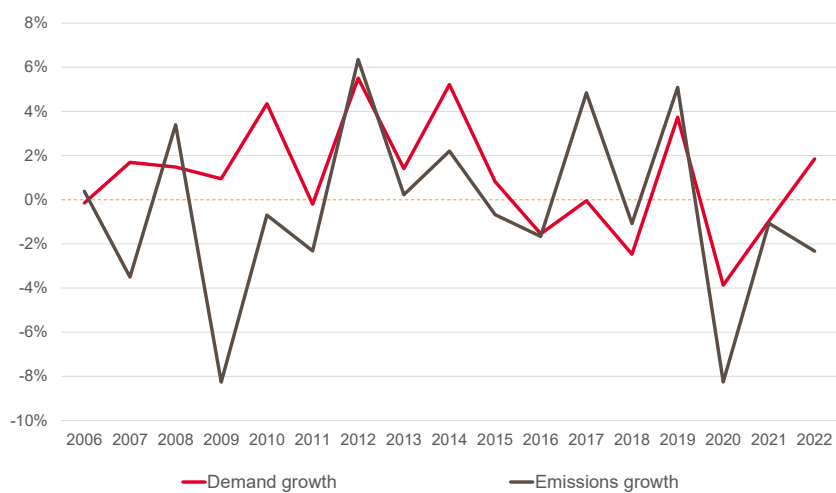
### Primary energy demand mix



### Electricity generation by source



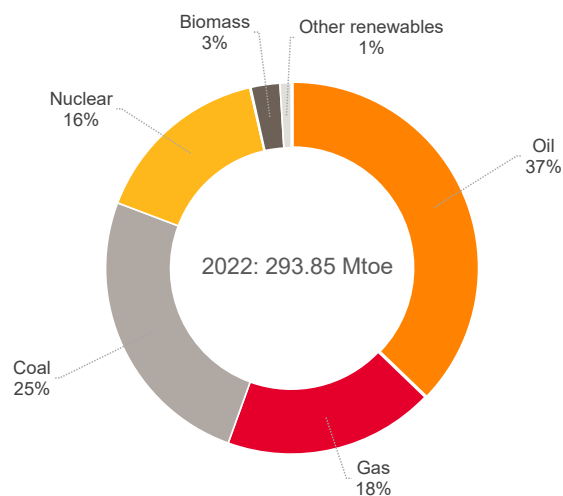
### Primary energy demand and CO<sub>2</sub> emissions growth



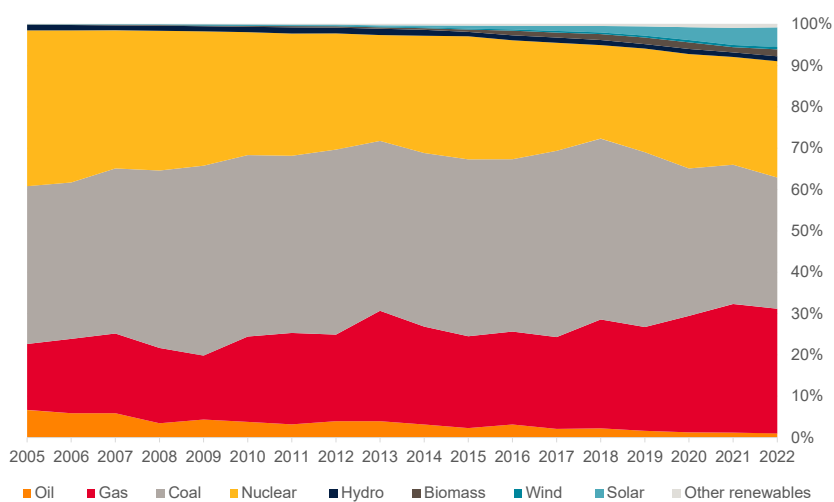
| South Korea<br>(Million toe)                                      | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>263.8</b> | <b>268.4</b> | <b>272.6</b> | <b>282.3</b> | <b>282.2</b> | <b>282.0</b> | <b>280.1</b> | <b>276.1</b> | <b>292.1</b> | <b>293.9</b> | <b>100.0</b>         |
| Oil                                                               | 96.6         | 96.3         | 102.7        | 109.8        | 109.1        | 110.4        | 104.4        | 101.3        | 111.0        | 109.0        | 37.1                 |
| Gas                                                               | 47.6         | 43.1         | 39.3         | 41.3         | 43.2         | 47.5         | 48.9         | 49.5         | 54.2         | 53.7         | 18.3                 |
| Coal                                                              | 77.9         | 81.7         | 80.8         | 81.5         | 82.6         | 80.5         | 80.0         | 74.3         | 75.2         | 74.0         | 25.2                 |
| Nuclear                                                           | 36.2         | 40.8         | 42.9         | 42.2         | 38.7         | 34.8         | 38.0         | 41.7         | 41.2         | 45.9         | 15.6                 |
| Hydro                                                             | 0.4          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.2          | 0.3          | 0.3          | 0.3          | 0.1                  |
| Biomass                                                           | 4.7          | 5.5          | 5.8          | 6.3          | 7.1          | 7.0          | 6.6          | 6.5          | 7.0          | 7.4          | 2.5                  |
| Other renewables                                                  | 0.2          | 0.3          | 0.5          | 0.6          | 0.8          | 1.0          | 1.3          | 1.8          | 2.4          | 2.9          | 1.0                  |
| Electricity balance of trade*                                     | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.6          | 0.7          | 0.8          | 0.7          | 0.3                  |
| <b>Total final consumption, by source</b>                         | <b>178.0</b> | <b>179.5</b> | <b>183.4</b> | <b>188.7</b> | <b>193.2</b> | <b>192.2</b> | <b>192.2</b> | <b>184.6</b> | <b>196.7</b> | <b>195.0</b> | <b>100.0</b>         |
| Oil                                                               | 84.6         | 86.5         | 90.3         | 94.1         | 97.3         | 94.6         | 97.5         | 92.7         | 100.5        | 98.2         | 50.3                 |
| Gas                                                               | 24.1         | 22.2         | 20.5         | 21.5         | 22.2         | 22.4         | 21.8         | 21.1         | 21.8         | 22.5         | 11.5                 |
| Coal                                                              | 19.6         | 20.1         | 21.0         | 19.5         | 18.7         | 19.4         | 18.3         | 17.2         | 17.9         | 16.3         | 8.4                  |
| Electricity                                                       | 41.9         | 41.9         | 42.6         | 44.5         | 45.0         | 45.7         | 45.0         | 44.1         | 46.2         | 47.5         | 24.3                 |
| Heat                                                              | 4.4          | 4.7          | 4.5          | 5.0          | 5.3          | 5.8          | 5.8          | 5.7          | 6.0          | 6.6          | 3.4                  |
| Biomass                                                           | 3.3          | 4.1          | 4.5          | 4.2          | 4.7          | 4.3          | 3.7          | 3.7          | 4.3          | 4.0          | 2.1                  |
| <b>Electricity generation, by source</b>                          | <b>46.6</b>  | <b>47.4</b>  | <b>47.5</b>  | <b>48.4</b>  | <b>48.8</b>  | <b>50.8</b>  | <b>50.0</b>  | <b>49.8</b>  | <b>52.1</b>  | <b>53.7</b>  | <b>100.0</b>         |
| Oil                                                               | 1.8          | 1.5          | 1.1          | 1.5          | 1.0          | 1.1          | 0.8          | 0.6          | 0.6          | 0.5          | 1.0                  |
| Gas                                                               | 12.5         | 11.2         | 10.6         | 10.9         | 10.8         | 13.4         | 12.6         | 14.0         | 16.2         | 16.2         | 30.2                 |
| Coal                                                              | 19.2         | 19.9         | 20.3         | 20.2         | 22.0         | 22.2         | 21.2         | 17.8         | 17.6         | 17.1         | 31.8                 |
| Nuclear                                                           | 11.9         | 13.5         | 14.2         | 13.9         | 12.8         | 11.5         | 12.5         | 13.8         | 13.6         | 15.1         | 28.2                 |
| Hydro                                                             | 0.7          | 0.7          | 0.5          | 0.6          | 0.6          | 0.6          | 0.5          | 0.6          | 0.6          | 0.6          | 1.2                  |
| Biomass                                                           | 0.2          | 0.2          | 0.3          | 0.6          | 0.6          | 0.7          | 0.8          | 0.8          | 0.7          | 0.9          | 1.7                  |
| Wind                                                              | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.5                  |
| Solar                                                             | 0.1          | 0.2          | 0.3          | 0.4          | 0.6          | 0.8          | 1.1          | 1.5          | 2.2          | 2.6          | 4.8                  |
| Other renewables                                                  | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.4          | 0.4          | 0.4          | 0.7                  |
| <b>Total final consumption, by sector</b>                         | <b>178.0</b> | <b>179.5</b> | <b>183.4</b> | <b>188.7</b> | <b>193.2</b> | <b>192.2</b> | <b>192.2</b> | <b>184.6</b> | <b>196.7</b> | <b>195.0</b> | <b>100.0</b>         |
| Industry                                                          | 57.8         | 58.4         | 58.2         | 57.8         | 58.4         | 59.3         | 57.5         | 55.5         | 58.6         | 57.6         | 29.5                 |
| Transport                                                         | 31.9         | 32.4         | 34.4         | 35.4         | 36.1         | 35.6         | 37.1         | 34.7         | 36.8         | 36.6         | 18.8                 |
| Residential/Commercial                                            | 41.3         | 39.9         | 40.8         | 42.9         | 43.5         | 43.7         | 42.2         | 42.0         | 43.0         | 44.5         | 22.8                 |
| <b>Oil final consumption, by sector</b>                           | <b>84.6</b>  | <b>86.5</b>  | <b>90.3</b>  | <b>94.1</b>  | <b>97.3</b>  | <b>94.6</b>  | <b>97.5</b>  | <b>92.7</b>  | <b>100.5</b> | <b>98.2</b>  | <b>100.0</b>         |
| Industry                                                          | 3.5          | 3.5          | 3.4          | 3.6          | 3.6          | 3.7          | 3.6          | 4.1          | 4.0          | 3.9          | 4.0                  |
| Transport                                                         | 30.1         | 30.6         | 32.6         | 33.4         | 34.1         | 33.5         | 35.0         | 32.7         | 34.8         | 34.6         | 35.2                 |
| Residential/Commercial                                            | 5.7          | 5.4          | 6.2          | 6.4          | 6.4          | 6.1          | 5.5          | 5.5          | 5.4          | 5.4          | 5.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>24.1</b>  | <b>22.2</b>  | <b>20.5</b>  | <b>21.5</b>  | <b>22.2</b>  | <b>22.4</b>  | <b>21.8</b>  | <b>21.1</b>  | <b>21.8</b>  | <b>22.5</b>  | <b>100.0</b>         |
| Industry                                                          | 9.8          | 8.8          | 7.4          | 7.5          | 7.5          | 7.5          | 7.4          | 6.9          | 7.4          | 7.3          | 32.7                 |
| Transport                                                         | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          | 1.1          | 1.0          | 1.0          | 4.5                  |
| Residential/Commercial                                            | 13.1         | 12.2         | 11.9         | 12.8         | 13.5         | 13.7         | 13.2         | 13.1         | 13.4         | 14.1         | 62.8                 |
| <b>Refined products consumption</b>                               | <b>84.6</b>  | <b>86.5</b>  | <b>90.3</b>  | <b>94.1</b>  | <b>97.3</b>  | <b>94.6</b>  | <b>97.5</b>  | <b>92.7</b>  | <b>100.5</b> | <b>98.2</b>  | <b>100.0</b>         |
| Gasoline                                                          | 9.2          | 9.2          | 9.6          | 9.9          | 9.9          | 10.0         | 10.3         | 10.1         | 10.6         | 11.0         | 11.2                 |
| Diesel                                                            | 19.8         | 20.1         | 21.7         | 22.1         | 22.9         | 22.0         | 23.2         | 21.9         | 22.1         | 21.3         | 21.6                 |
| Heating Oil                                                       | 1.8          | 1.6          | 1.7          | 1.9          | 1.6          | 1.5          | 1.2          | 1.0          | 0.9          | 0.9          | 0.9                  |
| Aviation Jet                                                      | 1.2          | 1.5          | 1.7          | 1.7          | 1.8          | 1.8          | 1.5          | 1.4          | 2.8          | 2.8          | 2.9                  |
| LPG                                                               | 8.6          | 8.3          | 8.7          | 9.5          | 9.2          | 9.8          | 10.9         | 10.6         | 10.6         | 11.1         | 11.3                 |
| <b>Imports</b>                                                    | <b>213.6</b> | <b>212.4</b> | <b>218.7</b> | <b>229.4</b> | <b>234.5</b> | <b>243.6</b> | <b>236.1</b> | <b>223.1</b> | <b>233.2</b> | <b>240.9</b> | <b>100.0</b>         |
| Oil                                                               | 165.9        | 168.3        | 179.7        | 189.8        | 190.9        | 194.0        | 187.9        | 175.0        | 178.6        | 185.8        | 77.1                 |
| Gas                                                               | 47.7         | 44.0         | 38.9         | 39.6         | 43.6         | 49.6         | 48.2         | 48.1         | 54.6         | 55.1         | 22.9                 |
| Gasoline                                                          | 0.2          | 0.0          | 0.0          | 0.2          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 1.4          | 0.8          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.1          | 0.1          | 0.3          | 0.1                  |
| Heating Oil                                                       | 7.1          | 8.0          | 7.2          | 7.2          | 6.1          | 6.7          | 4.8          | 4.5          | 5.6          | 3.1          | 1.3                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 6.4          | 6.1          | 6.0          | 8.3          | 7.2          | 7.4          | 9.0          | 9.5          | 9.1          | 10.1         | 4.2                  |
| <b>Exports</b>                                                    | <b>56.9</b>  | <b>59.0</b>  | <b>62.8</b>  | <b>64.3</b>  | <b>66.8</b>  | <b>70.9</b>  | <b>69.3</b>  | <b>61.7</b>  | <b>59.0</b>  | <b>65.6</b>  | <b>100.0</b>         |
| Oil                                                               | 56.9         | 59.0         | 62.8         | 64.3         | 66.8         | 70.9         | 69.3         | 61.7         | 59.0         | 65.6         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 8.0          | 9.1          | 9.9          | 9.5          | 10.2         | 11.0         | 11.0         | 9.2          | 12.3         | 12.5         | 19.1                 |
| Diesel                                                            | 22.3         | 23.8         | 23.5         | 23.9         | 24.0         | 26.0         | 26.7         | 27.2         | 24.7         | 27.8         | 42.4                 |
| Heating Oil                                                       | 3.4          | 2.1          | 1.6          | 2.0          | 2.5          | 4.1          | 2.7          | 2.0          | 1.3          | 1.9          | 2.9                  |
| Aviation Jet                                                      | 12.0         | 12.6         | 14.4         | 14.9         | 16.1         | 15.5         | 15.4         | 10.7         | 8.4          | 11.0         | 16.8                 |
| LPG                                                               | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.5          | 0.5          | 0.6          | 0.3          | 0.1          | 0.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>628.2</b> | <b>624.3</b> | <b>638.5</b> | <b>655.5</b> | <b>665.1</b> | <b>667.1</b> | <b>652.7</b> | <b>609.4</b> | <b>615.1</b> | <b>597.2</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>344.7</b> | <b>332.0</b> | <b>330.2</b> | <b>329.3</b> | <b>323.9</b> | <b>315.7</b> | <b>302.1</b> | <b>284.5</b> | <b>276.0</b> | <b>261.3</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>73.6</b>  | <b>70.9</b>  | <b>70.3</b>  | <b>69.7</b>  | <b>68.5</b>  | <b>66.9</b>  | <b>64.6</b>  | <b>63.0</b>  | <b>63.4</b>  | <b>62.0</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>144.8</b> | <b>142.7</b> | <b>141.0</b> | <b>141.8</b> | <b>137.4</b> | <b>133.4</b> | <b>129.6</b> | <b>128.9</b> | <b>131.1</b> | <b>128.6</b> | <b>-</b>             |

\*Heat is included

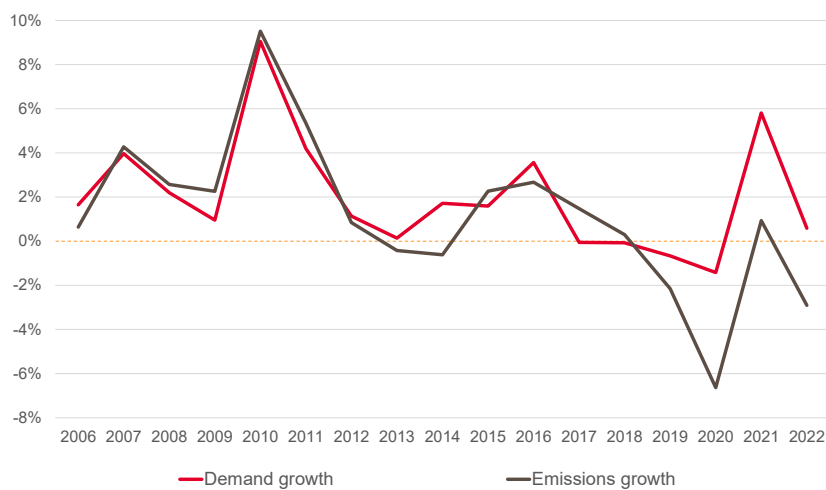
### Primary energy demand mix



### Electricity generation by source



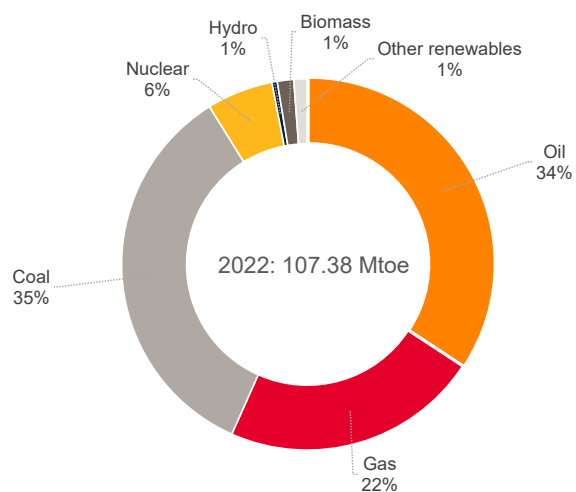
### Primary energy demand and CO<sub>2</sub> emissions growth



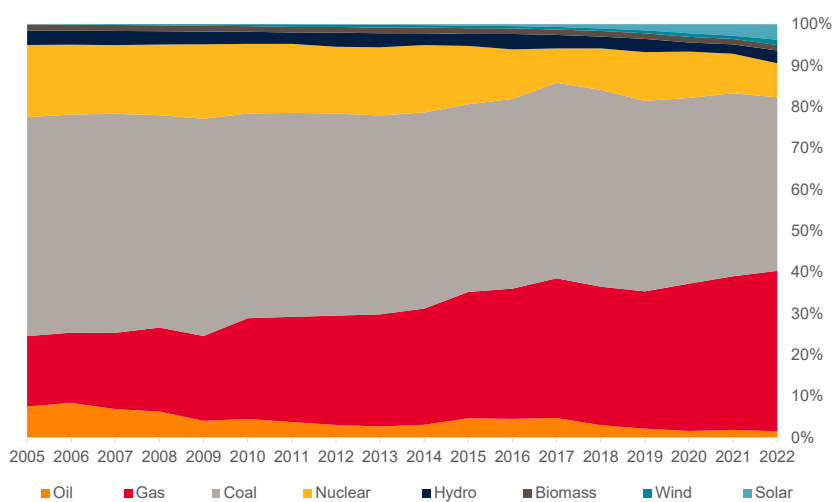
| <b>Taiwan</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>109.8</b> | <b>111.9</b> | <b>110.6</b> | <b>111.2</b> | <b>110.7</b> | <b>112.1</b> | <b>109.5</b> | <b>107.3</b> | <b>111.3</b> | <b>107.4</b> | <b>100.0</b>         |
| Oil                                                               | 41.9         | 42.7         | 42.8         | 43.4         | 43.1         | 42.5         | 39.7         | 38.7         | 39.0         | 36.8         | 34.2                 |
| Gas                                                               | 15.2         | 16.1         | 17.3         | 18.1         | 19.9         | 20.1         | 19.8         | 21.4         | 23.2         | 24.0         | 22.4                 |
| Coal                                                              | 39.4         | 39.8         | 38.6         | 39.0         | 39.6         | 39.9         | 39.1         | 36.4         | 39.1         | 37.0         | 34.5                 |
| Nuclear                                                           | 10.9         | 11.0         | 9.5          | 8.3          | 5.8          | 7.2          | 8.4          | 8.2          | 7.2          | 6.2          | 5.8                  |
| Hydro                                                             | 0.5          | 0.4          | 0.4          | 0.6          | 0.5          | 0.4          | 0.5          | 0.3          | 0.3          | 0.5          | 0.5                  |
| Biomass                                                           | 1.7          | 1.6          | 1.6          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.4                  |
| Other renewables                                                  | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.4          | 0.5          | 0.7          | 0.9          | 1.2          | 1.2                  |
| Electricity balance of trade*                                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1                  |
| <b>Total final consumption, by source</b>                         | <b>73.2</b>  | <b>74.3</b>  | <b>74.1</b>  | <b>74.8</b>  | <b>74.2</b>  | <b>75.5</b>  | <b>72.9</b>  | <b>73.3</b>  | <b>76.8</b>  | <b>72.2</b>  | <b>100.0</b>         |
| Oil                                                               | 38.9         | 39.2         | 39.5         | 39.4         | 38.7         | 39.3         | 37.0         | 37.2         | 38.6         | 35.1         | 48.6                 |
| Gas                                                               | 2.8          | 3.0          | 3.2          | 3.4          | 3.6          | 3.9          | 4.0          | 4.1          | 4.6          | 4.8          | 6.7                  |
| Coal                                                              | 10.1         | 10.2         | 9.7          | 10.0         | 9.5          | 8.7          | 8.5          | 8.0          | 8.5          | 7.5          | 10.4                 |
| Electricity                                                       | 19.5         | 20.0         | 19.9         | 20.3         | 20.8         | 21.3         | 21.2         | 21.7         | 22.8         | 22.4         | 31.1                 |
| Heat                                                              | 1.4          | 1.4          | 1.3          | 1.3          | 1.3          | 2.0          | 1.8          | 1.8          | 1.9          | 1.9          | 2.7                  |
| Biomass                                                           | 0.5          | 0.5          | 0.5          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.6                  |
| <b>Electricity generation, by source</b>                          | <b>21.7</b>  | <b>22.4</b>  | <b>22.2</b>  | <b>22.7</b>  | <b>23.2</b>  | <b>23.7</b>  | <b>23.6</b>  | <b>24.1</b>  | <b>25.0</b>  | <b>24.8</b>  | <b>100.0</b>         |
| Oil                                                               | 0.6          | 0.7          | 1.0          | 1.0          | 1.1          | 0.7          | 0.5          | 0.4          | 0.5          | 0.4          | 1.5                  |
| Gas                                                               | 5.9          | 6.3          | 6.8          | 7.2          | 7.9          | 7.9          | 7.8          | 8.6          | 9.3          | 9.6          | 38.8                 |
| Coal                                                              | 10.4         | 10.6         | 10.1         | 10.4         | 11.0         | 11.3         | 10.9         | 10.8         | 11.1         | 10.4         | 42.0                 |
| Nuclear                                                           | 3.6          | 3.6          | 3.1          | 2.7          | 1.9          | 2.4          | 2.8          | 2.7          | 2.4          | 2.0          | 8.2                  |
| Hydro                                                             | 0.7          | 0.6          | 0.6          | 0.8          | 0.8          | 0.7          | 0.8          | 0.5          | 0.6          | 0.8          | 3.1                  |
| Biomass                                                           | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 1.3                  |
| Wind                                                              | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.3          | 1.3                  |
| Solar                                                             | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.2          | 0.3          | 0.5          | 0.7          | 0.9          | 3.7                  |
| Other renewables                                                  | 0.0          | -0.0         | -0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>73.2</b>  | <b>74.3</b>  | <b>74.1</b>  | <b>74.8</b>  | <b>74.2</b>  | <b>75.5</b>  | <b>72.9</b>  | <b>73.3</b>  | <b>76.8</b>  | <b>72.2</b>  | <b>100.0</b>         |
| Industry                                                          | 27.3         | 27.6         | 26.6         | 27.0         | 26.9         | 27.7         | 27.0         | 26.8         | 28.7         | 27.3         | 37.8                 |
| Transport                                                         | 11.8         | 12.0         | 12.3         | 12.6         | 12.5         | 12.2         | 12.3         | 12.4         | 11.7         | 12.0         | 16.6                 |
| Residential/Commercial                                            | 10.8         | 11.0         | 11.1         | 11.4         | 11.4         | 11.1         | 11.1         | 11.4         | 11.5         | 11.6         | 16.0                 |
| <b>Oil final consumption, by sector</b>                           | <b>38.9</b>  | <b>39.2</b>  | <b>39.5</b>  | <b>39.4</b>  | <b>38.7</b>  | <b>39.3</b>  | <b>37.0</b>  | <b>37.2</b>  | <b>38.6</b>  | <b>35.1</b>  | <b>100.0</b>         |
| Industry                                                          | 2.8          | 2.5          | 2.0          | 1.8          | 1.8          | 1.8          | 1.5          | 1.2          | 1.3          | 1.0          | 2.9                  |
| Transport                                                         | 11.7         | 11.8         | 12.2         | 12.5         | 12.4         | 12.0         | 12.1         | 12.2         | 11.6         | 11.9         | 33.9                 |
| Residential/Commercial                                            | 1.8          | 1.7          | 1.7          | 1.7          | 1.7          | 1.6          | 1.6          | 1.6          | 1.6          | 1.6          | 4.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>2.8</b>   | <b>3.0</b>   | <b>3.2</b>   | <b>3.4</b>   | <b>3.6</b>   | <b>3.9</b>   | <b>4.0</b>   | <b>4.1</b>   | <b>4.6</b>   | <b>4.8</b>   | <b>100.0</b>         |
| Industry                                                          | 1.8          | 2.0          | 2.1          | 2.3          | 2.5          | 2.8          | 2.9          | 3.0          | 3.4          | 3.6          | 75.1                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 1.0          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 23.7                 |
| <b>Refined products consumption</b>                               | <b>38.9</b>  | <b>39.2</b>  | <b>39.5</b>  | <b>39.4</b>  | <b>38.7</b>  | <b>39.3</b>  | <b>37.0</b>  | <b>37.2</b>  | <b>38.6</b>  | <b>35.1</b>  | <b>100.0</b>         |
| Gasoline                                                          | 7.5          | 7.6          | 7.9          | 8.2          | 8.0          | 7.8          | 7.8          | 7.9          | 7.3          | 7.5          | 21.5                 |
| Diesel                                                            | 4.6          | 4.7          | 4.7          | 4.8          | 4.7          | 4.7          | 4.8          | 4.9          | 4.9          | 5.0          | 14.1                 |
| Heating Oil                                                       | 2.9          | 2.5          | 2.1          | 1.9          | 1.8          | 1.5          | 1.2          | 0.9          | 1.0          | 0.7          | 2.0                  |
| Aviation Jet                                                      | 0.2          | 0.2          | 0.3          | 0.2          | 0.3          | 0.2          | 0.3          | 0.2          | 0.2          | 0.2          | 0.7                  |
| LPG                                                               | 3.0          | 3.0          | 2.6          | 3.3          | 2.6          | 3.1          | 3.1          | 2.6          | 1.8          | 1.8          | 5.2                  |
| <b>Imports</b>                                                    | <b>76.5</b>  | <b>80.5</b>  | <b>80.3</b>  | <b>82.2</b>  | <b>83.6</b>  | <b>84.6</b>  | <b>82.5</b>  | <b>76.3</b>  | <b>79.3</b>  | <b>80.0</b>  | <b>100.0</b>         |
| Oil                                                               | 61.5         | 64.6         | 63.3         | 64.5         | 63.9         | 64.4         | 62.6         | 55.0         | 55.9         | 56.0         | 70.0                 |
| Gas                                                               | 15.0         | 15.9         | 17.1         | 17.8         | 19.8         | 20.2         | 19.9         | 21.3         | 23.3         | 24.0         | 30.0                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.2          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.1          | 0.2          | 0.2                  |
| Diesel                                                            | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Heating Oil                                                       | 1.5          | 1.8          | 1.0          | 1.7          | 2.5          | 2.2          | 1.2          | 0.6          | 0.8          | 0.8          | 1.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.2          | 0.2          | 0.1          | 0.1          | 0.0          | 0.1          | 0.0          | 0.1          | 0.1                  |
| LPG                                                               | 1.4          | 2.0          | 1.6          | 2.1          | 1.5          | 2.1          | 2.1          | 1.8          | 0.6          | 0.9          | 1.2                  |
| <b>Exports</b>                                                    | <b>17.5</b>  | <b>17.5</b>  | <b>17.0</b>  | <b>17.4</b>  | <b>17.3</b>  | <b>18.5</b>  | <b>19.6</b>  | <b>13.0</b>  | <b>14.7</b>  | <b>16.6</b>  | <b>100.0</b>         |
| Oil                                                               | 17.5         | 17.5         | 17.0         | 17.4         | 17.3         | 18.5         | 19.6         | 13.0         | 14.7         | 16.6         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 4.3          | 4.2          | 4.3          | 4.7          | 4.4          | 4.1          | 3.7          | 1.8          | 3.2          | 3.4          | 20.4                 |
| Diesel                                                            | 9.9          | 9.9          | 9.0          | 8.9          | 8.3          | 9.4          | 10.0         | 6.6          | 6.7          | 8.5          | 51.3                 |
| Heating Oil                                                       | 0.6          | 0.7          | 1.0          | 1.3          | 1.6          | 1.9          | 1.8          | 1.6          | 1.9          | 1.6          | 9.4                  |
| Aviation Jet                                                      | 1.3          | 1.0          | 1.0          | 0.9          | 0.8          | 1.0          | 0.9          | 0.8          | 0.4          | 0.9          | 5.3                  |
| LPG                                                               | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>265.3</b> | <b>270.5</b> | <b>271.1</b> | <b>275.3</b> | <b>283.0</b> | <b>279.4</b> | <b>268.2</b> | <b>266.6</b> | <b>264.3</b> | <b>273.8</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>528.3</b> | <b>517.8</b> | <b>514.8</b> | <b>515.5</b> | <b>515.0</b> | <b>494.8</b> | <b>460.8</b> | <b>443.0</b> | <b>412.3</b> | <b>416.9</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>101.0</b> | <b>98.5</b>  | <b>96.4</b>  | <b>97.0</b>  | <b>93.8</b>  | <b>91.8</b>  | <b>88.0</b>  | <b>85.4</b>  | <b>82.3</b>  | <b>78.8</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>218.6</b> | <b>214.2</b> | <b>210.0</b> | <b>208.2</b> | <b>201.6</b> | <b>198.5</b> | <b>188.2</b> | <b>178.3</b> | <b>173.7</b> | <b>163.5</b> | <b>-</b>             |

\*Heat is included

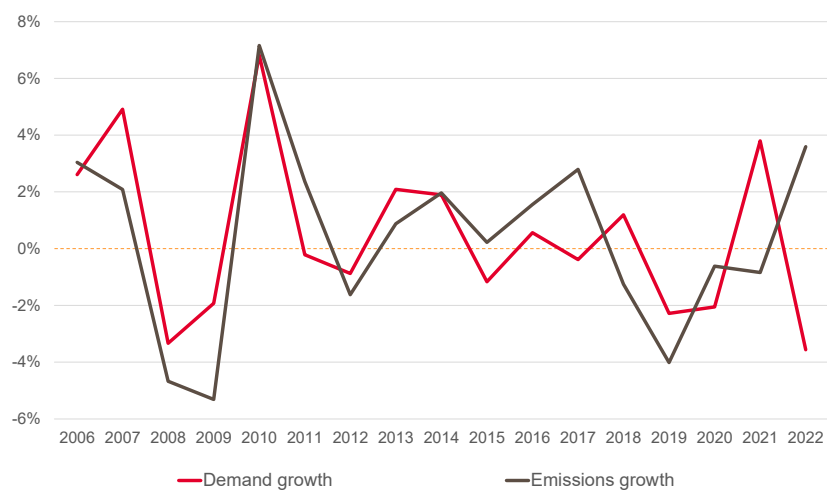
Primary energy demand mix



Electricity generation by source



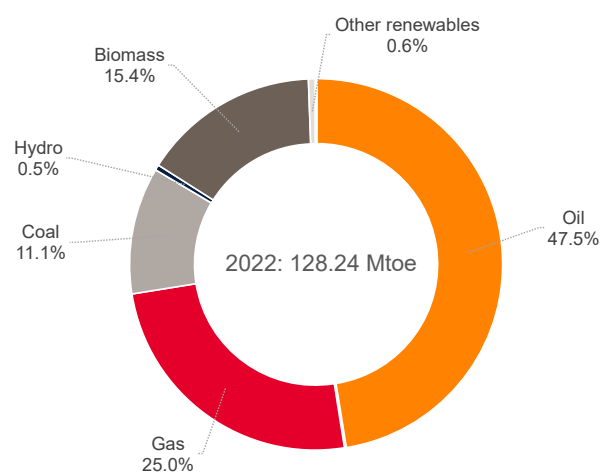
Primary energy demand and CO<sub>2</sub> emissions growth



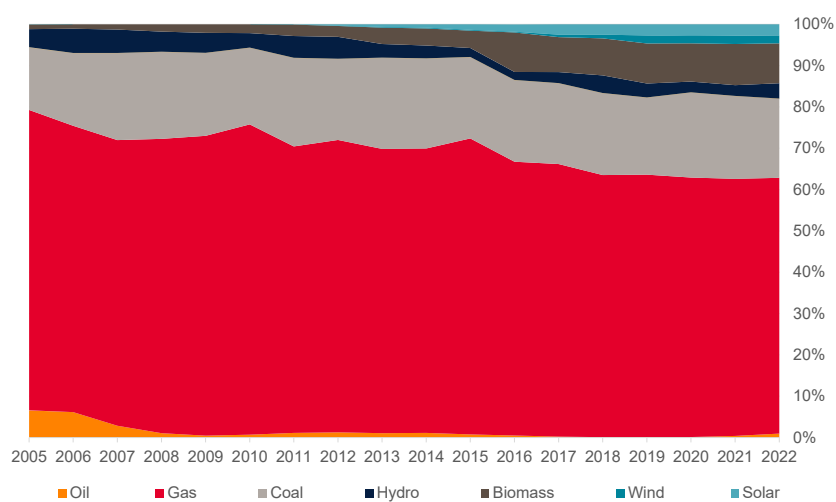
| Thailand<br>(Million toe)                                         | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>135.8</b> | <b>135.2</b> | <b>135.6</b> | <b>138.7</b> | <b>138.0</b> | <b>135.1</b> | <b>138.7</b> | <b>133.1</b> | <b>128.4</b> | <b>128.2</b> | <b>100.0</b>         |
| Oil                                                               | 54.4         | 54.2         | 54.1         | 55.9         | 56.4         | 54.7         | 55.1         | 55.1         | 54.3         | 59.5         | 46.4                 |
| Gas                                                               | 37.9         | 37.8         | 37.8         | 36.9         | 36.0         | 35.5         | 36.6         | 34.5         | 33.9         | 31.3         | 24.4                 |
| Coal                                                              | 17.2         | 15.9         | 16.9         | 15.4         | 16.4         | 15.8         | 16.3         | 17.1         | 15.3         | 13.9         | 10.8                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.5          | 0.5          | 0.3          | 0.3          | 0.4          | 0.7          | 0.6          | 0.4          | 0.4          | 0.6          | 0.5                  |
| Biomass                                                           | 24.7         | 25.7         | 25.3         | 28.2         | 26.3         | 25.7         | 27.3         | 23.0         | 21.1         | 19.3         | 15.1                 |
| Other renewables                                                  | 0.1          | 0.1          | 0.2          | 0.3          | 0.5          | 0.5          | 0.8          | 0.7          | 0.7          | 0.7          | 0.6                  |
| Electricity balance of trade*                                     | 1.0          | 0.9          | 1.1          | 1.6          | 2.0          | 2.2          | 2.0          | 2.3          | 2.7          | 2.9          | 2.2                  |
| <b>Total final consumption, by source</b>                         | <b>95.3</b>  | <b>96.0</b>  | <b>98.1</b>  | <b>97.2</b>  | <b>99.0</b>  | <b>100.4</b> | <b>102.5</b> | <b>96.7</b>  | <b>92.6</b>  | <b>93.8</b>  | <b>100.0</b>         |
| Oil                                                               | 51.2         | 51.1         | 51.9         | 53.5         | 53.8         | 54.7         | 55.0         | 53.9         | 53.6         | 56.9         | 60.7                 |
| Gas                                                               | 7.1          | 7.4          | 7.2          | 7.2          | 7.0          | 7.3          | 7.1          | 5.3          | 5.4          | 5.7          | 6.0                  |
| Coal                                                              | 7.3          | 6.4          | 8.2          | 6.1          | 7.5          | 6.9          | 7.8          | 8.5          | 6.8          | 5.3          | 5.6                  |
| Electricity                                                       | 14.1         | 14.5         | 15.0         | 15.9         | 15.9         | 16.2         | 16.6         | 16.1         | 16.4         | 17.0         | 18.1                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 15.5         | 16.5         | 15.9         | 14.5         | 14.7         | 15.3         | 15.9         | 12.8         | 10.4         | 8.9          | 9.5                  |
| <b>Electricity generation, by source</b>                          | <b>14.6</b>  | <b>14.8</b>  | <b>15.2</b>  | <b>16.2</b>  | <b>15.6</b>  | <b>15.7</b>  | <b>16.4</b>  | <b>15.4</b>  | <b>15.5</b>  | <b>16.0</b>  | <b>100.0</b>         |
| Oil                                                               | 0.2          | 0.2          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 1.0                  |
| Gas                                                               | 10.1         | 10.2         | 10.9         | 10.7         | 10.3         | 9.9          | 10.4         | 9.7          | 9.7          | 9.9          | 61.9                 |
| Coal                                                              | 3.2          | 3.2          | 3.0          | 3.2          | 3.1          | 3.1          | 3.1          | 3.2          | 3.1          | 3.1          | 19.2                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.5          | 0.5          | 0.3          | 0.3          | 0.4          | 0.7          | 0.6          | 0.4          | 0.4          | 0.6          | 3.7                  |
| Biomass                                                           | 0.6          | 0.6          | 0.6          | 1.5          | 1.3          | 1.4          | 1.6          | 1.4          | 1.5          | 1.5          | 9.7                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.3          | 0.3          | 0.3          | 0.3          | 1.9                  |
| Solar                                                             | 0.1          | 0.1          | 0.2          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 2.7                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>95.3</b>  | <b>96.0</b>  | <b>98.1</b>  | <b>97.2</b>  | <b>99.0</b>  | <b>100.4</b> | <b>102.5</b> | <b>96.7</b>  | <b>92.6</b>  | <b>93.8</b>  | <b>100.0</b>         |
| Industry                                                          | 28.4         | 30.5         | 32.1         | 31.3         | 31.6         | 31.6         | 33.5         | 31.2         | 28.6         | 27.2         | 29.0                 |
| Transport                                                         | 21.9         | 21.6         | 22.8         | 24.1         | 26.3         | 26.4         | 27.1         | 26.7         | 24.7         | 27.6         | 29.5                 |
| Residential/Commercial                                            | 17.5         | 16.6         | 16.6         | 15.8         | 15.6         | 14.9         | 15.4         | 14.2         | 13.7         | 13.5         | 14.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>51.2</b>  | <b>51.1</b>  | <b>51.9</b>  | <b>53.5</b>  | <b>53.8</b>  | <b>54.7</b>  | <b>55.0</b>  | <b>53.9</b>  | <b>53.6</b>  | <b>56.9</b>  | <b>100.0</b>         |
| Industry                                                          | 5.0          | 6.1          | 5.7          | 6.5          | 5.0          | 4.1          | 4.6          | 4.3          | 4.5          | 5.1          | 9.0                  |
| Transport                                                         | 18.2         | 17.5         | 18.8         | 20.2         | 22.5         | 22.6         | 23.3         | 23.4         | 21.8         | 24.7         | 43.3                 |
| Residential/Commercial                                            | 2.8          | 2.6          | 2.5          | 2.5          | 2.5          | 2.5          | 2.5          | 2.4          | 2.4          | 2.5          | 4.3                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>7.1</b>   | <b>7.4</b>   | <b>7.2</b>   | <b>7.2</b>   | <b>7.0</b>   | <b>7.3</b>   | <b>7.1</b>   | <b>5.3</b>   | <b>5.4</b>   | <b>5.7</b>   | <b>100.0</b>         |
| Industry                                                          | 2.4          | 2.5          | 3.0          | 3.3          | 3.3          | 3.5          | 3.5          | 3.4          | 3.8          | 4.0          | 69.9                 |
| Transport                                                         | 2.5          | 2.6          | 2.5          | 2.3          | 2.0          | 1.8          | 1.6          | 1.1          | 0.9          | 1.0          | 17.5                 |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Refined products consumption</b>                               | <b>50.7</b>  | <b>50.6</b>  | <b>51.3</b>  | <b>52.8</b>  | <b>53.2</b>  | <b>54.1</b>  | <b>54.4</b>  | <b>53.4</b>  | <b>53.1</b>  | <b>56.5</b>  | <b>100.0</b>         |
| Gasoline                                                          | 5.5          | 5.6          | 6.3          | 7.0          | 7.1          | 7.3          | 7.5          | 7.5          | 6.9          | 7.1          | 12.6                 |
| Diesel                                                            | 17.3         | 17.3         | 18.0         | 18.6         | 19.0         | 18.5         | 19.8         | 18.9         | 18.2         | 20.8         | 36.8                 |
| Heating Oil                                                       | 1.0          | 1.0          | 0.6          | 0.8          | 0.8          | 0.7          | 0.7          | 1.3          | 1.5          | 1.8          | 3.2                  |
| Aviation Jet                                                      | 0.6          | 0.6          | 0.9          | 0.9          | 1.0          | 0.9          | 0.9          | 0.7          | 0.4          | 0.8          | 1.5                  |
| LPG                                                               | 8.7          | 8.7          | 7.7          | 7.1          | 7.3          | 7.7          | 7.7          | 6.6          | 7.1          | 7.5          | 13.2                 |
| <b>Imports</b>                                                    | <b>59.9</b>  | <b>57.8</b>  | <b>62.8</b>  | <b>62.8</b>  | <b>66.1</b>  | <b>69.1</b>  | <b>65.9</b>  | <b>64.2</b>  | <b>65.5</b>  | <b>70.4</b>  | <b>100.0</b>         |
| Oil                                                               | 50.4         | 49.0         | 50.8         | 51.2         | 53.7         | 56.4         | 53.4         | 51.3         | 51.9         | 55.9         | 79.4                 |
| Gas                                                               | 9.5          | 8.9          | 12.0         | 11.6         | 12.4         | 12.6         | 12.5         | 12.9         | 13.6         | 14.5         | 20.6                 |
| Gasoline                                                          | 0.2          | 0.7          | 0.6          | 1.2          | 1.3          | 1.2          | 1.7          | 1.1          | 0.5          | 0.4          | 0.6                  |
| Diesel                                                            | 0.2          | 0.3          | 0.1          | 0.7          | 0.7          | 0.5          | 2.1          | 0.0          | 0.2          | 0.9          | 1.3                  |
| Heating Oil                                                       | 0.3          | 0.4          | 0.2          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.3          | 0.1          | 0.0          | 0.0          | 0.1                  |
| LPG                                                               | 2.3          | 2.5          | 1.6          | 0.5          | 0.8          | 0.8          | 0.6          | 0.6          | 0.6          | 1.8          | 2.6                  |
| <b>Exports</b>                                                    | <b>14.3</b>  | <b>12.6</b>  | <b>14.1</b>  | <b>12.9</b>  | <b>14.1</b>  | <b>15.0</b>  | <b>11.8</b>  | <b>12.3</b>  | <b>12.6</b>  | <b>10.0</b>  | <b>100.0</b>         |
| Oil                                                               | 14.3         | 12.6         | 14.1         | 12.9         | 14.1         | 15.0         | 11.8         | 12.3         | 12.6         | 10.0         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 1.2          | 1.0          | 1.1          | 1.1          | 1.2          | 1.3          | 0.9          | 1.1          | 1.5          | 1.6          | 15.6                 |
| Diesel                                                            | 4.2          | 3.8          | 5.4          | 4.2          | 4.6          | 4.8          | 3.3          | 5.0          | 5.6          | 3.0          | 29.9                 |
| Heating Oil                                                       | 3.6          | 3.6          | 3.5          | 3.1          | 3.3          | 3.3          | 3.1          | 2.5          | 2.9          | 2.8          | 28.1                 |
| Aviation Jet                                                      | 1.2          | 1.0          | 1.2          | 0.4          | 0.6          | 0.8          | 0.7          | 0.5          | 0.3          | 0.7          | 6.8                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.1          | 0.3          | 0.5          | 0.4          | 0.3          | 0.2          | 0.2          | 2.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>262.0</b> | <b>257.4</b> | <b>263.9</b> | <b>260.2</b> | <b>260.1</b> | <b>258.8</b> | <b>268.3</b> | <b>257.4</b> | <b>246.5</b> | <b>250.5</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>250.9</b> | <b>244.2</b> | <b>242.7</b> | <b>231.4</b> | <b>222.1</b> | <b>212.0</b> | <b>215.1</b> | <b>220.0</b> | <b>207.5</b> | <b>205.3</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>68.8</b>  | <b>68.9</b>  | <b>69.4</b>  | <b>66.0</b>  | <b>65.0</b>  | <b>62.1</b>  | <b>63.2</b>  | <b>63.6</b>  | <b>58.3</b>  | <b>58.1</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>130.1</b> | <b>128.2</b> | <b>124.7</b> | <b>123.4</b> | <b>117.8</b> | <b>110.7</b> | <b>111.2</b> | <b>113.8</b> | <b>108.1</b> | <b>105.1</b> | <b>-</b>             |

\*Heat is included

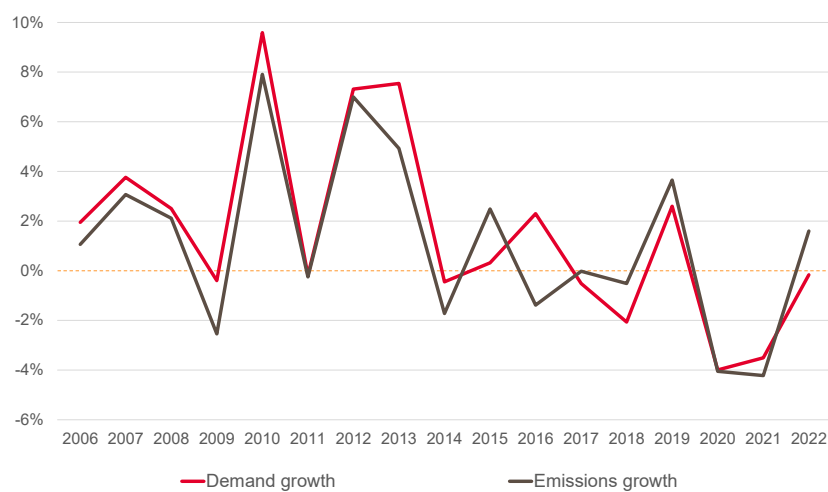
### Primary energy demand mix



### Electricity generation by source



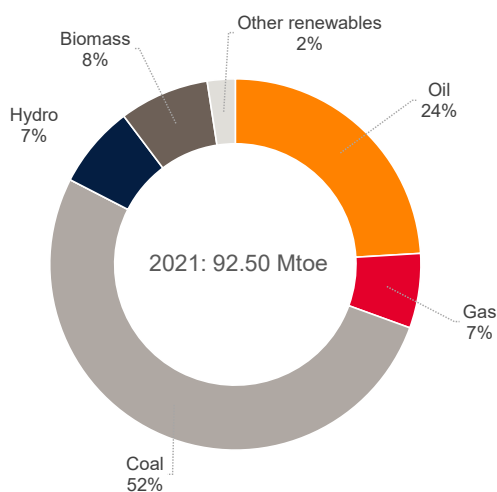
### Primary energy demand and CO<sub>2</sub> emissions growth



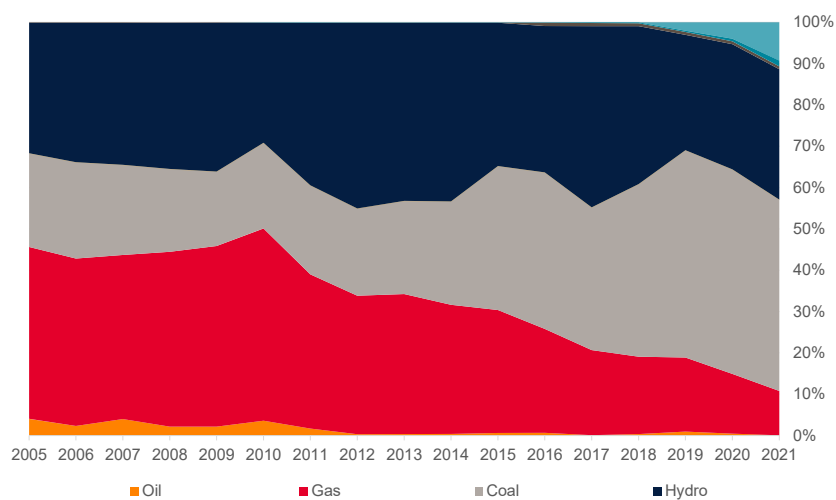
| <b>Vietnam</b><br>(Million toe)                                   | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022        | Share in<br>2021 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>61.1</b>  | <b>68.4</b>  | <b>63.1</b>  | <b>69.5</b>  | <b>72.1</b>  | <b>85.2</b>  | <b>95.9</b>  | <b>97.3</b>  | <b>92.5</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 15.9         | 19.2         | 17.4         | 18.5         | 19.8         | 22.8         | 25.2         | 24.2         | 22.2         | n.d.        | 24.0                 |
| Gas                                                               | 8.5          | 9.1          | 7.9          | 9.0          | 8.3          | 8.3          | 8.5          | 7.4          | 6.0          | n.d.        | 6.5                  |
| Coal                                                              | 17.2         | 19.9         | 24.4         | 27.2         | 27.4         | 37.3         | 46.5         | 50.8         | 48.1         | n.d.        | 52.0                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Hydro                                                             | 4.5          | 5.1          | 4.8          | 5.5          | 7.4          | 7.1          | 5.7          | 6.3          | 6.7          | n.d.        | 7.2                  |
| Biomass                                                           | 14.8         | 14.8         | 8.5          | 9.2          | 9.2          | 9.6          | 9.4          | 7.5          | 7.2          | n.d.        | 7.8                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.5          | 1.0          | 2.2          | n.d.        | 2.4                  |
| Electricity balance of trade*                                     | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | n.d.        | 0.1                  |
| <b>Total final consumption, by source</b>                         | <b>51.7</b>  | <b>55.0</b>  | <b>46.8</b>  | <b>49.3</b>  | <b>52.1</b>  | <b>59.7</b>  | <b>65.0</b>  | <b>66.6</b>  | <b>66.0</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 15.6         | 16.7         | 17.4         | 18.7         | 19.9         | 20.9         | 21.9         | 19.5         | 19.5         | n.d.        | 29.5                 |
| Gas                                                               | 1.5          | 1.6          | 1.1          | 1.3          | 1.4          | 1.4          | 1.4          | 1.4          | 1.5          | n.d.        | 2.3                  |
| Coal                                                              | 10.9         | 11.8         | 7.9          | 7.7          | 8.2          | 13.1         | 16.2         | 21.2         | 20.6         | n.d.        | 31.2                 |
| Electricity                                                       | 10.0         | 11.0         | 12.3         | 13.7         | 14.9         | 16.5         | 18.0         | 18.7         | 19.0         | n.d.        | 28.8                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Biomass                                                           | 13.8         | 13.8         | 8.1          | 7.9          | 7.8          | 7.8          | 7.5          | 5.7          | 5.4          | n.d.        | 8.2                  |
| <b>Electricity generation, by source</b>                          | <b>10.4</b>  | <b>11.9</b>  | <b>13.9</b>  | <b>15.5</b>  | <b>16.9</b>  | <b>18.7</b>  | <b>20.4</b>  | <b>20.7</b>  | <b>21.1</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.1          | 0.1          | 0.0          | 0.1          | 0.2          | 0.1          | 0.0          | n.d.        | 0.1                  |
| Gas                                                               | 3.5          | 3.7          | 4.1          | 3.9          | 3.5          | 3.5          | 3.7          | 3.0          | 2.3          | n.d.        | 10.7                 |
| Coal                                                              | 2.3          | 3.0          | 4.9          | 5.9          | 5.8          | 7.8          | 10.2         | 10.2         | 9.8          | n.d.        | 46.3                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Hydro                                                             | 4.5          | 5.1          | 4.8          | 5.5          | 7.4          | 7.1          | 5.7          | 6.3          | 6.7          | n.d.        | 31.6                 |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | n.d.        | 0.7                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.3          | n.d.        | 1.4                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4          | 0.8          | 2.0          | n.d.        | 9.3                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | n.d.        | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>51.7</b>  | <b>55.0</b>  | <b>46.8</b>  | <b>49.3</b>  | <b>52.1</b>  | <b>59.7</b>  | <b>65.0</b>  | <b>66.6</b>  | <b>66.0</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 20.5         | 22.7         | 18.6         | 20.3         | 21.7         | 27.9         | 31.9         | 36.4         | 36.1         | n.d.        | 54.7                 |
| Transport                                                         | 9.8          | 10.0         | 11.1         | 12.3         | 13.4         | 14.0         | 14.6         | 12.3         | 12.3         | n.d.        | 18.6                 |
| Residential/Commercial                                            | 18.4         | 18.6         | 12.9         | 12.7         | 12.8         | 13.0         | 13.2         | 12.7         | 12.4         | n.d.        | 18.7                 |
| <b>Oil final consumption, by sector</b>                           | <b>15.6</b>  | <b>16.7</b>  | <b>17.4</b>  | <b>18.7</b>  | <b>19.9</b>  | <b>20.9</b>  | <b>21.9</b>  | <b>19.5</b>  | <b>19.5</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.4          | 1.6          | 1.5          | 1.9          | 1.6          | 1.6          | 1.6          | 1.5          | 1.6          | n.d.        | 8.1                  |
| Transport                                                         | 9.8          | 10.0         | 11.1         | 12.2         | 13.3         | 13.9         | 14.5         | 12.2         | 12.2         | n.d.        | 62.5                 |
| Residential/Commercial                                            | 1.5          | 1.6          | 1.8          | 1.7          | 1.9          | 2.0          | 2.2          | 2.2          | 2.0          | n.d.        | 10.4                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>1.5</b>   | <b>1.6</b>   | <b>1.1</b>   | <b>1.3</b>   | <b>1.4</b>   | <b>1.4</b>   | <b>1.4</b>   | <b>1.4</b>   | <b>1.5</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.5          | 1.6          | 0.4          | 0.7          | 0.8          | 0.8          | 0.7          | 0.8          | 0.8          | n.d.        | 53.1                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 1.5                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| <b>Refined products consumption</b>                               | <b>15.6</b>  | <b>16.7</b>  | <b>17.4</b>  | <b>18.7</b>  | <b>19.9</b>  | <b>20.9</b>  | <b>21.9</b>  | <b>19.5</b>  | <b>19.5</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Gasoline                                                          | 4.8          | 4.7          | 5.4          | 5.9          | 6.5          | 6.7          | 6.9          | 5.9          | 5.9          | n.d.        | 30.4                 |
| Diesel                                                            | 6.2          | 6.7          | 7.9          | 8.9          | 9.3          | 9.7          | 10.1         | 8.7          | 9.2          | n.d.        | 47.0                 |
| Heating Oil                                                       | 0.2          | 0.4          | 0.4          | 0.3          | 0.2          | 0.1          | 0.1          | 0.2          | 0.3          | n.d.        | 1.5                  |
| Aviation Jet                                                      | 0.4          | 0.4          | 0.6          | 0.8          | 0.8          | 0.8          | 1.0          | 0.8          | 0.4          | n.d.        | 2.2                  |
| LPG                                                               | 1.5          | 1.5          | 1.7          | 1.9          | 2.1          | 2.3          | 2.5          | 2.6          | 2.3          | n.d.        | 12.0                 |
| <b>Imports</b>                                                    | <b>10.7</b>  | <b>12.6</b>  | <b>12.9</b>  | <b>14.5</b>  | <b>16.1</b>  | <b>19.0</b>  | <b>20.8</b>  | <b>23.3</b>  | <b>19.6</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 10.7         | 12.6         | 12.9         | 14.5         | 16.1         | 19.0         | 20.8         | 23.3         | 19.6         | n.d.        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Gasoline                                                          | 2.4          | 2.6          | 2.8          | 2.6          | 3.3          | 2.4          | 2.1          | 1.6          | 0.9          | n.d.        | 4.6                  |
| Diesel                                                            | 3.2          | 4.2          | 5.3          | 6.8          | 7.4          | 5.9          | 4.8          | 4.9          | 4.8          | n.d.        | 24.5                 |
| Heating Oil                                                       | 0.7          | 0.7          | 0.7          | 0.9          | 0.6          | 0.7          | 0.8          | 0.7          | 0.6          | n.d.        | 3.3                  |
| Aviation Jet                                                      | 1.2          | 1.2          | 1.4          | 1.6          | 1.8          | 2.1          | 2.1          | 1.2          | 0.7          | n.d.        | 3.4                  |
| LPG                                                               | 0.8          | 0.8          | 1.2          | 1.3          | 1.5          | 1.6          | 2.0          | 2.0          | 1.7          | n.d.        | 8.5                  |
| <b>Exports</b>                                                    | <b>9.8</b>   | <b>10.6</b>  | <b>10.6</b>  | <b>9.9</b>   | <b>9.1</b>   | <b>6.7</b>   | <b>5.8</b>   | <b>6.6</b>   | <b>5.1</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 9.8          | 10.6         | 10.6         | 9.9          | 9.1          | 6.7          | 5.8          | 6.6          | 5.1          | n.d.        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Gasoline                                                          | 0.2          | 0.2          | 0.3          | 0.2          | 0.3          | 0.2          | 0.2          | 0.3          | 0.3          | n.d.        | 6.2                  |
| Diesel                                                            | 0.5          | 0.4          | 0.5          | 0.5          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | n.d.        | 12.7                 |
| Heating Oil                                                       | 0.2          | 0.1          | 0.1          | 0.3          | 0.3          | 0.4          | 0.5          | 0.4          | 0.4          | n.d.        | 7.3                  |
| Aviation Jet                                                      | 0.3          | 0.4          | 0.3          | 0.4          | 0.3          | 0.4          | 0.2          | 0.3          | 0.3          | n.d.        | 5.7                  |
| LPG                                                               | 0.1          | 0.0          | 0.0          | 0.3          | 0.2          | 0.3          | 0.5          | 0.3          | 0.3          | n.d.        | 5.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>132.8</b> | <b>147.0</b> | <b>166.0</b> | <b>184.0</b> | <b>185.3</b> | <b>231.1</b> | <b>275.9</b> | <b>283.7</b> | <b>271.4</b> | <b>n.d.</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>215.9</b> | <b>224.6</b> | <b>237.0</b> | <b>246.3</b> | <b>232.0</b> | <b>269.8</b> | <b>300.6</b> | <b>300.4</b> | <b>280.1</b> | <b>n.d.</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>80.2</b>  | <b>79.3</b>  | <b>63.9</b>  | <b>64.0</b>  | <b>63.4</b>  | <b>67.7</b>  | <b>68.7</b>  | <b>68.4</b>  | <b>66.1</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>99.4</b>  | <b>104.5</b> | <b>90.1</b>  | <b>93.0</b>  | <b>90.2</b>  | <b>99.5</b>  | <b>104.5</b> | <b>103.0</b> | <b>95.4</b>  | <b>n.d.</b> | <b>-</b>             |

\*Heat is included

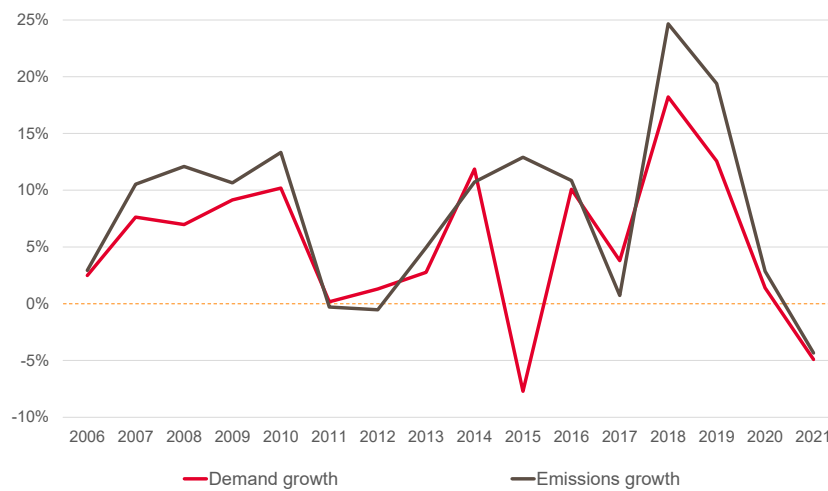
Primary energy demand mix



Electricity generation by source



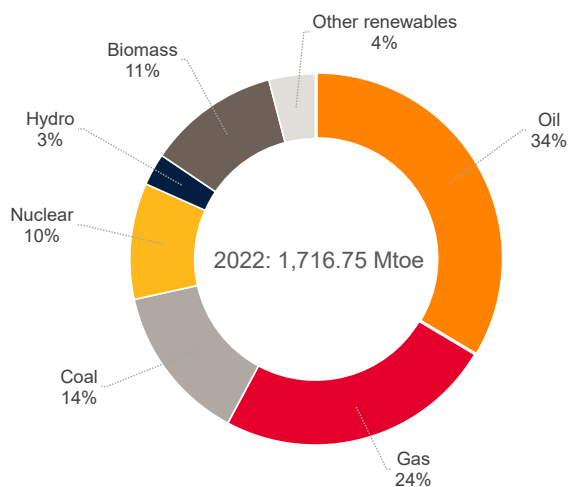
Primary energy demand and CO<sub>2</sub> emissions growth



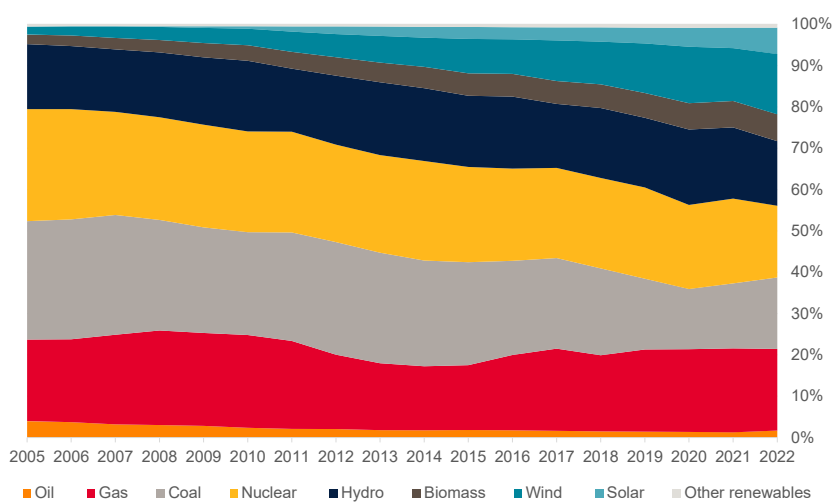
| Europe<br>(Million toe)                                           | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>1,843.2</b> | <b>1,778.2</b> | <b>1,804.6</b> | <b>1,825.0</b> | <b>1,859.2</b> | <b>1,845.7</b> | <b>1,815.9</b> | <b>1,704.7</b> | <b>1,785.4</b> | <b>1,716.8</b> | <b>100.0</b>         |
| Oil                                                               | 578.5          | 572.7          | 582.0          | 592.6          | 608.4          | 595.6          | 591.6          | 538.9          | 559.2          | 565.7          | 33.0                 |
| Gas                                                               | 435.6          | 393.9          | 408.5          | 431.6          | 453.0          | 443.4          | 448.2          | 438.3          | 459.4          | 409.0          | 23.8                 |
| Coal                                                              | 334.8          | 316.1          | 312.9          | 296.7          | 290.6          | 282.5          | 241.1          | 206.0          | 223.7          | 231.3          | 13.5                 |
| Nuclear                                                           | 235.3          | 235.6          | 229.4          | 224.3          | 221.5          | 222.2          | 221.0          | 197.5          | 207.7          | 170.8          | 10.0                 |
| Hydro                                                             | 55.1           | 54.0           | 53.6           | 54.8           | 48.9           | 53.9           | 52.9           | 55.6           | 54.6           | 47.2           | 2.7                  |
| Biomass                                                           | 156.3          | 154.4          | 159.8          | 163.1          | 167.4          | 173.6          | 178.6          | 179.9          | 191.2          | 193.8          | 11.3                 |
| Other renewables                                                  | 29.4           | 32.1           | 37.6           | 38.3           | 44.5           | 46.9           | 53.1           | 59.3           | 59.3           | 67.9           | 4.0                  |
| Electricity balance of trade*                                     | 18.3           | 19.3           | 20.9           | 23.6           | 24.9           | 27.5           | 29.4           | 29.2           | 30.4           | 30.9           | 1.8                  |
| <b>Total final consumption, by source</b>                         | <b>1,314.3</b> | <b>1,265.8</b> | <b>1,293.5</b> | <b>1,318.3</b> | <b>1,342.5</b> | <b>1,337.1</b> | <b>1,328.5</b> | <b>1,262.8</b> | <b>1,340.1</b> | <b>1,282.7</b> | <b>100.0</b>         |
| Oil                                                               | 521.3          | 516.8          | 526.1          | 535.2          | 546.3          | 539.6          | 538.4          | 492.4          | 519.9          | 521.7          | 40.7                 |
| Gas                                                               | 288.2          | 258.9          | 268.7          | 277.5          | 284.0          | 283.4          | 281.5          | 276.0          | 300.1          | 255.2          | 19.9                 |
| Coal                                                              | 73.0           | 72.0           | 71.9           | 72.0           | 72.2           | 68.0           | 63.4           | 60.8           | 65.2           | 60.2           | 4.7                  |
| Electricity                                                       | 276.8          | 271.4          | 276.1          | 280.2          | 283.7          | 284.8          | 281.8          | 272.6          | 284.9          | 275.6          | 21.5                 |
| Heat                                                              | 57.9           | 54.0           | 55.3           | 57.3           | 57.8           | 57.0           | 56.9           | 55.0           | 58.6           | 56.1           | 4.4                  |
| Biomass                                                           | 97.1           | 92.6           | 95.2           | 96.2           | 98.6           | 104.3          | 106.4          | 106.0          | 111.5          | 113.8          | 8.9                  |
| <b>Electricity generation, by source</b>                          | <b>328.8</b>   | <b>322.8</b>   | <b>328.1</b>   | <b>331.3</b>   | <b>335.4</b>   | <b>335.2</b>   | <b>330.2</b>   | <b>320.7</b>   | <b>333.6</b>   | <b>324.2</b>   | <b>100.0</b>         |
| Oil                                                               | 5.8            | 5.6            | 5.9            | 5.7            | 5.4            | 4.9            | 4.7            | 4.3            | 4.2            | 5.5            | 1.7                  |
| Gas                                                               | 53.3           | 50.0           | 51.5           | 60.4           | 66.8           | 61.8           | 65.6           | 64.3           | 67.8           | 64.0           | 19.8                 |
| Coal                                                              | 87.9           | 82.6           | 81.8           | 75.4           | 73.5           | 70.5           | 56.5           | 46.7           | 52.4           | 56.0           | 17.3                 |
| Nuclear                                                           | 77.6           | 77.7           | 75.7           | 74.0           | 73.1           | 73.3           | 72.9           | 65.2           | 68.5           | 56.4           | 17.4                 |
| Hydro                                                             | 58.0           | 56.9           | 56.5           | 57.7           | 52.0           | 56.8           | 55.6           | 58.6           | 57.4           | 50.6           | 15.6                 |
| Biomass                                                           | 15.6           | 16.6           | 17.8           | 18.2           | 18.6           | 19.2           | 19.9           | 20.4           | 21.4           | 21.1           | 6.5                  |
| Wind                                                              | 21.3           | 22.8           | 27.3           | 27.7           | 32.9           | 34.6           | 39.6           | 43.8           | 42.7           | 47.2           | 14.6                 |
| Solar                                                             | 7.5            | 8.5            | 9.4            | 9.8            | 10.7           | 11.7           | 12.7           | 14.8           | 16.6           | 20.7           | 6.4                  |
| Other renewables                                                  | 1.7            | 1.9            | 2.1            | 2.3            | 2.4            | 2.5            | 2.6            | 2.7            | 2.6            | 2.6            | 0.8                  |
| <b>Total final consumption, by sector</b>                         | <b>1,314.3</b> | <b>1,265.8</b> | <b>1,293.5</b> | <b>1,318.3</b> | <b>1,342.5</b> | <b>1,337.1</b> | <b>1,328.5</b> | <b>1,262.8</b> | <b>1,340.1</b> | <b>1,282.7</b> | <b>100.0</b>         |
| Industry                                                          | 323.2          | 319.5          | 320.8          | 322.9          | 333.0          | 334.6          | 327.7          | 316.7          | 334.8          | 310.2          | 24.2                 |
| Transport                                                         | 340.7          | 346.3          | 353.8          | 363.9          | 371.0          | 372.5          | 375.4          | 327.4          | 358.7          | 368.2          | 28.7                 |
| Residential/Commercial                                            | 507.8          | 457.4          | 477.9          | 488.1          | 490.2          | 483.6          | 479.4          | 472.2          | 497.5          | 466.8          | 36.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>521.3</b>   | <b>516.8</b>   | <b>526.1</b>   | <b>535.2</b>   | <b>546.3</b>   | <b>539.6</b>   | <b>538.4</b>   | <b>492.4</b>   | <b>519.9</b>   | <b>521.7</b>   | <b>100.0</b>         |
| Industry                                                          | 30.0           | 28.8           | 30.0           | 27.4           | 30.2           | 31.8           | 29.9           | 30.0           | 29.7           | 30.3           | 5.8                  |
| Transport                                                         | 319.7          | 324.4          | 331.9          | 341.8          | 347.4          | 347.0          | 348.5          | 301.0          | 330.5          | 339.5          | 65.1                 |
| Residential/Commercial                                            | 60.3           | 53.2           | 54.4           | 54.5           | 53.9           | 47.9           | 48.0           | 48.1           | 43.9           | 43.8           | 8.4                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>288.2</b>   | <b>258.9</b>   | <b>268.7</b>   | <b>277.5</b>   | <b>284.0</b>   | <b>283.4</b>   | <b>281.5</b>   | <b>276.0</b>   | <b>300.1</b>   | <b>255.2</b>   | <b>100.0</b>         |
| Industry                                                          | 95.0           | 92.7           | 91.1           | 93.0           | 97.5           | 96.3           | 94.9           | 92.3           | 98.9           | 82.7           | 32.4                 |
| Transport                                                         | 1.6            | 1.7            | 1.8            | 1.8            | 1.8            | 1.8            | 2.0            | 1.9            | 2.5            | 2.2            | 0.9                  |
| Residential/Commercial                                            | 172.0          | 144.5          | 156.8          | 163.4          | 164.3          | 165.0          | 163.7          | 161.5          | 178.6          | 154.1          | 60.4                 |
| <b>Refined products consumption</b>                               | <b>518.6</b>   | <b>514.1</b>   | <b>523.9</b>   | <b>532.9</b>   | <b>544.1</b>   | <b>537.8</b>   | <b>536.9</b>   | <b>490.7</b>   | <b>518.4</b>   | <b>520.1</b>   | <b>100.0</b>         |
| Gasoline                                                          | 87.2           | 86.5           | 84.8           | 85.1           | 85.2           | 85.1           | 86.6           | 74.0           | 81.2           | 85.9           | 16.5                 |
| Diesel                                                            | 291.9          | 289.4          | 298.9          | 306.2          | 311.8          | 308.7          | 307.9          | 280.5          | 297.0          | 296.1          | 56.9                 |
| Heating Oil                                                       | 8.9            | 8.0            | 8.2            | 7.0            | 6.8            | 6.4            | 5.8            | 4.9            | 4.8            | 5.5            | 1.1                  |
| Aviation Jet                                                      | 7.8            | 8.5            | 8.8            | 9.2            | 9.3            | 9.5            | 9.7            | 5.0            | 6.7            | 10.0           | 1.9                  |
| LPG                                                               | 33.9           | 34.8           | 36.0           | 36.1           | 36.5           | 37.4           | 37.8           | 34.4           | 34.5           | 33.9           | 6.5                  |
| <b>Imports</b>                                                    | <b>1,341.1</b> | <b>1,307.2</b> | <b>1,378.2</b> | <b>1,404.5</b> | <b>1,439.8</b> | <b>1,424.4</b> | <b>1,446.8</b> | <b>1,282.6</b> | <b>1,340.2</b> | <b>1,398.4</b> | <b>100.0</b>         |
| Oil                                                               | 972.9          | 962.8          | 1,023.5        | 1,032.2        | 1,055.2        | 1,040.0        | 1,031.1        | 901.3          | 931.9          | 987.8          | 70.6                 |
| Gas                                                               | 368.2          | 344.4          | 354.7          | 372.3          | 384.6          | 384.4          | 415.8          | 381.3          | 408.3          | 410.6          | 29.4                 |
| Gasoline                                                          | 29.2           | 28.7           | 31.3           | 32.3           | 31.8           | 28.9           | 30.2           | 26.8           | 29.0           | 30.2           | 2.2                  |
| Diesel                                                            | 145.9          | 141.4          | 154.1          | 164.0          | 162.4          | 155.3          | 156.8          | 144.7          | 146.6          | 148.0          | 10.6                 |
| Heating Oil                                                       | 67.2           | 67.9           | 70.6           | 68.4           | 52.0           | 51.3           | 46.7           | 49.3           | 56.3           | 54.9           | 3.9                  |
| Aviation Jet                                                      | 33.9           | 33.0           | 34.5           | 37.0           | 38.3           | 40.9           | 41.9           | 25.3           | 25.5           | 35.6           | 2.5                  |
| LPG                                                               | 23.4           | 25.6           | 27.6           | 28.3           | 27.8           | 29.0           | 28.5           | 26.2           | 26.6           | 28.2           | 2.0                  |
| <b>Exports</b>                                                    | <b>626.8</b>   | <b>617.5</b>   | <b>662.1</b>   | <b>670.0</b>   | <b>663.9</b>   | <b>644.5</b>   | <b>625.5</b>   | <b>587.7</b>   | <b>612.4</b>   | <b>632.9</b>   | <b>100.0</b>         |
| Oil                                                               | 462.8          | 459.0          | 501.4          | 512.5          | 521.1          | 508.7          | 488.7          | 458.9          | 483.5          | 477.5          | 75.4                 |
| Gas                                                               | 164.0          | 158.5          | 160.6          | 157.6          | 142.8          | 135.8          | 136.8          | 128.8          | 128.9          | 155.4          | 24.6                 |
| Gasoline                                                          | 79.7           | 79.1           | 91.0           | 91.8           | 94.2           | 93.4           | 93.6           | 78.9           | 87.4           | 89.3           | 14.1                 |
| Diesel                                                            | 104.2          | 102.2          | 109.9          | 115.4          | 118.2          | 106.1          | 104.8          | 100.7          | 107.2          | 102.5          | 16.2                 |
| Heating Oil                                                       | 73.4           | 75.4           | 83.8           | 80.2           | 63.0           | 58.4           | 50.1           | 52.9           | 61.6           | 59.3           | 9.4                  |
| Aviation Jet                                                      | 17.9           | 14.8           | 15.1           | 16.3           | 17.5           | 19.6           | 20.1           | 14.0           | 14.1           | 16.8           | 2.7                  |
| LPG                                                               | 8.5            | 8.0            | 9.7            | 10.1           | 10.2           | 9.6            | 9.5            | 8.5            | 9.6            | 9.8            | 1.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>3,946.2</b> | <b>3,777.5</b> | <b>3,833.3</b> | <b>3,850.3</b> | <b>3,903.9</b> | <b>3,821.5</b> | <b>3,656.4</b> | <b>3,349.3</b> | <b>3,589.8</b> | <b>3,533.6</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>180.6</b>   | <b>169.3</b>   | <b>167.2</b>   | <b>164.3</b>   | <b>161.4</b>   | <b>154.5</b>   | <b>145.2</b>   | <b>140.6</b>   | <b>142.0</b>   | <b>134.6</b>   | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>55.2</b>    | <b>51.9</b>    | <b>51.7</b>    | <b>51.6</b>    | <b>50.8</b>    | <b>49.6</b>    | <b>48.4</b>    | <b>48.5</b>    | <b>48.6</b>    | <b>45.0</b>    | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>84.3</b>    | <b>79.7</b>    | <b>78.7</b>    | <b>77.9</b>    | <b>76.9</b>    | <b>74.6</b>    | <b>72.1</b>    | <b>71.6</b>    | <b>70.6</b>    | <b>65.4</b>    | -                    |

\*Heat is included

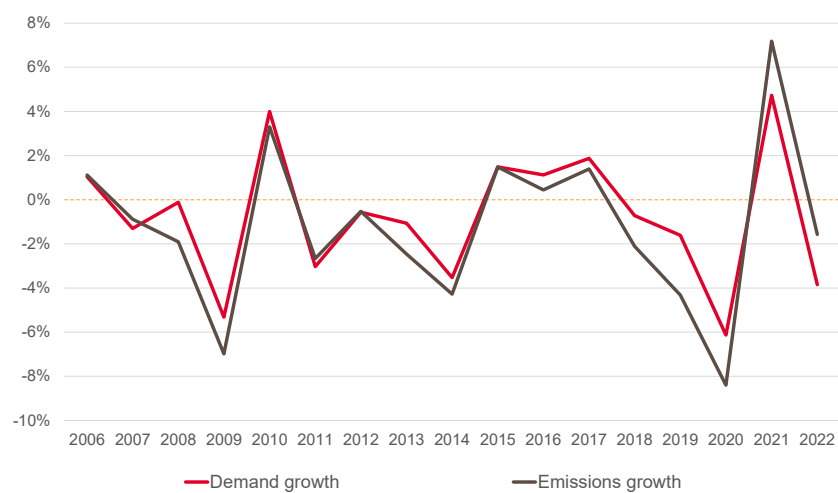
Primary energy demand mix



Electricity generation by source



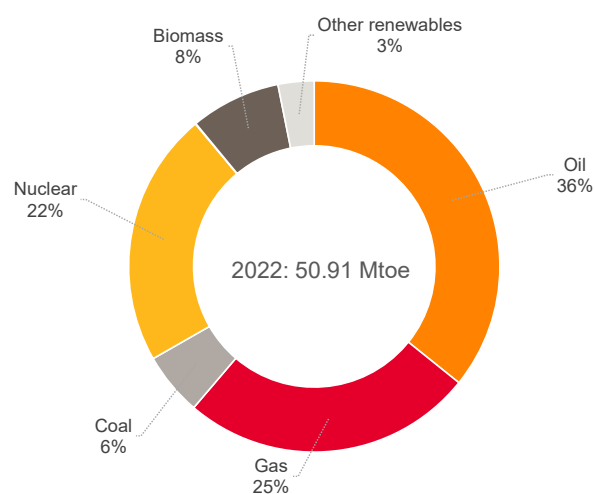
Primary energy demand and CO<sub>2</sub> emissions growth



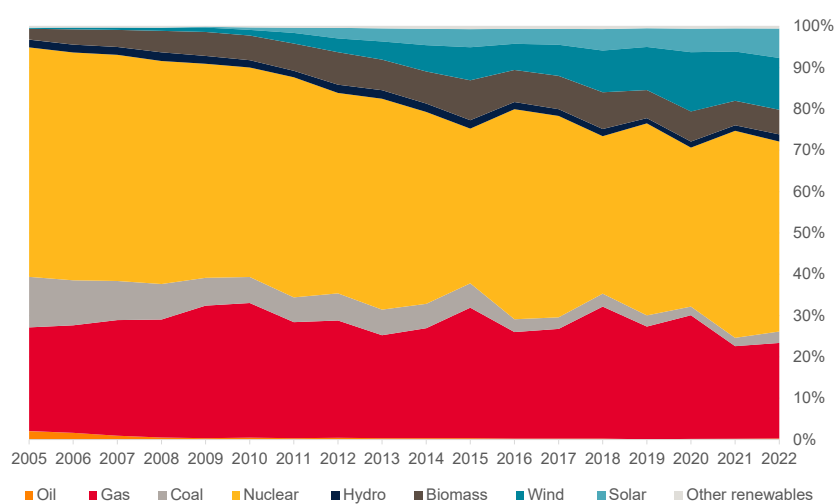
| Belgium<br>(Million toe)                                          | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>55.8</b>  | <b>52.7</b>  | <b>52.5</b>  | <b>55.5</b>  | <b>55.3</b>  | <b>53.3</b>  | <b>54.9</b>  | <b>50.6</b>  | <b>55.8</b>  | <b>50.9</b>  | <b>100.0</b>         |
| Oil                                                               | 21.3         | 22.0         | 22.0         | 21.4         | 21.2         | 21.2         | 20.3         | 18.5         | 19.8         | 18.4         | 36.0                 |
| Gas                                                               | 14.5         | 12.6         | 13.9         | 14.2         | 14.5         | 15.0         | 15.2         | 15.1         | 15.2         | 13.1         | 25.7                 |
| Coal                                                              | 3.5          | 3.4          | 3.4          | 3.1          | 3.1          | 3.0          | 3.0          | 2.3          | 2.6          | 2.8          | 5.5                  |
| Nuclear                                                           | 11.1         | 8.8          | 6.8          | 11.3         | 11.0         | 7.5          | 11.3         | 9.0          | 13.1         | 11.4         | 22.4                 |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 3.6          | 3.4          | 3.6          | 3.8          | 3.8          | 3.8          | 3.7          | 3.8          | 4.0          | 4.0          | 7.9                  |
| Other renewables                                                  | 0.5          | 0.6          | 0.7          | 0.7          | 0.8          | 1.0          | 1.2          | 1.5          | 1.5          | 1.6          | 3.2                  |
| Electricity balance of trade*                                     | 1.1          | 1.8          | 2.0          | 0.8          | 0.8          | 1.8          | 0.1          | 0.2          | -0.4         | -0.4         | -0.8                 |
| <b>Total final consumption, by source</b>                         | <b>42.8</b>  | <b>40.9</b>  | <b>41.9</b>  | <b>42.3</b>  | <b>41.8</b>  | <b>42.3</b>  | <b>41.1</b>  | <b>38.9</b>  | <b>41.6</b>  | <b>38.2</b>  | <b>100.0</b>         |
| Oil                                                               | 20.3         | 20.2         | 20.6         | 20.2         | 19.5         | 19.9         | 18.9         | 17.5         | 18.7         | 17.7         | 46.4                 |
| Gas                                                               | 10.7         | 9.2          | 9.9          | 10.2         | 10.5         | 10.5         | 10.4         | 10.2         | 11.1         | 9.2          | 24.0                 |
| Coal                                                              | 2.2          | 2.2          | 2.2          | 2.3          | 2.3          | 2.3          | 2.3          | 1.8          | 2.0          | 1.8          | 4.6                  |
| Electricity                                                       | 7.1          | 7.0          | 7.0          | 7.1          | 7.1          | 7.1          | 7.0          | 6.8          | 7.0          | 6.6          | 17.2                 |
| Heat                                                              | 0.6          | 0.5          | 0.5          | 0.5          | 0.4          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 1.3                  |
| Biomass                                                           | 2.0          | 1.8          | 1.8          | 2.0          | 2.0          | 2.0          | 2.0          | 2.1          | 2.4          | 2.5          | 6.5                  |
| <b>Electricity generation, by source</b>                          | <b>7.2</b>   | <b>6.2</b>   | <b>6.0</b>   | <b>7.4</b>   | <b>7.4</b>   | <b>6.5</b>   | <b>8.1</b>   | <b>7.7</b>   | <b>8.6</b>   | <b>8.2</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Gas                                                               | 1.8          | 1.7          | 1.9          | 1.9          | 2.0          | 2.1          | 2.2          | 2.3          | 1.9          | 1.9          | 23.1                 |
| Coal                                                              | 0.4          | 0.4          | 0.4          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 2.8                  |
| Nuclear                                                           | 3.7          | 2.9          | 2.2          | 3.7          | 3.6          | 2.5          | 3.7          | 3.0          | 4.3          | 3.8          | 46.0                 |
| Hydro                                                             | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 1.7                  |
| Biomass                                                           | 0.5          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.5          | 0.6          | 0.5          | 0.5          | 5.9                  |
| Wind                                                              | 0.3          | 0.4          | 0.5          | 0.5          | 0.6          | 0.7          | 0.8          | 1.1          | 1.0          | 1.0          | 12.5                 |
| Solar                                                             | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.5          | 0.6          | 7.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.5                  |
| <b>Total final consumption, by sector</b>                         | <b>42.8</b>  | <b>40.9</b>  | <b>41.9</b>  | <b>42.3</b>  | <b>41.8</b>  | <b>42.3</b>  | <b>41.1</b>  | <b>38.9</b>  | <b>41.6</b>  | <b>38.2</b>  | <b>100.0</b>         |
| Industry                                                          | 10.9         | 10.6         | 10.6         | 10.8         | 10.9         | 11.1         | 10.9         | 10.2         | 10.8         | 9.7          | 25.4                 |
| Transport                                                         | 8.4          | 8.6          | 9.0          | 9.0          | 8.9          | 8.9          | 8.9          | 7.8          | 8.6          | 8.6          | 22.5                 |
| Residential/Commercial                                            | 14.0         | 11.7         | 12.8         | 12.8         | 12.7         | 12.6         | 12.3         | 12.1         | 12.9         | 11.6         | 30.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>20.3</b>  | <b>20.2</b>  | <b>20.6</b>  | <b>20.2</b>  | <b>19.5</b>  | <b>19.9</b>  | <b>18.9</b>  | <b>17.5</b>  | <b>18.7</b>  | <b>17.7</b>  | <b>100.0</b>         |
| Industry                                                          | 0.6          | 0.6          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 2.6                  |
| Transport                                                         | 7.9          | 8.0          | 8.6          | 8.5          | 8.3          | 8.3          | 8.2          | 6.9          | 7.6          | 7.5          | 42.6                 |
| Residential/Commercial                                            | 3.8          | 3.0          | 3.6          | 3.3          | 3.3          | 3.2          | 3.0          | 3.2          | 3.0          | 2.9          | 16.5                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>10.7</b>  | <b>9.2</b>   | <b>9.9</b>   | <b>10.2</b>  | <b>10.5</b>  | <b>10.5</b>  | <b>10.4</b>  | <b>10.2</b>  | <b>11.1</b>  | <b>9.2</b>   | <b>100.0</b>         |
| Industry                                                          | 3.8          | 3.7          | 3.7          | 3.8          | 4.0          | 4.0          | 3.9          | 3.9          | 4.1          | 3.4          | 36.6                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.6                  |
| Residential/Commercial                                            | 5.7          | 4.5          | 4.9          | 5.2          | 5.1          | 5.1          | 5.1          | 4.8          | 5.6          | 4.6          | 50.1                 |
| <b>Refined products consumption</b>                               | <b>20.3</b>  | <b>20.2</b>  | <b>20.6</b>  | <b>20.2</b>  | <b>19.5</b>  | <b>19.9</b>  | <b>18.9</b>  | <b>17.5</b>  | <b>18.7</b>  | <b>17.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 1.2          | 1.3          | 1.4          | 1.5          | 1.5          | 1.7          | 1.9          | 1.5          | 1.9          | 2.1          | 11.8                 |
| Diesel                                                            | 10.9         | 10.1         | 11.0         | 10.5         | 10.3         | 10.1         | 9.6          | 8.8          | 8.9          | 8.5          | 48.1                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.2                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| LPG                                                               | 1.7          | 2.0          | 2.0          | 1.7          | 1.7          | 2.5          | 2.6          | 2.5          | 2.6          | 2.7          | 15.5                 |
| <b>Imports</b>                                                    | <b>72.2</b>  | <b>72.3</b>  | <b>75.2</b>  | <b>73.7</b>  | <b>78.1</b>  | <b>81.4</b>  | <b>82.4</b>  | <b>71.7</b>  | <b>76.2</b>  | <b>71.5</b>  | <b>100.0</b>         |
| Oil                                                               | 56.9         | 58.8         | 59.9         | 58.8         | 63.5         | 65.2         | 63.1         | 53.8         | 58.5         | 56.3         | 78.7                 |
| Gas                                                               | 15.3         | 13.5         | 15.3         | 14.9         | 14.6         | 16.2         | 19.2         | 17.9         | 17.7         | 15.2         | 21.3                 |
| Gasoline                                                          | 0.7          | 0.9          | 1.3          | 1.5          | 0.9          | 1.6          | 1.3          | 0.7          | 0.9          | 1.0          | 1.4                  |
| Diesel                                                            | 12.3         | 10.0         | 10.9         | 11.3         | 10.8         | 10.0         | 8.3          | 8.4          | 7.0          | 7.9          | 11.1                 |
| Heating Oil                                                       | 5.0          | 3.5          | 3.7          | 3.9          | 4.8          | 5.9          | 5.5          | 4.2          | 5.5          | 4.5          | 6.3                  |
| Aviation Jet                                                      | 1.6          | 1.0          | 0.8          | 0.5          | 1.5          | 1.7          | 1.5          | 1.0          | 1.1          | 0.9          | 1.3                  |
| LPG                                                               | 1.9          | 2.0          | 2.1          | 1.8          | 1.8          | 2.3          | 2.3          | 2.4          | 2.5          | 3.1          | 4.3                  |
| <b>Exports</b>                                                    | <b>28.3</b>  | <b>30.5</b>  | <b>30.9</b>  | <b>30.2</b>  | <b>34.3</b>  | <b>33.9</b>  | <b>36.2</b>  | <b>30.0</b>  | <b>33.3</b>  | <b>30.7</b>  | <b>100.0</b>         |
| Oil                                                               | 27.5         | 29.8         | 29.5         | 29.6         | 34.1         | 32.8         | 32.5         | 27.1         | 30.8         | 28.7         | 93.3                 |
| Gas                                                               | 0.8          | 0.7          | 1.4          | 0.6          | 0.3          | 1.1          | 3.7          | 2.9          | 2.5          | 2.1          | 6.7                  |
| Gasoline                                                          | 4.1          | 4.4          | 5.4          | 5.4          | 4.9          | 4.5          | 5.0          | 3.4          | 3.8          | 4.5          | 14.7                 |
| Diesel                                                            | 11.2         | 12.0         | 11.0         | 11.9         | 12.5         | 11.8         | 11.2         | 9.4          | 11.3         | 10.2         | 33.3                 |
| Heating Oil                                                       | 4.6          | 4.3          | 4.5          | 4.0          | 6.0          | 5.5          | 4.1          | 3.2          | 3.0          | 2.4          | 7.8                  |
| Aviation Jet                                                      | 1.7          | 1.4          | 0.9          | 0.8          | 1.8          | 1.6          | 2.2          | 1.1          | 0.6          | 0.7          | 2.4                  |
| LPG                                                               | 0.8          | 0.7          | 0.8          | 0.9          | 0.9          | 0.7          | 0.8          | 0.9          | 1.0          | 1.0          | 3.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>99.3</b>  | <b>92.3</b>  | <b>97.0</b>  | <b>95.8</b>  | <b>95.1</b>  | <b>96.0</b>  | <b>95.3</b>  | <b>87.4</b>  | <b>91.5</b>  | <b>86.7</b>  | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>197.6</b> | <b>180.8</b> | <b>186.3</b> | <b>181.6</b> | <b>177.5</b> | <b>175.8</b> | <b>171.0</b> | <b>166.2</b> | <b>163.8</b> | <b>150.5</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>68.0</b>  | <b>61.9</b>  | <b>63.5</b>  | <b>63.4</b>  | <b>62.1</b>  | <b>61.3</b>  | <b>59.3</b>  | <b>58.9</b>  | <b>59.4</b>  | <b>53.2</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>111.0</b> | <b>103.2</b> | <b>100.9</b> | <b>105.3</b> | <b>103.2</b> | <b>97.6</b>  | <b>98.5</b>  | <b>96.2</b>  | <b>99.9</b>  | <b>88.4</b>  | -                    |

\*Heat is included

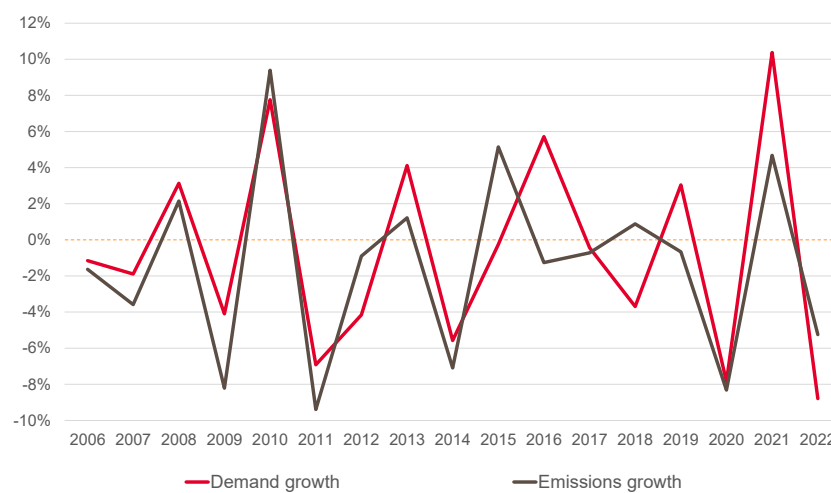
### Primary energy demand mix



### Electricity generation by source



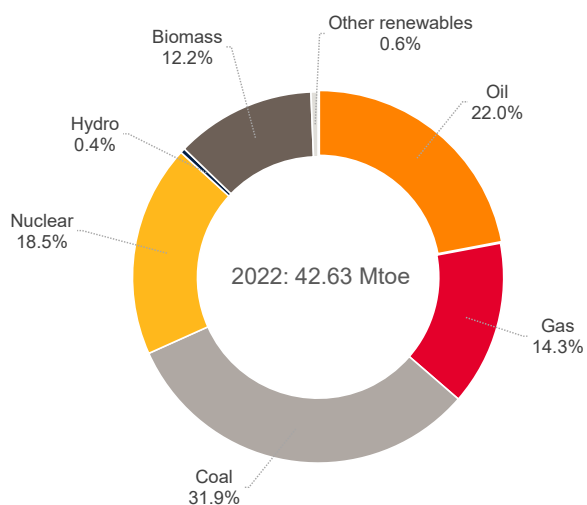
### Primary energy demand and CO<sub>2</sub> emissions growth



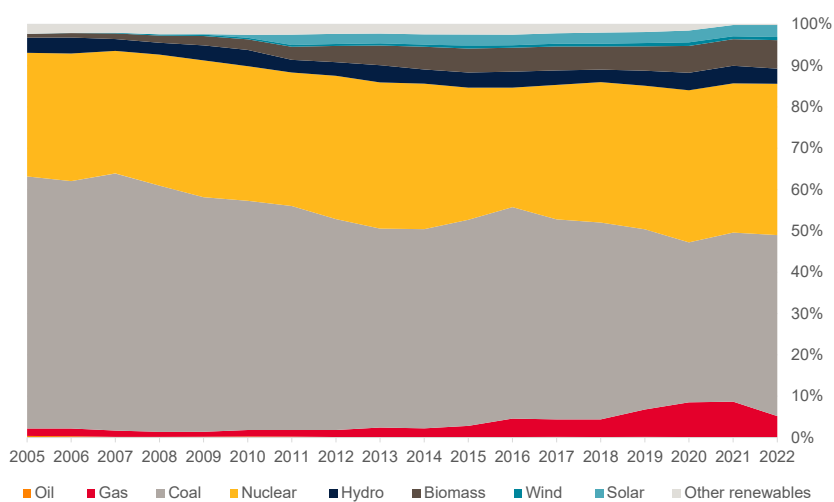
| <b>Czech Republic</b><br>(Million toe)                            | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>43.1</b>  | <b>41.8</b>  | <b>41.9</b>  | <b>41.3</b>  | <b>43.2</b>  | <b>43.3</b>  | <b>42.6</b>  | <b>40.2</b>  | <b>42.6</b>  | <b>42.6</b>  | <b>100.0</b>         |
| Oil                                                               | 8.3          | 8.8          | 8.6          | 8.0          | 9.3          | 9.4          | 9.5          | 8.5          | 9.4          | 9.6          | 22.6                 |
| Gas                                                               | 6.9          | 6.2          | 6.5          | 7.0          | 7.2          | 6.8          | 7.2          | 7.3          | 7.8          | 6.3          | 14.7                 |
| Coal                                                              | 17.0         | 15.9         | 16.3         | 16.4         | 15.7         | 15.7         | 14.2         | 12.2         | 12.8         | 14.0         | 32.8                 |
| Nuclear                                                           | 8.0          | 7.9          | 7.0          | 6.3          | 7.4          | 7.8          | 7.9          | 7.8          | 8.0          | 8.1          | 19.0                 |
| Hydro                                                             | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.4                  |
| Biomass                                                           | 3.8          | 4.0          | 4.1          | 4.2          | 4.3          | 4.3          | 4.6          | 4.8          | 5.1          | 5.3          | 12.5                 |
| Other renewables                                                  | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.6                  |
| Electricity balance of trade*                                     | -1.4         | -1.4         | -1.1         | -0.9         | -1.1         | -1.2         | -1.1         | -0.8         | -0.9         | -1.1         | -2.6                 |
| <b>Total final consumption, by source</b>                         | <b>26.6</b>  | <b>26.2</b>  | <b>26.4</b>  | <b>26.3</b>  | <b>28.1</b>  | <b>27.9</b>  | <b>27.8</b>  | <b>26.7</b>  | <b>28.8</b>  | <b>28.5</b>  | <b>100.0</b>         |
| Oil                                                               | 8.0          | 8.5          | 8.4          | 7.7          | 9.1          | 9.2          | 9.2          | 8.4          | 9.3          | 9.5          | 33.4                 |
| Gas                                                               | 5.4          | 4.9          | 5.1          | 5.4          | 5.6          | 5.2          | 5.3          | 5.2          | 5.6          | 4.9          | 17.3                 |
| Coal                                                              | 3.5          | 3.3          | 3.2          | 3.2          | 3.3          | 3.3          | 2.9          | 2.8          | 3.0          | 3.2          | 11.1                 |
| Electricity                                                       | 4.6          | 4.6          | 4.7          | 4.8          | 4.9          | 5.0          | 5.0          | 4.9          | 5.2          | 5.0          | 17.5                 |
| Heat                                                              | 2.3          | 2.0          | 2.0          | 2.1          | 2.2          | 2.1          | 2.0          | 2.0          | 2.2          | 2.1          | 7.4                  |
| Biomass                                                           | 2.7          | 2.9          | 2.9          | 3.0          | 3.0          | 3.1          | 3.3          | 3.4          | 3.7          | 3.8          | 13.4                 |
| <b>Electricity generation, by source</b>                          | <b>7.5</b>   | <b>7.4</b>   | <b>7.2</b>   | <b>7.2</b>   | <b>7.5</b>   | <b>7.6</b>   | <b>7.5</b>   | <b>7.0</b>   | <b>7.3</b>   | <b>7.3</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Gas                                                               | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.5          | 0.6          | 0.6          | 0.4          | 5.1                  |
| Coal                                                              | 3.6          | 3.6          | 3.6          | 3.7          | 3.6          | 3.6          | 3.3          | 2.7          | 3.0          | 3.2          | 43.8                 |
| Nuclear                                                           | 2.6          | 2.6          | 2.3          | 2.1          | 2.4          | 2.6          | 2.6          | 2.6          | 2.6          | 2.7          | 36.6                 |
| Hydro                                                             | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 3.6                  |
| Biomass                                                           | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.5          | 6.9                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.8                  |
| Solar                                                             | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 2.9                  |
| Other renewables                                                  | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.0          | 0.0          | 0.2                  |
| <b>Total final consumption, by sector</b>                         | <b>26.6</b>  | <b>26.2</b>  | <b>26.4</b>  | <b>26.3</b>  | <b>28.1</b>  | <b>27.9</b>  | <b>27.8</b>  | <b>26.7</b>  | <b>28.8</b>  | <b>28.5</b>  | <b>100.0</b>         |
| Industry                                                          | 7.4          | 7.3          | 7.4          | 7.4          | 7.6          | 7.7          | 7.5          | 7.4          | 7.9          | 7.7          | 27.2                 |
| Transport                                                         | 5.7          | 5.9          | 6.2          | 6.4          | 6.6          | 6.6          | 6.8          | 6.3          | 6.9          | 7.0          | 24.6                 |
| Residential/Commercial                                            | 10.3         | 9.4          | 9.7          | 10.1         | 10.3         | 10.0         | 10.0         | 10.0         | 10.6         | 10.2         | 36.0                 |
| <b>Oil final consumption, by sector</b>                           | <b>8.0</b>   | <b>8.5</b>   | <b>8.4</b>   | <b>7.7</b>   | <b>9.1</b>   | <b>9.2</b>   | <b>9.2</b>   | <b>8.4</b>   | <b>9.3</b>   | <b>9.5</b>   | <b>100.0</b>         |
| Industry                                                          | 0.2          | 0.3          | 0.3          | 0.1          | 0.1          | 0.2          | 0.1          | 0.2          | 0.2          | 0.2          | 2.3                  |
| Transport                                                         | 5.3          | 5.4          | 5.7          | 5.9          | 6.1          | 6.1          | 6.2          | 5.7          | 6.2          | 6.4          | 67.8                 |
| Residential/Commercial                                            | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.8                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>5.4</b>   | <b>4.9</b>   | <b>5.1</b>   | <b>5.4</b>   | <b>5.6</b>   | <b>5.2</b>   | <b>5.3</b>   | <b>5.2</b>   | <b>5.6</b>   | <b>4.9</b>   | <b>100.0</b>         |
| Industry                                                          | 2.1          | 1.9          | 2.0          | 2.0          | 2.1          | 2.0          | 2.0          | 2.0          | 2.2          | 2.0          | 40.1                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 1.5                  |
| Residential/Commercial                                            | 3.2          | 2.8          | 2.9          | 3.2          | 3.3          | 3.0          | 3.0          | 3.0          | 3.1          | 2.8          | 56.0                 |
| <b>Refined products consumption</b>                               | <b>8.0</b>   | <b>8.5</b>   | <b>8.4</b>   | <b>7.7</b>   | <b>9.1</b>   | <b>9.2</b>   | <b>9.2</b>   | <b>8.4</b>   | <b>9.3</b>   | <b>9.5</b>   | <b>100.0</b>         |
| Gasoline                                                          | 1.6          | 1.6          | 1.6          | 1.6          | 1.6          | 1.6          | 1.6          | 1.5          | 1.6          | 1.7          | 17.4                 |
| Diesel                                                            | 4.0          | 4.2          | 4.4          | 4.6          | 4.7          | 4.8          | 4.9          | 4.6          | 4.9          | 5.0          | 52.7                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.5                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 1.0                  |
| LPG                                                               | 0.3          | 0.4          | 0.3          | 0.3          | 0.5          | 0.5          | 0.5          | 0.4          | 0.4          | 0.4          | 4.5                  |
| <b>Imports</b>                                                    | <b>17.0</b>  | <b>16.8</b>  | <b>17.3</b>  | <b>17.0</b>  | <b>19.1</b>  | <b>18.6</b>  | <b>19.7</b>  | <b>16.8</b>  | <b>18.6</b>  | <b>18.7</b>  | <b>100.0</b>         |
| Oil                                                               | 10.0         | 10.9         | 11.2         | 10.3         | 11.8         | 12.0         | 11.9         | 10.5         | 11.4         | 11.6         | 61.9                 |
| Gas                                                               | 7.0          | 6.0          | 6.2          | 6.7          | 7.3          | 6.6          | 7.9          | 6.3          | 7.2          | 7.1          | 38.1                 |
| Gasoline                                                          | 0.6          | 0.5          | 0.5          | 0.8          | 0.6          | 0.7          | 0.6          | 0.6          | 0.6          | 0.6          | 3.3                  |
| Diesel                                                            | 1.7          | 1.8          | 2.2          | 2.9          | 2.1          | 2.4          | 2.2          | 2.6          | 2.7          | 2.4          | 12.7                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Aviation Jet                                                      | 0.2          | 0.1          | 0.1          | 0.3          | 0.2          | 0.3          | 0.3          | 0.1          | 0.1          | 0.2          | 0.9                  |
| LPG                                                               | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 1.0                  |
| <b>Exports</b>                                                    | <b>1.8</b>   | <b>2.0</b>   | <b>2.5</b>   | <b>2.2</b>   | <b>2.4</b>   | <b>2.2</b>   | <b>2.2</b>   | <b>1.8</b>   | <b>2.2</b>   | <b>1.8</b>   | <b>100.0</b>         |
| Oil                                                               | 1.8          | 2.0          | 2.5          | 2.2          | 2.4          | 2.2          | 2.2          | 1.8          | 2.2          | 1.8          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.3          | 0.5          | 0.6          | 0.4          | 0.6          | 0.6          | 0.6          | 0.4          | 0.6          | 0.5          | 27.5                 |
| Diesel                                                            | 0.7          | 0.9          | 1.1          | 0.8          | 0.9          | 0.8          | 0.8          | 0.8          | 1.0          | 0.7          | 41.3                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 3.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.1          | 0.1          | 0.1          | 6.6                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>102.5</b> | <b>99.9</b>  | <b>100.8</b> | <b>102.2</b> | <b>103.8</b> | <b>102.6</b> | <b>97.6</b>  | <b>89.1</b>  | <b>93.8</b>  | <b>96.8</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>309.1</b> | <b>294.6</b> | <b>281.9</b> | <b>278.7</b> | <b>269.3</b> | <b>257.9</b> | <b>238.1</b> | <b>230.7</b> | <b>235.2</b> | <b>236.9</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>72.2</b>  | <b>68.6</b>  | <b>66.9</b>  | <b>66.9</b>  | <b>65.3</b>  | <b>62.8</b>  | <b>60.7</b>  | <b>63.1</b>  | <b>65.3</b>  | <b>62.7</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>129.9</b> | <b>123.2</b> | <b>117.1</b> | <b>112.7</b> | <b>112.0</b> | <b>108.7</b> | <b>104.0</b> | <b>104.2</b> | <b>106.8</b> | <b>104.3</b> | <b>-</b>             |

\*Heat is included

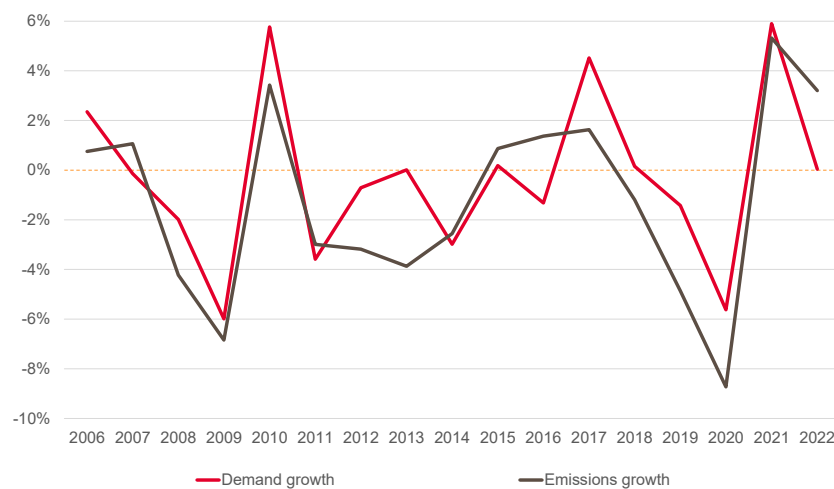
### Primary energy demand mix



### Electricity generation by source



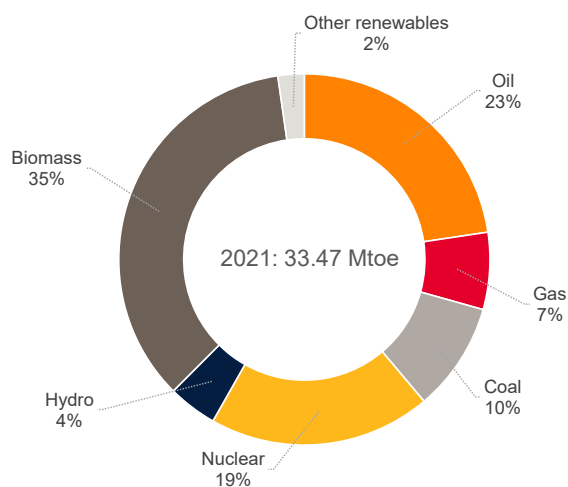
### Primary energy demand and CO<sub>2</sub> emissions growth



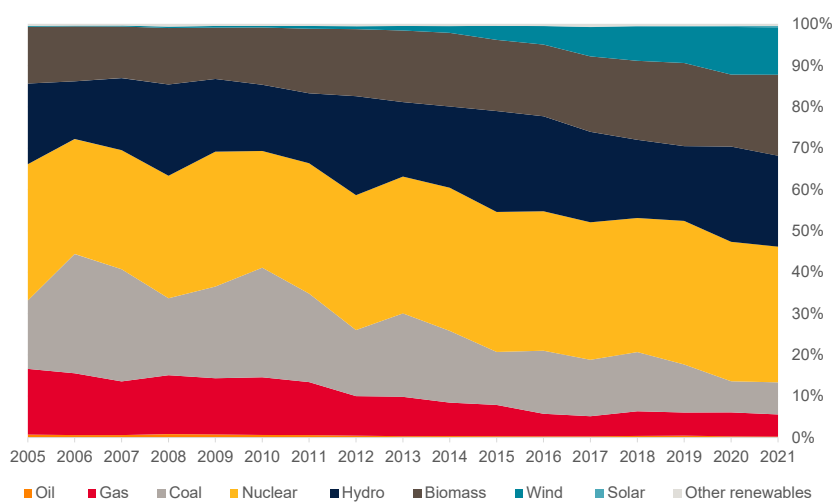
| Finland<br>(Million toe)                                          | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022        | Share in<br>2021 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>33.6</b>  | <b>34.3</b>  | <b>32.7</b>  | <b>33.9</b>  | <b>33.8</b>  | <b>34.3</b>  | <b>33.6</b>  | <b>32.0</b>  | <b>33.5</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 7.9          | 9.0          | 8.0          | 8.8          | 8.4          | 8.3          | 7.9          | 7.8          | 7.2          | n.d.        | 21.5                 |
| Gas                                                               | 2.9          | 2.5          | 2.2          | 2.1          | 1.9          | 2.2          | 2.1          | 2.1          | 2.1          | n.d.        | 6.4                  |
| Coal                                                              | 5.1          | 4.5          | 4.1          | 4.3          | 4.1          | 4.2          | 3.5          | 2.9          | 3.0          | n.d.        | 9.0                  |
| Nuclear                                                           | 6.2          | 6.1          | 6.1          | 6.0          | 5.9          | 5.9          | 6.2          | 6.1          | 6.1          | n.d.        | 18.4                 |
| Hydro                                                             | 1.1          | 1.2          | 1.4          | 1.4          | 1.3          | 1.1          | 1.1          | 1.4          | 1.4          | n.d.        | 4.1                  |
| Biomass                                                           | 8.9          | 9.3          | 9.1          | 9.3          | 9.8          | 10.1         | 10.3         | 9.6          | 11.2         | n.d.        | 33.4                 |
| Other renewables                                                  | 0.1          | 0.1          | 0.2          | 0.3          | 0.4          | 0.5          | 0.5          | 0.7          | 0.7          | n.d.        | 2.2                  |
| Electricity balance of trade*                                     | 1.5          | 1.7          | 1.5          | 1.8          | 1.9          | 1.9          | 1.9          | 1.5          | 1.7          | n.d.        | 5.1                  |
| <b>Total final consumption, by source</b>                         | <b>25.5</b>  | <b>25.4</b>  | <b>24.8</b>  | <b>25.9</b>  | <b>26.0</b>  | <b>26.3</b>  | <b>26.0</b>  | <b>24.6</b>  | <b>26.0</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 7.9          | 7.5          | 7.3          | 7.8          | 7.5          | 7.5          | 7.3          | 7.1          | 6.7          | n.d.        | 25.6                 |
| Gas                                                               | 0.7          | 0.7          | 0.6          | 0.6          | 0.7          | 0.6          | 0.7          | 0.7          | 0.8          | n.d.        | 3.1                  |
| Coal                                                              | 0.9          | 0.9          | 0.9          | 1.0          | 0.9          | 1.0          | 0.9          | 0.8          | 0.9          | n.d.        | 3.5                  |
| Electricity                                                       | 6.9          | 6.8          | 6.8          | 7.0          | 7.0          | 7.1          | 7.0          | 6.6          | 7.1          | n.d.        | 27.2                 |
| Heat                                                              | 4.1          | 4.0          | 3.8          | 4.1          | 4.0          | 4.0          | 3.9          | 3.6          | 4.1          | n.d.        | 15.9                 |
| Biomass                                                           | 5.0          | 5.5          | 5.4          | 5.5          | 5.9          | 6.1          | 6.2          | 5.8          | 6.4          | n.d.        | 24.7                 |
| <b>Electricity generation, by source</b>                          | <b>6.1</b>   | <b>5.9</b>   | <b>5.9</b>   | <b>5.9</b>   | <b>5.8</b>   | <b>6.0</b>   | <b>5.9</b>   | <b>5.9</b>   | <b>6.2</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.2                  |
| Gas                                                               | 0.6          | 0.5          | 0.4          | 0.3          | 0.3          | 0.4          | 0.3          | 0.3          | 0.3          | n.d.        | 5.3                  |
| Coal                                                              | 1.2          | 1.0          | 0.8          | 0.9          | 0.8          | 0.9          | 0.7          | 0.4          | 0.5          | n.d.        | 7.8                  |
| Nuclear                                                           | 2.0          | 2.0          | 2.0          | 2.0          | 1.9          | 2.0          | 2.1          | 2.0          | 2.0          | n.d.        | 32.9                 |
| Hydro                                                             | 1.1          | 1.2          | 1.4          | 1.4          | 1.3          | 1.1          | 1.1          | 1.4          | 1.4          | n.d.        | 22.0                 |
| Biomass                                                           | 1.1          | 1.0          | 1.0          | 1.0          | 1.1          | 1.2          | 1.2          | 1.0          | 1.2          | n.d.        | 19.6                 |
| Wind                                                              | 0.1          | 0.1          | 0.2          | 0.3          | 0.4          | 0.5          | 0.5          | 0.7          | 0.7          | n.d.        | 11.4                 |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.4                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.4                  |
| <b>Total final consumption, by sector</b>                         | <b>25.5</b>  | <b>25.4</b>  | <b>24.8</b>  | <b>25.9</b>  | <b>26.0</b>  | <b>26.3</b>  | <b>26.0</b>  | <b>24.6</b>  | <b>26.0</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 10.6         | 10.6         | 10.5         | 10.9         | 11.1         | 11.5         | 11.3         | 10.6         | 11.2         | n.d.        | 43.1                 |
| Transport                                                         | 4.3          | 4.2          | 4.2          | 4.3          | 4.3          | 4.3          | 4.3          | 4.0          | 4.1          | n.d.        | 16.0                 |
| Residential/Commercial                                            | 8.0          | 7.9          | 7.6          | 8.2          | 8.1          | 8.2          | 8.0          | 7.5          | 8.3          | n.d.        | 32.0                 |
| <b>Oil final consumption, by sector</b>                           | <b>7.9</b>   | <b>7.5</b>   | <b>7.3</b>   | <b>7.8</b>   | <b>7.5</b>   | <b>7.5</b>   | <b>7.3</b>   | <b>7.1</b>   | <b>6.7</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.2          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.0          | 0.9          | 0.9          | n.d.        | 14.1                 |
| Transport                                                         | 4.0          | 3.7          | 3.7          | 4.1          | 3.8          | 3.9          | 3.8          | 3.5          | 3.3          | n.d.        | 50.1                 |
| Residential/Commercial                                            | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.5          | 0.5          | 0.4          | 0.5          | n.d.        | 7.6                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>0.7</b>   | <b>0.7</b>   | <b>0.6</b>   | <b>0.6</b>   | <b>0.7</b>   | <b>0.6</b>   | <b>0.7</b>   | <b>0.7</b>   | <b>0.8</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 0.6          | 0.6          | 0.6          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.7          | n.d.        | 84.5                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 2.5                  |
| Residential/Commercial                                            | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | n.d.        | 7.0                  |
| <b>Refined products consumption</b>                               | <b>7.9</b>   | <b>7.5</b>   | <b>7.3</b>   | <b>7.8</b>   | <b>7.5</b>   | <b>7.5</b>   | <b>7.3</b>   | <b>7.1</b>   | <b>6.7</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Gasoline                                                          | 1.5          | 1.4          | 1.4          | 1.4          | 1.4          | 1.4          | 1.3          | 1.2          | 1.2          | n.d.        | 18.6                 |
| Diesel                                                            | 4.0          | 3.7          | 3.6          | 4.0          | 3.9          | 3.9          | 3.8          | 3.7          | 3.4          | n.d.        | 51.5                 |
| Heating Oil                                                       | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | n.d.        | 2.6                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | n.d.        | 0.9                  |
| LPG                                                               | 1.1          | 1.2          | 1.1          | 1.1          | 1.1          | 1.1          | 1.2          | 1.2          | 1.1          | n.d.        | 16.7                 |
| <b>Imports</b>                                                    | <b>21.4</b>  | <b>20.6</b>  | <b>18.8</b>  | <b>20.5</b>  | <b>19.9</b>  | <b>20.2</b>  | <b>20.2</b>  | <b>19.4</b>  | <b>15.9</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 18.5         | 18.0         | 16.5         | 18.5         | 18.0         | 18.0         | 18.1         | 17.2         | 13.8         | n.d.        | 86.7                 |
| Gas                                                               | 2.9          | 2.5          | 2.2          | 2.1          | 1.9          | 2.2          | 2.1          | 2.1          | 2.1          | n.d.        | 13.3                 |
| Gasoline                                                          | 0.6          | 0.5          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | n.d.        | 3.9                  |
| Diesel                                                            | 3.2          | 2.2          | 1.8          | 2.0          | 1.8          | 1.6          | 1.6          | 2.0          | 1.6          | n.d.        | 9.9                  |
| Heating Oil                                                       | 0.8          | 1.2          | 1.1          | 1.2          | 0.9          | 0.4          | 0.6          | 0.4          | 0.6          | n.d.        | 3.9                  |
| Aviation Jet                                                      | 0.1          | 0.2          | 0.3          | 0.3          | 0.2          | 0.2          | 0.3          | 0.2          | 0.1          | n.d.        | 0.5                  |
| LPG                                                               | 0.8          | 0.9          | 0.9          | 0.8          | 0.8          | 0.9          | 0.9          | 0.9          | 1.0          | n.d.        | 6.1                  |
| <b>Exports</b>                                                    | <b>9.2</b>   | <b>8.7</b>   | <b>7.0</b>   | <b>9.2</b>   | <b>9.1</b>   | <b>9.0</b>   | <b>9.7</b>   | <b>8.9</b>   | <b>6.6</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 9.2          | 8.7          | 7.0          | 9.2          | 9.1          | 9.0          | 9.7          | 8.9          | 6.6          | n.d.        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Gasoline                                                          | 3.2          | 3.2          | 2.5          | 3.1          | 3.2          | 3.1          | 3.5          | 3.1          | 2.5          | n.d.        | 38.6                 |
| Diesel                                                            | 4.1          | 3.8          | 3.0          | 3.9          | 3.8          | 3.7          | 3.9          | 3.5          | 2.3          | n.d.        | 35.6                 |
| Heating Oil                                                       | 1.1          | 0.8          | 0.8          | 1.3          | 1.1          | 1.1          | 1.1          | 1.1          | 0.9          | n.d.        | 14.1                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>51.7</b>  | <b>47.6</b>  | <b>44.2</b>  | <b>47.6</b>  | <b>45.1</b>  | <b>46.3</b>  | <b>43.0</b>  | <b>38.3</b>  | <b>38.4</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>222.4</b> | <b>205.7</b> | <b>189.9</b> | <b>199.0</b> | <b>182.5</b> | <b>185.2</b> | <b>169.9</b> | <b>155.1</b> | <b>150.2</b> | <b>n.d.</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>102.8</b> | <b>102.7</b> | <b>100.3</b> | <b>102.0</b> | <b>99.3</b>  | <b>99.5</b>  | <b>97.1</b>  | <b>93.1</b>  | <b>96.1</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>144.7</b> | <b>148.2</b> | <b>140.3</b> | <b>141.7</b> | <b>136.7</b> | <b>137.2</b> | <b>132.7</b> | <b>129.4</b> | <b>130.9</b> | <b>n.d.</b> | <b>-</b>             |

\*Heat is included

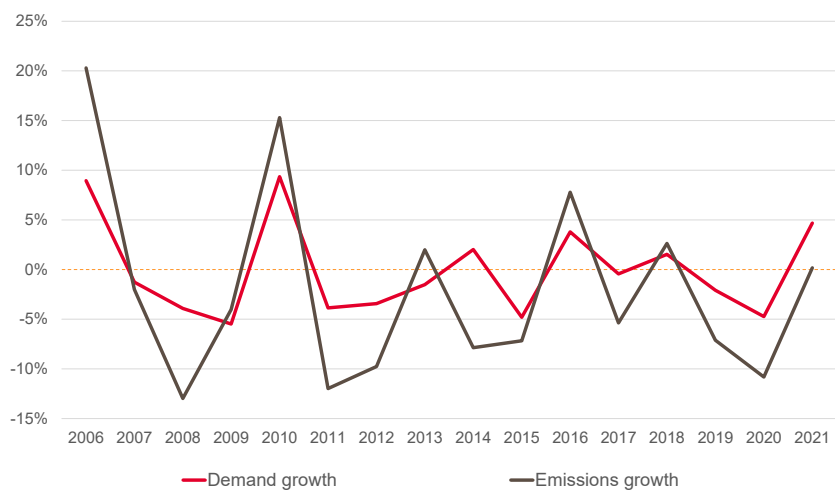
### Primary energy demand mix



### Electricity generation by source



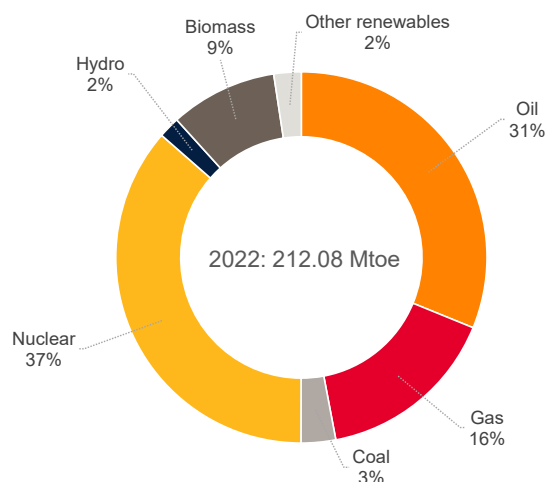
### Primary energy demand and CO<sub>2</sub> emissions growth



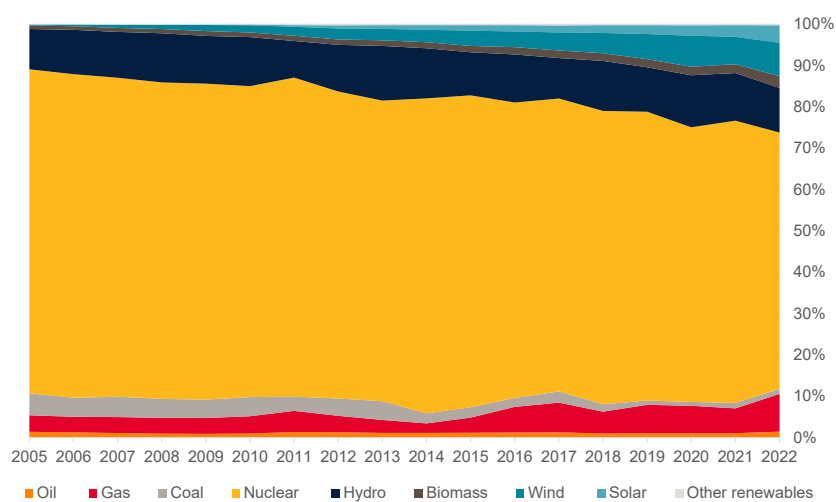
| France<br>(Million toe)                                           | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>258.5</b> | <b>248.5</b> | <b>252.4</b> | <b>247.6</b> | <b>247.4</b> | <b>245.8</b> | <b>242.3</b> | <b>217.8</b> | <b>233.9</b> | <b>212.1</b> | <b>100.0</b>         |
| Oil                                                               | 75.3         | 74.7         | 75.4         | 72.9         | 73.4         | 70.5         | 71.0         | 62.0         | 66.0         | 65.5         | 30.9                 |
| Gas                                                               | 38.8         | 32.6         | 35.0         | 38.3         | 38.5         | 36.8         | 37.5         | 34.9         | 37.0         | 33.3         | 15.7                 |
| Coal                                                              | 13.1         | 9.7          | 9.3          | 9.1          | 9.9          | 9.1          | 7.3          | 5.3          | 7.1          | 6.3          | 3.0                  |
| Nuclear                                                           | 110.4        | 113.7        | 114.0        | 105.1        | 103.8        | 107.6        | 104.0        | 92.2         | 98.9         | 76.5         | 36.1                 |
| Hydro                                                             | 6.2          | 5.5          | 4.8          | 5.2          | 4.3          | 5.6          | 4.9          | 5.4          | 5.1          | 3.9          | 1.8                  |
| Biomass                                                           | 16.7         | 15.6         | 16.4         | 17.5         | 17.5         | 17.6         | 17.8         | 16.7         | 18.5         | 19.6         | 9.2                  |
| Other renewables                                                  | 1.8          | 2.0          | 2.5          | 2.6          | 2.9          | 3.4          | 4.0          | 4.6          | 4.5          | 5.0          | 2.4                  |
| Electricity balance of trade*                                     | -3.7         | -5.3         | -5.0         | -3.1         | -2.9         | -4.8         | -4.4         | -3.3         | -3.3         | 2.0          | 0.9                  |
| <b>Total final consumption, by source</b>                         | <b>163.5</b> | <b>153.4</b> | <b>155.4</b> | <b>157.2</b> | <b>156.9</b> | <b>153.3</b> | <b>151.7</b> | <b>139.1</b> | <b>151.1</b> | <b>142.7</b> | <b>100.0</b>         |
| Oil                                                               | 70.1         | 69.0         | 69.0         | 67.6         | 68.3         | 65.8         | 65.5         | 58.5         | 63.2         | 61.7         | 43.2                 |
| Gas                                                               | 34.3         | 29.0         | 29.8         | 31.2         | 30.4         | 30.1         | 29.4         | 27.4         | 30.3         | 24.7         | 17.3                 |
| Coal                                                              | 4.6          | 4.7          | 4.4          | 4.3          | 4.5          | 3.9          | 3.4          | 2.8          | 3.5          | 3.3          | 2.3                  |
| Electricity                                                       | 38.7         | 36.5         | 37.4         | 38.0         | 37.7         | 37.5         | 37.1         | 35.3         | 37.2         | 35.7         | 25.0                 |
| Heat                                                              | 3.4          | 3.0          | 3.3          | 3.7          | 3.8          | 3.8          | 3.9          | 3.8          | 4.4          | 4.5          | 3.1                  |
| Biomass                                                           | 12.5         | 11.2         | 11.6         | 12.4         | 12.2         | 12.2         | 12.3         | 11.3         | 12.5         | 12.9         | 9.1                  |
| <b>Electricity generation, by source</b>                          | <b>50.1</b>  | <b>49.2</b>  | <b>49.8</b>  | <b>48.5</b>  | <b>48.3</b>  | <b>50.0</b>  | <b>49.1</b>  | <b>45.8</b>  | <b>47.8</b>  | <b>40.7</b>  | <b>100.0</b>         |
| Oil                                                               | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 1.4                  |
| Gas                                                               | 1.6          | 1.1          | 1.8          | 3.0          | 3.5          | 2.6          | 3.4          | 3.0          | 2.9          | 3.7          | 9.2                  |
| Coal                                                              | 2.3          | 1.2          | 1.3          | 1.1          | 1.3          | 0.9          | 0.5          | 0.4          | 0.6          | 0.5          | 1.2                  |
| Nuclear                                                           | 36.4         | 37.5         | 37.6         | 34.7         | 34.3         | 35.5         | 34.3         | 30.4         | 32.6         | 25.2         | 62.1                 |
| Hydro                                                             | 6.6          | 6.0          | 5.2          | 5.6          | 4.7          | 6.1          | 5.3          | 5.8          | 5.5          | 4.4          | 10.8                 |
| Biomass                                                           | 0.7          | 0.7          | 0.8          | 0.9          | 0.9          | 0.9          | 1.0          | 1.0          | 1.0          | 1.2          | 2.9                  |
| Wind                                                              | 1.4          | 1.5          | 1.8          | 1.8          | 2.1          | 2.5          | 3.0          | 3.4          | 3.2          | 3.3          | 8.0                  |
| Solar                                                             | 0.4          | 0.5          | 0.7          | 0.7          | 0.8          | 0.9          | 1.1          | 1.2          | 1.4          | 1.7          | 4.3                  |
| Other renewables                                                  | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2                  |
| <b>Total final consumption, by sector</b>                         | <b>163.5</b> | <b>153.4</b> | <b>155.4</b> | <b>157.2</b> | <b>156.9</b> | <b>153.3</b> | <b>151.7</b> | <b>139.1</b> | <b>151.1</b> | <b>142.7</b> | <b>100.0</b>         |
| Industry                                                          | 32.3         | 31.1         | 30.5         | 31.1         | 30.3         | 30.3         | 29.4         | 27.2         | 29.4         | 26.5         | 18.6                 |
| Transport                                                         | 45.2         | 45.5         | 45.9         | 46.0         | 46.3         | 45.4         | 45.5         | 38.4         | 43.2         | 44.6         | 31.2                 |
| Residential/Commercial                                            | 67.6         | 57.8         | 60.5         | 62.2         | 61.7         | 59.8         | 58.9         | 56.2         | 60.6         | 56.1         | 39.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>70.1</b>  | <b>69.0</b>  | <b>69.0</b>  | <b>67.6</b>  | <b>68.3</b>  | <b>65.8</b>  | <b>65.5</b>  | <b>58.5</b>  | <b>63.2</b>  | <b>61.7</b>  | <b>100.0</b>         |
| Industry                                                          | 2.9          | 2.8          | 2.8          | 2.7          | 2.4          | 2.5          | 2.5          | 2.4          | 2.5          | 2.2          | 3.6                  |
| Transport                                                         | 41.6         | 41.6         | 41.9         | 42.0         | 42.2         | 41.3         | 41.2         | 34.8         | 39.2         | 40.5         | 65.7                 |
| Residential/Commercial                                            | 9.6          | 8.1          | 8.3          | 7.7          | 7.8          | 7.1          | 6.7          | 6.6          | 6.3          | 5.9          | 9.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>34.3</b>  | <b>29.0</b>  | <b>29.8</b>  | <b>31.2</b>  | <b>30.4</b>  | <b>30.1</b>  | <b>29.4</b>  | <b>27.4</b>  | <b>30.3</b>  | <b>24.7</b>  | <b>100.0</b>         |
| Industry                                                          | 12.1         | 11.3         | 10.9         | 11.2         | 10.5         | 11.0         | 10.5         | 9.9          | 10.5         | 8.6          | 34.8                 |
| Transport                                                         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.3          | 0.2          | 0.9                  |
| Residential/Commercial                                            | 20.9         | 16.4         | 17.5         | 18.6         | 18.4         | 17.6         | 17.4         | 16.0         | 18.2         | 14.8         | 59.9                 |
| <b>Refined products consumption</b>                               | <b>70.1</b>  | <b>69.0</b>  | <b>69.0</b>  | <b>67.6</b>  | <b>68.3</b>  | <b>65.8</b>  | <b>65.5</b>  | <b>58.5</b>  | <b>63.2</b>  | <b>61.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 7.0          | 7.0          | 7.1          | 7.2          | 7.5          | 7.7          | 8.2          | 7.0          | 8.3          | 9.2          | 15.0                 |
| Diesel                                                            | 46.0         | 44.6         | 45.3         | 44.5         | 44.4         | 42.5         | 41.3         | 36.8         | 38.9         | 37.9         | 61.4                 |
| Heating Oil                                                       | 0.7          | 0.5          | 0.5          | 0.4          | 0.3          | 0.3          | 0.2          | 0.2          | 0.4          | 0.5          | 0.8                  |
| Aviation Jet                                                      | 1.9          | 1.9          | 1.8          | 1.7          | 1.8          | 1.9          | 1.9          | 1.3          | 1.6          | 2.3          | 3.7                  |
| LPG                                                               | 4.2          | 4.5          | 4.4          | 4.3          | 4.2          | 4.2          | 4.6          | 3.8          | 3.9          | 3.3          | 5.4                  |
| <b>Imports</b>                                                    | <b>144.1</b> | <b>138.1</b> | <b>140.7</b> | <b>138.6</b> | <b>142.1</b> | <b>139.0</b> | <b>142.7</b> | <b>117.9</b> | <b>121.1</b> | <b>132.7</b> | <b>100.0</b>         |
| Oil                                                               | 101.6        | 100.3        | 103.2        | 99.2         | 100.8        | 97.2         | 95.3         | 77.6         | 80.7         | 83.5         | 62.9                 |
| Gas                                                               | 42.5         | 37.8         | 37.5         | 39.3         | 41.2         | 41.8         | 47.4         | 40.3         | 40.4         | 49.2         | 37.1                 |
| Gasoline                                                          | 0.4          | 0.5          | 0.7          | 1.3          | 1.5          | 1.4          | 1.6          | 1.4          | 2.7          | 3.1          | 2.3                  |
| Diesel                                                            | 24.5         | 24.0         | 25.2         | 22.8         | 22.3         | 22.8         | 24.8         | 24.9         | 25.1         | 22.3         | 16.8                 |
| Heating Oil                                                       | 5.4          | 5.4          | 3.6          | 4.0          | 3.4          | 3.3          | 2.8          | 1.9          | 1.5          | 1.6          | 1.2                  |
| Aviation Jet                                                      | 4.4          | 4.5          | 4.8          | 4.7          | 4.5          | 5.9          | 6.2          | 4.1          | 5.1          | 5.7          | 4.3                  |
| LPG                                                               | 3.6          | 4.1          | 3.9          | 3.8          | 3.6          | 3.5          | 3.7          | 3.3          | 3.6          | 3.5          | 2.6                  |
| <b>Exports</b>                                                    | <b>23.7</b>  | <b>23.3</b>  | <b>24.4</b>  | <b>22.3</b>  | <b>24.2</b>  | <b>23.5</b>  | <b>25.7</b>  | <b>20.2</b>  | <b>17.5</b>  | <b>26.0</b>  | <b>100.0</b>         |
| Oil                                                               | 19.2         | 19.4         | 21.4         | 20.9         | 20.6         | 20.3         | 17.5         | 12.9         | 12.7         | 13.4         | 51.5                 |
| Gas                                                               | 4.5          | 4.0          | 3.0          | 1.4          | 3.5          | 3.2          | 8.2          | 7.3          | 4.8          | 12.6         | 48.5                 |
| Gasoline                                                          | 3.7          | 4.0          | 4.3          | 4.8          | 4.6          | 3.3          | 2.8          | 2.3          | 2.2          | 1.9          | 7.3                  |
| Diesel                                                            | 2.0          | 1.8          | 2.8          | 2.1          | 2.6          | 2.2          | 2.6          | 1.5          | 1.5          | 1.3          | 4.9                  |
| Heating Oil                                                       | 5.4          | 5.7          | 6.3          | 5.6          | 4.6          | 4.7          | 3.7          | 2.5          | 2.6          | 3.4          | 13.2                 |
| Aviation Jet                                                      | 1.0          | 1.1          | 1.2          | 1.0          | 1.2          | 2.0          | 1.8          | 1.5          | 1.7          | 1.3          | 5.0                  |
| LPG                                                               | 1.4          | 1.2          | 1.4          | 1.3          | 1.3          | 1.2          | 1.0          | 1.0          | 1.0          | 1.2          | 4.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>344.4</b> | <b>312.6</b> | <b>317.7</b> | <b>319.2</b> | <b>325.9</b> | <b>316.5</b> | <b>308.7</b> | <b>273.7</b> | <b>302.2</b> | <b>289.1</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>129.3</b> | <b>116.3</b> | <b>116.9</b> | <b>116.1</b> | <b>115.9</b> | <b>110.5</b> | <b>105.8</b> | <b>101.9</b> | <b>105.1</b> | <b>98.0</b>  | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>56.2</b>  | <b>51.7</b>  | <b>52.0</b>  | <b>52.3</b>  | <b>50.8</b>  | <b>48.9</b>  | <b>47.4</b>  | <b>47.1</b>  | <b>47.9</b>  | <b>44.6</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>97.1</b>  | <b>92.4</b>  | <b>92.8</b>  | <b>90.1</b>  | <b>88.0</b>  | <b>85.8</b>  | <b>83.1</b>  | <b>81.0</b>  | <b>81.4</b>  | <b>71.9</b>  | <b>-</b>             |

\*Heat is included

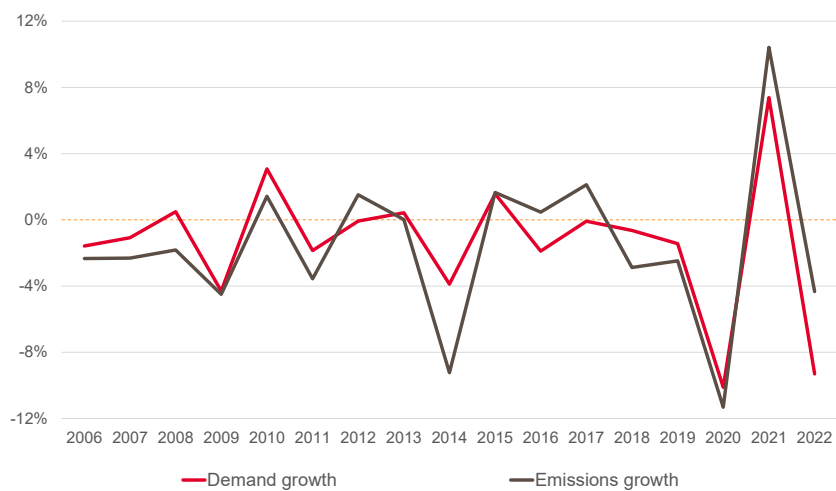
### Primary energy demand mix



### Electricity generation by source



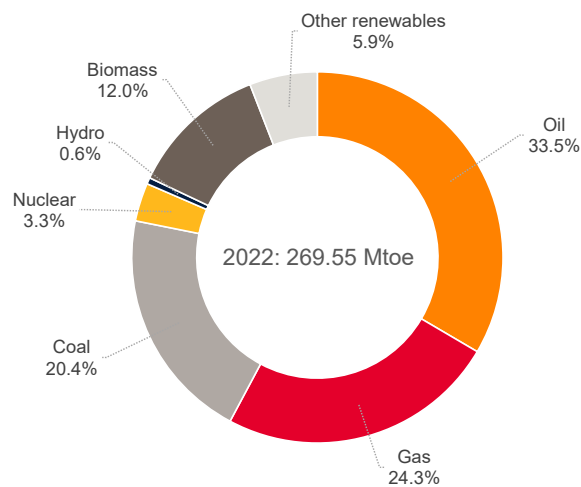
### Primary energy demand and CO<sub>2</sub> emissions growth



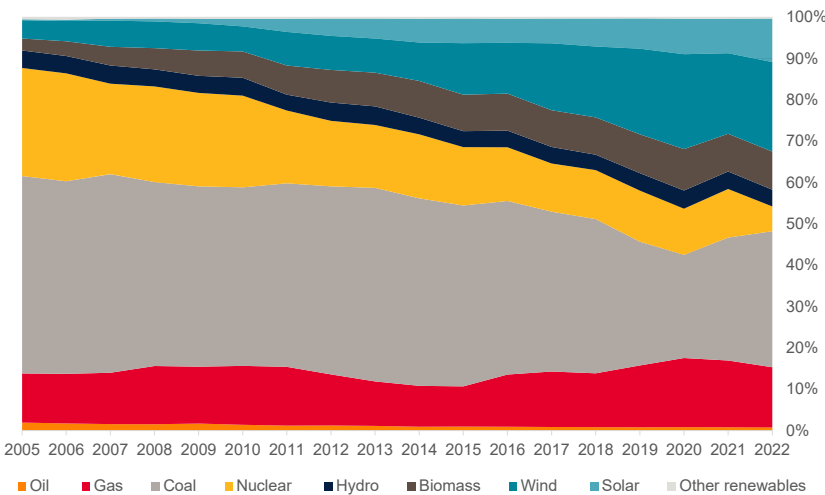
| Germany<br>(Million toe)                                          | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>321.7</b> | <b>307.7</b> | <b>309.1</b> | <b>310.4</b> | <b>311.4</b> | <b>303.6</b> | <b>296.9</b> | <b>278.8</b> | <b>288.2</b> | <b>269.6</b> | <b>100.0</b>         |
| Oil                                                               | 103.3        | 101.2        | 101.4        | 101.7        | 103.2        | 98.2         | 99.8         | 94.5         | 91.3         | 90.6         | 33.6                 |
| Gas                                                               | 73.1         | 63.4         | 65.2         | 70.3         | 75.3         | 73.5         | 75.6         | 74.6         | 78.1         | 65.8         | 24.4                 |
| Coal                                                              | 81.6         | 79.6         | 79.4         | 77.2         | 71.4         | 69.6         | 56.4         | 44.6         | 53.2         | 55.1         | 20.5                 |
| Nuclear                                                           | 25.4         | 25.3         | 23.9         | 22.1         | 19.9         | 19.8         | 19.6         | 16.8         | 18.0         | 9.0          | 3.4                  |
| Hydro                                                             | 2.0          | 1.7          | 1.6          | 1.8          | 1.7          | 1.5          | 1.7          | 1.6          | 1.7          | 1.5          | 0.6                  |
| Biomass                                                           | 31.1         | 30.3         | 30.5         | 30.5         | 30.8         | 30.8         | 30.9         | 31.5         | 32.2         | 32.5         | 12.1                 |
| Other renewables                                                  | 7.2          | 8.1          | 10.3         | 10.1         | 12.5         | 13.2         | 14.6         | 15.6         | 14.1         | 16.0         | 5.9                  |
| Electricity balance of trade*                                     | -1.9         | -1.9         | -3.1         | -3.3         | -3.5         | -3.0         | -1.7         | -0.4         | -0.4         | -1.1         | -0.4                 |
| <b>Total final consumption, by source</b>                         | <b>234.9</b> | <b>224.8</b> | <b>226.7</b> | <b>230.3</b> | <b>233.2</b> | <b>227.7</b> | <b>227.2</b> | <b>219.4</b> | <b>229.8</b> | <b>216.5</b> | <b>100.0</b>         |
| Oil                                                               | 94.2         | 92.9         | 91.6         | 92.0         | 93.5         | 88.7         | 90.4         | 85.8         | 87.9         | 87.4         | 40.4                 |
| Gas                                                               | 55.0         | 49.7         | 51.4         | 54.7         | 55.8         | 55.8         | 55.3         | 54.5         | 59.2         | 51.1         | 23.6                 |
| Coal                                                              | 13.2         | 13.2         | 14.1         | 13.7         | 13.7         | 13.3         | 12.4         | 11.6         | 12.4         | 10.9         | 5.0                  |
| Electricity                                                       | 44.9         | 44.0         | 44.3         | 44.5         | 44.6         | 43.8         | 42.7         | 41.5         | 42.5         | 40.7         | 18.8                 |
| Heat                                                              | 11.0         | 9.9          | 10.3         | 10.5         | 10.6         | 10.4         | 10.4         | 9.8          | 10.8         | 9.1          | 4.2                  |
| Biomass                                                           | 16.6         | 15.0         | 15.0         | 14.8         | 15.1         | 15.7         | 15.9         | 16.3         | 16.9         | 17.3         | 8.0                  |
| <b>Electricity generation, by source</b>                          | <b>54.9</b>  | <b>54.0</b>  | <b>55.8</b>  | <b>55.9</b>  | <b>56.2</b>  | <b>55.1</b>  | <b>52.2</b>  | <b>49.5</b>  | <b>50.6</b>  | <b>49.8</b>  | <b>100.0</b>         |
| Oil                                                               | 0.6          | 0.5          | 0.5          | 0.5          | 0.5          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.8                  |
| Gas                                                               | 5.9          | 5.4          | 5.4          | 7.1          | 7.5          | 7.2          | 7.8          | 8.3          | 8.2          | 7.2          | 14.5                 |
| Coal                                                              | 25.7         | 24.5         | 24.4         | 23.5         | 21.7         | 20.6         | 15.6         | 12.4         | 15.1         | 16.4         | 32.9                 |
| Nuclear                                                           | 8.4          | 8.4          | 7.9          | 7.3          | 6.6          | 6.5          | 6.5          | 5.5          | 5.9          | 3.0          | 6.0                  |
| Hydro                                                             | 2.5          | 2.2          | 2.1          | 2.2          | 2.2          | 2.1          | 2.2          | 2.2          | 2.1          | 2.0          | 4.1                  |
| Biomass                                                           | 4.5          | 4.8          | 4.9          | 5.0          | 5.0          | 5.0          | 4.9          | 5.0          | 4.6          | 4.6          | 9.3                  |
| Wind                                                              | 4.5          | 5.0          | 6.9          | 6.9          | 9.1          | 9.5          | 10.8         | 11.4         | 9.9          | 10.8         | 21.7                 |
| Solar                                                             | 2.7          | 3.1          | 3.3          | 3.3          | 3.4          | 3.7          | 3.8          | 4.3          | 4.2          | 5.2          | 10.5                 |
| Other renewables                                                  | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.2          | 0.2          | 0.2          | 0.3                  |
| <b>Total final consumption, by sector</b>                         | <b>234.9</b> | <b>224.8</b> | <b>226.7</b> | <b>230.3</b> | <b>233.2</b> | <b>227.7</b> | <b>227.2</b> | <b>219.4</b> | <b>229.8</b> | <b>216.5</b> | <b>100.0</b>         |
| Industry                                                          | 62.5         | 62.2         | 62.6         | 63.1         | 63.9         | 63.7         | 61.9         | 60.0         | 62.1         | 54.0         | 24.9                 |
| Transport                                                         | 54.4         | 55.7         | 55.4         | 56.7         | 57.4         | 55.4         | 56.0         | 51.2         | 52.5         | 53.3         | 24.6                 |
| Residential/Commercial                                            | 95.0         | 83.2         | 86.0         | 87.5         | 87.6         | 83.4         | 83.9         | 83.2         | 85.5         | 81.7         | 37.8                 |
| <b>Oil final consumption, by sector</b>                           | <b>94.2</b>  | <b>92.9</b>  | <b>91.6</b>  | <b>92.0</b>  | <b>93.5</b>  | <b>88.7</b>  | <b>90.4</b>  | <b>85.8</b>  | <b>87.9</b>  | <b>87.4</b>  | <b>100.0</b>         |
| Industry                                                          | 3.0          | 2.8          | 3.0          | 2.4          | 2.1          | 3.3          | 3.2          | 3.4          | 3.2          | 2.9          | 3.3                  |
| Transport                                                         | 50.4         | 51.5         | 51.5         | 52.8         | 53.4         | 51.5         | 52.1         | 46.5         | 48.3         | 49.1         | 56.2                 |
| Residential/Commercial                                            | 21.9         | 19.4         | 18.6         | 18.4         | 18.2         | 13.3         | 15.0         | 15.6         | 11.5         | 12.1         | 13.9                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>55.0</b>  | <b>49.7</b>  | <b>51.4</b>  | <b>54.7</b>  | <b>55.8</b>  | <b>55.8</b>  | <b>55.3</b>  | <b>54.5</b>  | <b>59.2</b>  | <b>51.1</b>  | <b>100.0</b>         |
| Industry                                                          | 19.6         | 19.2         | 19.2         | 20.0         | 21.2         | 19.6         | 19.5         | 19.6         | 20.1         | 16.7         | 32.6                 |
| Transport                                                         | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.4                  |
| Residential/Commercial                                            | 32.4         | 27.4         | 29.4         | 31.6         | 31.6         | 33.0         | 31.9         | 31.6         | 35.8         | 31.6         | 61.9                 |
| <b>Refined products consumption</b>                               | <b>94.2</b>  | <b>92.9</b>  | <b>91.6</b>  | <b>92.0</b>  | <b>93.5</b>  | <b>88.7</b>  | <b>90.4</b>  | <b>85.8</b>  | <b>87.9</b>  | <b>87.4</b>  | <b>100.0</b>         |
| Gasoline                                                          | 17.9         | 18.0         | 17.2         | 17.2         | 17.5         | 16.8         | 17.0         | 15.3         | 15.4         | 15.6         | 17.9                 |
| Diesel                                                            | 53.3         | 51.6         | 51.5         | 52.6         | 53.2         | 50.0         | 52.1         | 49.7         | 47.7         | 48.5         | 55.4                 |
| Heating Oil                                                       | 2.5          | 2.5          | 2.7          | 1.5          | 1.5          | 1.4          | 1.3          | 1.2          | 1.0          | 0.9          | 1.0                  |
| Aviation Jet                                                      | 0.7          | 0.7          | 0.7          | 0.8          | 0.7          | 0.6          | 0.7          | 0.3          | 0.2          | 0.4          | 0.4                  |
| LPG                                                               | 3.2          | 2.7          | 2.8          | 2.7          | 3.6          | 3.2          | 3.3          | 3.0          | 3.1          | 2.9          | 3.3                  |
| <b>Imports</b>                                                    | <b>194.0</b> | <b>185.4</b> | <b>189.4</b> | <b>194.5</b> | <b>202.8</b> | <b>198.1</b> | <b>205.8</b> | <b>185.8</b> | <b>190.0</b> | <b>194.8</b> | <b>100.0</b>         |
| Oil                                                               | 130.4        | 128.7        | 130.8        | 132.2        | 133.9        | 127.5        | 130.2        | 119.3        | 120.0        | 125.6        | 64.5                 |
| Gas                                                               | 63.5         | 56.7         | 58.7         | 62.3         | 68.8         | 70.5         | 75.7         | 66.5         | 70.0         | 69.2         | 35.5                 |
| Gasoline                                                          | 1.9          | 1.9          | 1.9          | 1.5          | 2.2          | 2.4          | 3.2          | 1.9          | 2.3          | 1.8          | 0.9                  |
| Diesel                                                            | 18.2         | 17.4         | 18.8         | 19.8         | 19.9         | 18.9         | 20.3         | 18.0         | 16.8         | 15.9         | 8.2                  |
| Heating Oil                                                       | 2.4          | 2.4          | 1.9          | 2.4          | 2.2          | 2.1          | 1.6          | 1.3          | 1.2          | 1.1          | 0.5                  |
| Aviation Jet                                                      | 5.4          | 4.9          | 5.1          | 5.1          | 6.1          | 6.7          | 6.9          | 3.1          | 4.1          | 6.5          | 3.3                  |
| LPG                                                               | 1.1          | 0.7          | 0.8          | 0.8          | 1.0          | 1.1          | 1.3          | 1.3          | 1.5          | 1.4          | 0.7                  |
| <b>Exports</b>                                                    | <b>20.1</b>  | <b>21.3</b>  | <b>22.4</b>  | <b>22.7</b>  | <b>23.3</b>  | <b>22.3</b>  | <b>21.8</b>  | <b>22.0</b>  | <b>25.3</b>  | <b>27.3</b>  | <b>100.0</b>         |
| Oil                                                               | 20.1         | 21.3         | 22.4         | 22.7         | 23.3         | 22.3         | 21.8         | 22.0         | 25.3         | 27.3         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 5.2          | 5.0          | 4.5          | 5.1          | 5.7          | 5.1          | 4.9          | 5.4          | 6.0          | 6.0          | 22.0                 |
| Diesel                                                            | 7.1          | 7.9          | 8.5          | 9.6          | 9.1          | 8.2          | 7.4          | 8.3          | 9.3          | 11.1         | 40.7                 |
| Heating Oil                                                       | 2.6          | 3.0          | 3.0          | 2.1          | 1.8          | 2.6          | 2.6          | 2.7          | 3.5          | 3.2          | 11.7                 |
| Aviation Jet                                                      | 1.2          | 0.9          | 1.2          | 0.9          | 1.3          | 1.4          | 1.4          | 0.7          | 1.0          | 1.7          | 6.3                  |
| LPG                                                               | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.2          | 0.3          | 0.2          | 0.3          | 0.3          | 1.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>787.4</b> | <b>751.8</b> | <b>751.6</b> | <b>761.3</b> | <b>743.1</b> | <b>713.5</b> | <b>667.6</b> | <b>612.7</b> | <b>651.6</b> | <b>636.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>210.0</b> | <b>196.2</b> | <b>193.3</b> | <b>191.5</b> | <b>182.0</b> | <b>172.9</b> | <b>160.1</b> | <b>154.0</b> | <b>159.1</b> | <b>152.7</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>56.9</b>  | <b>52.9</b>  | <b>52.8</b>  | <b>52.5</b>  | <b>51.5</b>  | <b>49.9</b>  | <b>49.2</b>  | <b>49.7</b>  | <b>49.8</b>  | <b>46.3</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>85.8</b>  | <b>80.3</b>  | <b>79.5</b>  | <b>78.1</b>  | <b>76.3</b>  | <b>73.6</b>  | <b>71.2</b>  | <b>70.0</b>  | <b>70.4</b>  | <b>64.7</b>  | <b>-</b>             |

\*Heat is included

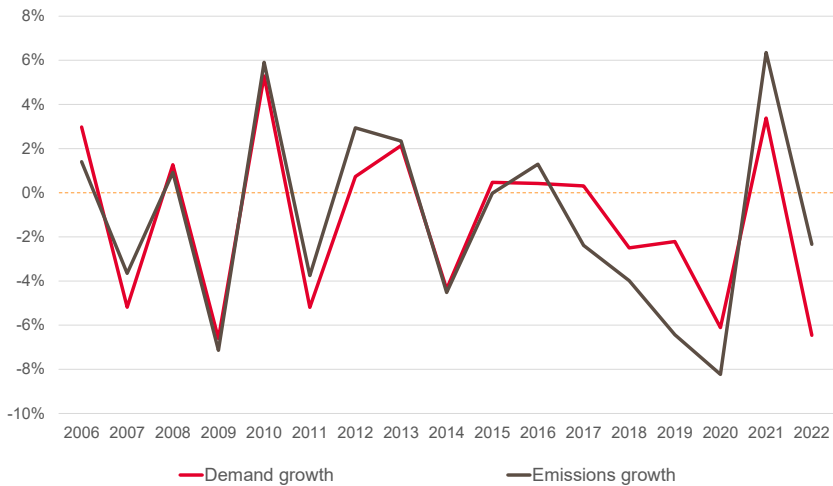
Primary energy demand mix



Electricity generation by source



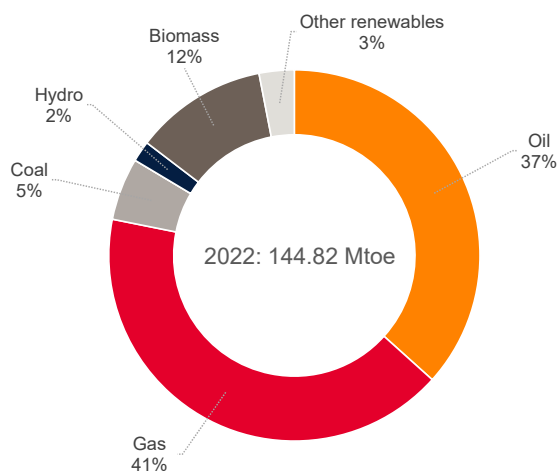
Primary energy demand and CO<sub>2</sub> emissions growth



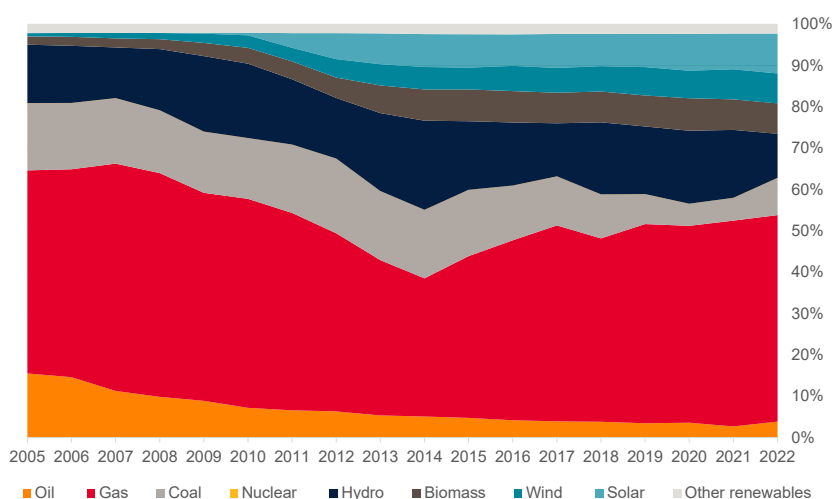
| Italy<br>(Million toe)                                            | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>155.9</b> | <b>147.2</b> | <b>153.0</b> | <b>151.2</b> | <b>153.5</b> | <b>150.6</b> | <b>149.0</b> | <b>137.7</b> | <b>149.8</b> | <b>144.8</b> | <b>100.0</b>         |
| Oil                                                               | 53.8         | 52.0         | 54.0         | 51.7         | 52.1         | 50.9         | 50.1         | 43.4         | 49.6         | 49.7         | 34.4                 |
| Gas                                                               | 57.4         | 50.7         | 55.3         | 58.1         | 61.5         | 59.5         | 60.9         | 58.3         | 62.4         | 56.2         | 38.8                 |
| Coal                                                              | 13.5         | 13.1         | 12.3         | 11.0         | 9.3          | 8.6          | 6.5          | 5.1          | 5.5          | 7.4          | 5.1                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 4.5          | 5.0          | 3.9          | 3.6          | 3.1          | 4.2          | 4.0          | 4.1          | 3.9          | 2.5          | 1.7                  |
| Biomass                                                           | 14.6         | 14.0         | 14.6         | 14.4         | 14.9         | 14.5         | 14.8         | 14.6         | 15.2         | 15.7         | 10.8                 |
| Other renewables                                                  | 3.1          | 3.2          | 3.2          | 3.4          | 3.6          | 3.5          | 3.8          | 3.8          | 4.0          | 4.1          | 2.9                  |
| Electricity balance of trade*                                     | 8.9          | 9.2          | 9.7          | 9.0          | 9.0          | 9.4          | 8.9          | 8.4          | 9.2          | 9.2          | 6.3                  |
| <b>Total final consumption, by source</b>                         | <b>121.7</b> | <b>117.4</b> | <b>119.6</b> | <b>118.9</b> | <b>119.6</b> | <b>119.5</b> | <b>118.3</b> | <b>107.9</b> | <b>117.4</b> | <b>113.9</b> | <b>100.0</b>         |
| Oil                                                               | 46.5         | 47.8         | 47.1         | 46.1         | 45.5         | 45.9         | 45.3         | 38.3         | 43.6         | 44.2         | 38.8                 |
| Gas                                                               | 35.5         | 31.2         | 33.4         | 33.7         | 34.4         | 34.0         | 33.5         | 32.3         | 34.8         | 29.8         | 26.1                 |
| Coal                                                              | 2.6          | 2.7          | 2.0          | 2.2          | 1.6          | 1.7          | 1.6          | 1.3          | 1.5          | 1.9          | 1.7                  |
| Electricity                                                       | 24.7         | 24.2         | 24.7         | 24.6         | 25.1         | 25.2         | 25.1         | 23.6         | 25.1         | 24.9         | 21.9                 |
| Heat                                                              | 4.0          | 4.0          | 4.2          | 4.3          | 4.5          | 4.4          | 4.5          | 4.2          | 3.5          | 3.6          | 3.1                  |
| Biomass                                                           | 8.5          | 7.4          | 8.3          | 8.0          | 8.6          | 8.3          | 8.3          | 8.1          | 8.9          | 9.5          | 8.3                  |
| <b>Electricity generation, by source</b>                          | <b>24.9</b>  | <b>24.1</b>  | <b>24.3</b>  | <b>24.9</b>  | <b>25.4</b>  | <b>24.9</b>  | <b>25.3</b>  | <b>24.1</b>  | <b>24.9</b>  | <b>24.5</b>  | <b>100.0</b>         |
| Oil                                                               | 1.3          | 1.2          | 1.2          | 1.0          | 1.0          | 0.9          | 0.9          | 0.9          | 0.7          | 0.9          | 3.8                  |
| Gas                                                               | 9.4          | 8.1          | 9.5          | 10.8         | 12.1         | 11.1         | 12.2         | 11.5         | 12.4         | 12.3         | 50.0                 |
| Coal                                                              | 4.2          | 4.0          | 3.9          | 3.3          | 3.0          | 2.7          | 1.8          | 1.3          | 1.4          | 2.2          | 9.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 4.7          | 5.2          | 4.0          | 3.8          | 3.3          | 4.3          | 4.1          | 4.3          | 4.1          | 2.6          | 10.7                 |
| Biomass                                                           | 1.7          | 1.8          | 1.9          | 1.9          | 1.9          | 1.9          | 1.9          | 1.9          | 1.8          | 1.8          | 7.4                  |
| Wind                                                              | 1.3          | 1.3          | 1.3          | 1.5          | 1.5          | 1.5          | 1.7          | 1.6          | 1.8          | 1.8          | 7.2                  |
| Solar                                                             | 1.9          | 1.9          | 2.0          | 1.9          | 2.1          | 1.9          | 2.0          | 2.1          | 2.2          | 2.4          | 9.6                  |
| Other renewables                                                  | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 2.2                  |
| <b>Total final consumption, by sector</b>                         | <b>121.7</b> | <b>117.4</b> | <b>119.6</b> | <b>118.9</b> | <b>119.6</b> | <b>119.5</b> | <b>118.3</b> | <b>107.9</b> | <b>117.4</b> | <b>113.9</b> | <b>100.0</b>         |
| Industry                                                          | 26.6         | 26.0         | 26.0         | 26.2         | 25.7         | 25.4         | 25.6         | 24.5         | 26.4         | 25.8         | 22.6                 |
| Transport                                                         | 35.9         | 37.2         | 36.3         | 35.9         | 34.5         | 35.6         | 35.8         | 28.9         | 35.1         | 36.3         | 31.8                 |
| Residential/Commercial                                            | 50.1         | 44.2         | 47.9         | 47.6         | 48.5         | 48.3         | 46.8         | 44.7         | 47.0         | 44.1         | 38.7                 |
| <b>Oil final consumption, by sector</b>                           | <b>46.5</b>  | <b>47.8</b>  | <b>47.1</b>  | <b>46.1</b>  | <b>45.5</b>  | <b>45.9</b>  | <b>45.3</b>  | <b>38.3</b>  | <b>43.6</b>  | <b>44.2</b>  | <b>100.0</b>         |
| Industry                                                          | 2.4          | 1.9          | 2.8          | 2.5          | 1.8          | 1.9          | 1.6          | 1.7          | 2.2          | 2.5          | 5.6                  |
| Transport                                                         | 32.9         | 34.4         | 33.3         | 33.0         | 31.7         | 32.5         | 32.6         | 26.0         | 31.6         | 33.1         | 74.9                 |
| Residential/Commercial                                            | 3.3          | 2.8          | 2.9          | 2.8          | 2.6          | 2.7          | 2.5          | 2.4          | 2.4          | 2.3          | 5.2                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>35.5</b>  | <b>31.2</b>  | <b>33.4</b>  | <b>33.7</b>  | <b>34.4</b>  | <b>34.0</b>  | <b>33.5</b>  | <b>32.3</b>  | <b>34.8</b>  | <b>29.8</b>  | <b>100.0</b>         |
| Industry                                                          | 8.7          | 8.5          | 8.3          | 8.4          | 8.9          | 8.6          | 8.5          | 8.1          | 8.9          | 7.6          | 25.5                 |
| Transport                                                         | 0.8          | 0.9          | 0.9          | 0.9          | 0.8          | 0.9          | 1.0          | 0.8          | 1.2          | 1.0          | 3.3                  |
| Residential/Commercial                                            | 25.3         | 21.2         | 23.5         | 23.6         | 23.9         | 23.7         | 23.2         | 22.6         | 23.9         | 20.5         | 68.8                 |
| <b>Refined products consumption</b>                               | <b>46.5</b>  | <b>47.8</b>  | <b>47.1</b>  | <b>46.1</b>  | <b>45.5</b>  | <b>45.9</b>  | <b>45.3</b>  | <b>38.3</b>  | <b>43.6</b>  | <b>44.2</b>  | <b>100.0</b>         |
| Gasoline                                                          | 8.7          | 8.8          | 8.2          | 7.8          | 7.6          | 7.8          | 7.9          | 6.1          | 7.4          | 7.9          | 17.8                 |
| Diesel                                                            | 25.8         | 26.8         | 26.2         | 26.1         | 24.6         | 25.6         | 25.2         | 21.0         | 25.1         | 25.6         | 57.9                 |
| Heating Oil                                                       | 1.2          | 1.2          | 1.5          | 1.7          | 1.3          | 1.2          | 0.9          | 0.8          | 0.9          | 1.1          | 2.4                  |
| Aviation Jet                                                      | 0.8          | 0.8          | 0.8          | 0.9          | 0.9          | 1.0          | 1.0          | 0.4          | 0.7          | 1.0          | 2.2                  |
| LPG                                                               | 3.6          | 3.5          | 3.6          | 3.6          | 3.7          | 3.5          | 3.6          | 3.2          | 3.5          | 3.7          | 8.3                  |
| <b>Imports</b>                                                    | <b>128.7</b> | <b>116.9</b> | <b>130.9</b> | <b>135.2</b> | <b>142.0</b> | <b>137.1</b> | <b>138.8</b> | <b>120.1</b> | <b>131.8</b> | <b>138.1</b> | <b>100.0</b>         |
| Oil                                                               | 78.0         | 71.3         | 80.7         | 81.8         | 85.0         | 81.5         | 80.6         | 65.7         | 72.0         | 78.6         | 56.9                 |
| Gas                                                               | 50.8         | 45.7         | 50.2         | 53.5         | 57.0         | 55.6         | 58.2         | 54.4         | 59.8         | 59.5         | 43.1                 |
| Gasoline                                                          | 0.4          | 0.4          | 0.5          | 0.4          | 0.1          | 0.4          | 0.4          | 0.4          | 0.3          | 0.5          | 0.4                  |
| Diesel                                                            | 3.1          | 3.2          | 3.1          | 4.5          | 5.1          | 5.4          | 5.3          | 4.7          | 4.9          | 5.1          | 3.7                  |
| Heating Oil                                                       | 0.5          | 0.3          | 0.3          | 0.8          | 0.8          | 1.6          | 1.0          | 1.2          | 1.2          | 1.3          | 1.0                  |
| Aviation Jet                                                      | 1.5          | 1.6          | 1.9          | 2.1          | 2.3          | 2.4          | 2.6          | 0.8          | 0.7          | 1.6          | 1.2                  |
| LPG                                                               | 2.6          | 2.4          | 2.5          | 2.6          | 2.6          | 2.5          | 2.7          | 2.3          | 2.5          | 2.8          | 2.0                  |
| <b>Exports</b>                                                    | <b>25.1</b>  | <b>21.4</b>  | <b>28.5</b>  | <b>30.1</b>  | <b>32.4</b>  | <b>30.2</b>  | <b>28.4</b>  | <b>24.0</b>  | <b>28.1</b>  | <b>31.5</b>  | <b>100.0</b>         |
| Oil                                                               | 24.9         | 21.2         | 28.3         | 29.9         | 32.1         | 29.9         | 28.2         | 23.7         | 26.9         | 27.8         | 88.1                 |
| Gas                                                               | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 1.3          | 3.8          | 11.9                 |
| Gasoline                                                          | 8.3          | 7.4          | 9.0          | 8.5          | 8.9          | 8.9          | 8.9          | 6.6          | 8.0          | 8.0          | 25.5                 |
| Diesel                                                            | 8.6          | 5.6          | 9.1          | 9.5          | 10.4         | 9.1          | 9.8          | 7.8          | 8.2          | 9.5          | 30.0                 |
| Heating Oil                                                       | 2.1          | 2.7          | 3.9          | 4.5          | 5.0          | 4.3          | 3.6          | 3.2          | 4.9          | 3.3          | 10.5                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.3          | 0.3          | 0.1          | 0.0          | 0.0          | 0.1                  |
| LPG                                                               | 0.5          | 0.2          | 0.3          | 0.4          | 0.3          | 0.2          | 0.3          | 0.3          | 0.4          | 0.4          | 1.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>343.7</b> | <b>328.1</b> | <b>335.7</b> | <b>332.7</b> | <b>329.1</b> | <b>323.6</b> | <b>315.2</b> | <b>280.6</b> | <b>312.2</b> | <b>310.7</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>154.6</b> | <b>147.6</b> | <b>149.8</b> | <b>146.6</b> | <b>142.6</b> | <b>138.9</b> | <b>134.6</b> | <b>131.8</b> | <b>137.5</b> | <b>132.0</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>51.9</b>  | <b>49.6</b>  | <b>50.4</b>  | <b>49.6</b>  | <b>48.4</b>  | <b>48.2</b>  | <b>47.5</b>  | <b>47.5</b>  | <b>49.1</b>  | <b>46.3</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>70.1</b>  | <b>66.2</b>  | <b>68.3</b>  | <b>66.6</b>  | <b>66.5</b>  | <b>64.7</b>  | <b>63.7</b>  | <b>64.7</b>  | <b>66.0</b>  | <b>61.5</b>  | <b>-</b>             |

\*Heat is included

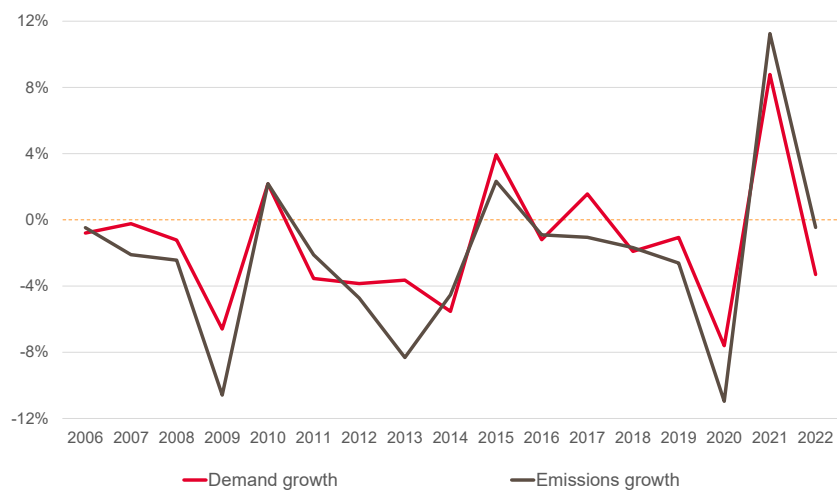
Primary energy demand mix



Electricity generation by source



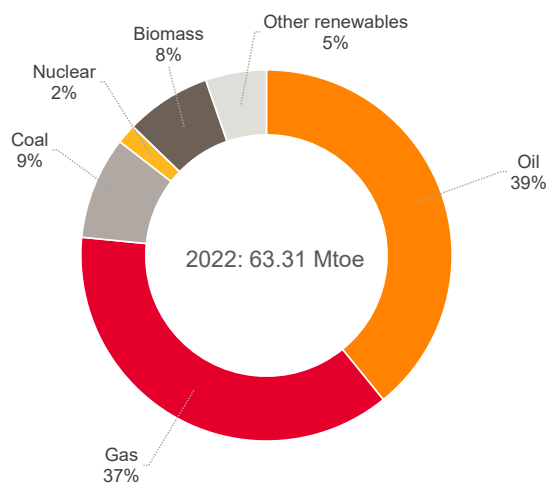
Primary energy demand and CO<sub>2</sub> emissions growth



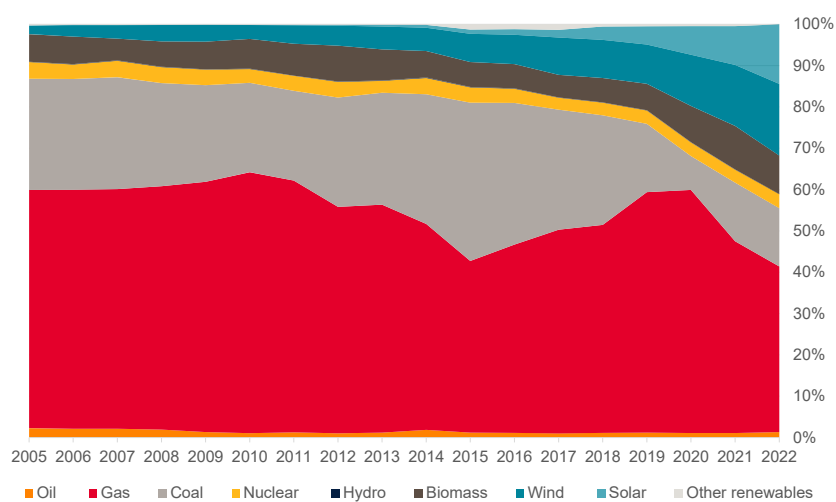
| <b>Netherlands</b><br>(Million toe)                               | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>75.3</b>  | <b>70.8</b>  | <b>72.4</b>  | <b>74.0</b>  | <b>75.0</b>  | <b>73.4</b>  | <b>71.7</b>  | <b>69.5</b>  | <b>71.7</b>  | <b>63.3</b>  | <b>100.0</b>         |
| Oil                                                               | 27.2         | 26.2         | 26.1         | 27.3         | 28.0         | 27.0         | 25.7         | 25.2         | 25.7         | 24.7         | 39.0                 |
| Gas                                                               | 33.4         | 29.1         | 28.6         | 30.0         | 31.2         | 30.7         | 32.1         | 31.6         | 30.3         | 23.6         | 37.3                 |
| Coal                                                              | 8.1          | 9.0          | 11.1         | 10.3         | 9.2          | 8.3          | 6.4          | 4.1          | 5.7          | 5.6          | 8.9                  |
| Nuclear                                                           | 0.8          | 1.1          | 1.1          | 1.0          | 0.9          | 0.9          | 1.0          | 1.1          | 1.0          | 1.1          | 1.7                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 3.7          | 3.5          | 3.6          | 3.6          | 3.9          | 4.2          | 4.5          | 5.3          | 6.0          | 4.7          | 7.4                  |
| Other renewables                                                  | 0.5          | 0.6          | 0.7          | 0.8          | 1.1          | 1.2          | 1.5          | 2.1          | 2.5          | 3.3          | 5.3                  |
| Electricity balance of trade*                                     | 1.6          | 1.3          | 1.1          | 0.8          | 0.7          | 1.0          | 0.5          | 0.3          | 0.5          | 0.2          | 0.3                  |
| <b>Total final consumption, by source</b>                         | <b>61.0</b>  | <b>56.3</b>  | <b>56.8</b>  | <b>58.4</b>  | <b>59.5</b>  | <b>58.9</b>  | <b>57.3</b>  | <b>55.6</b>  | <b>57.1</b>  | <b>49.9</b>  | <b>100.0</b>         |
| Oil                                                               | 24.3         | 23.1         | 23.2         | 24.3         | 24.9         | 24.5         | 23.1         | 22.8         | 22.5         | 21.4         | 42.9                 |
| Gas                                                               | 22.1         | 18.7         | 19.3         | 19.8         | 20.1         | 19.6         | 19.3         | 18.3         | 19.8         | 14.8         | 29.6                 |
| Coal                                                              | 1.8          | 1.8          | 1.9          | 1.9          | 2.0          | 2.0          | 1.9          | 1.6          | 1.7          | 1.7          | 3.4                  |
| Electricity                                                       | 9.0          | 8.7          | 8.9          | 9.0          | 9.1          | 9.3          | 9.3          | 9.1          | 9.2          | 8.9          | 17.8                 |
| Heat                                                              | 2.7          | 2.7          | 2.4          | 2.3          | 2.2          | 2.1          | 2.2          | 2.1          | 2.2          | 2.2          | 4.3                  |
| Biomass                                                           | 1.1          | 1.2          | 1.1          | 1.0          | 1.2          | 1.5          | 1.6          | 1.5          | 1.6          | 1.0          | 2.0                  |
| <b>Electricity generation, by source</b>                          | <b>8.7</b>   | <b>8.9</b>   | <b>9.5</b>   | <b>9.9</b>   | <b>10.1</b>  | <b>9.8</b>   | <b>10.4</b>  | <b>10.6</b>  | <b>10.5</b>  | <b>10.5</b>  | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 1.3                  |
| Gas                                                               | 4.8          | 4.4          | 3.9          | 4.5          | 5.0          | 4.9          | 6.1          | 6.2          | 4.9          | 4.2          | 40.1                 |
| Coal                                                              | 2.4          | 2.8          | 3.6          | 3.4          | 2.9          | 2.6          | 1.7          | 0.9          | 1.5          | 1.5          | 14.1                 |
| Nuclear                                                           | 0.2          | 0.4          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.3          | 0.4          | 3.4                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.7          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.7          | 0.9          | 1.1          | 1.0          | 9.3                  |
| Wind                                                              | 0.5          | 0.5          | 0.6          | 0.7          | 0.9          | 0.9          | 1.0          | 1.3          | 1.5          | 1.8          | 17.4                 |
| Solar                                                             | 0.0          | 0.1          | 0.1          | 0.1          | 0.2          | 0.3          | 0.5          | 0.7          | 1.0          | 1.5          | 14.4                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>61.0</b>  | <b>56.3</b>  | <b>56.8</b>  | <b>58.4</b>  | <b>59.5</b>  | <b>58.9</b>  | <b>57.3</b>  | <b>55.6</b>  | <b>57.1</b>  | <b>49.9</b>  | <b>100.0</b>         |
| Industry                                                          | 14.9         | 14.7         | 14.6         | 15.3         | 15.3         | 15.1         | 14.7         | 14.5         | 14.7         | 13.6         | 27.3                 |
| Transport                                                         | 10.8         | 10.0         | 10.1         | 10.1         | 10.3         | 10.7         | 10.7         | 9.1          | 9.3          | 9.2          | 18.5                 |
| Residential/Commercial                                            | 18.7         | 15.5         | 16.2         | 16.5         | 16.3         | 16.2         | 15.8         | 15.1         | 16.3         | 13.1         | 26.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>24.3</b>  | <b>23.1</b>  | <b>23.2</b>  | <b>24.3</b>  | <b>24.9</b>  | <b>24.5</b>  | <b>23.1</b>  | <b>22.8</b>  | <b>22.5</b>  | <b>21.4</b>  | <b>100.0</b>         |
| Industry                                                          | 3.0          | 3.1          | 3.0          | 3.4          | 3.3          | 3.3          | 3.0          | 3.3          | 3.1          | 3.6          | 17.0                 |
| Transport                                                         | 10.3         | 9.4          | 9.6          | 9.6          | 9.8          | 9.9          | 9.8          | 8.3          | 8.3          | 8.2          | 38.2                 |
| Residential/Commercial                                            | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 1.4                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>22.1</b>  | <b>18.7</b>  | <b>19.3</b>  | <b>19.8</b>  | <b>20.1</b>  | <b>19.6</b>  | <b>19.3</b>  | <b>18.3</b>  | <b>19.8</b>  | <b>14.8</b>  | <b>100.0</b>         |
| Industry                                                          | 4.8          | 4.6          | 4.8          | 5.0          | 5.2          | 5.1          | 5.0          | 4.9          | 5.1          | 3.8          | 25.7                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.4                  |
| Residential/Commercial                                            | 12.2         | 9.3          | 9.9          | 10.2         | 10.0         | 9.8          | 9.4          | 8.8          | 9.9          | 7.4          | 50.1                 |
| <b>Refined products consumption</b>                               | <b>21.7</b>  | <b>20.4</b>  | <b>21.0</b>  | <b>22.0</b>  | <b>22.8</b>  | <b>22.8</b>  | <b>21.6</b>  | <b>21.2</b>  | <b>21.1</b>  | <b>19.9</b>  | <b>100.0</b>         |
| Gasoline                                                          | 3.8          | 3.7          | 3.8          | 3.9          | 4.0          | 4.1          | 4.2          | 3.5          | 3.6          | 3.6          | 18.2                 |
| Diesel                                                            | 7.5          | 6.8          | 6.9          | 6.8          | 6.9          | 6.9          | 6.6          | 6.0          | 5.8          | 5.5          | 27.6                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| LPG                                                               | 2.0          | 2.6          | 2.7          | 2.3          | 2.0          | 2.3          | 2.0          | 2.1          | 1.8          | 1.8          | 8.9                  |
| <b>Imports</b>                                                    | <b>167.2</b> | <b>164.6</b> | <b>185.4</b> | <b>189.5</b> | <b>169.8</b> | <b>173.5</b> | <b>174.9</b> | <b>158.7</b> | <b>165.9</b> | <b>171.9</b> | <b>100.0</b>         |
| Oil                                                               | 145.4        | 142.3        | 156.3        | 156.7        | 152.4        | 151.2        | 149.1        | 132.6        | 143.7        | 151.9        | 88.4                 |
| Gas                                                               | 21.8         | 22.3         | 29.2         | 32.9         | 17.4         | 22.4         | 25.8         | 26.2         | 22.3         | 20.0         | 11.6                 |
| Gasoline                                                          | 9.9          | 9.7          | 10.2         | 10.2         | 10.9         | 7.9          | 7.5          | 7.8          | 8.6          | 8.4          | 4.9                  |
| Diesel                                                            | 18.4         | 15.9         | 16.9         | 19.4         | 17.3         | 12.5         | 13.2         | 12.0         | 9.2          | 13.3         | 7.8                  |
| Heating Oil                                                       | 33.2         | 34.4         | 37.8         | 31.0         | 15.7         | 12.8         | 11.5         | 19.5         | 27.2         | 24.5         | 14.2                 |
| Aviation Jet                                                      | 4.0          | 2.7          | 3.2          | 4.6          | 3.8          | 3.5          | 3.6          | 4.2          | 4.6          | 4.1          | 2.4                  |
| LPG                                                               | 2.8          | 3.7          | 4.9          | 4.0          | 3.5          | 4.3          | 3.6          | 3.6          | 3.4          | 3.4          | 2.0                  |
| <b>Exports</b>                                                    | <b>154.1</b> | <b>146.8</b> | <b>152.2</b> | <b>158.1</b> | <b>131.3</b> | <b>129.0</b> | <b>124.6</b> | <b>105.1</b> | <b>121.8</b> | <b>112.1</b> | <b>100.0</b>         |
| Oil                                                               | 103.3        | 102.7        | 112.6        | 115.3        | 112.6        | 111.2        | 107.2        | 93.2         | 109.7        | 107.2        | 95.6                 |
| Gas                                                               | 50.8         | 44.1         | 39.7         | 42.7         | 18.7         | 17.8         | 17.3         | 11.9         | 12.1         | 4.9          | 4.4                  |
| Gasoline                                                          | 17.7         | 19.3         | 21.4         | 20.1         | 20.4         | 23.9         | 26.6         | 20.9         | 25.3         | 24.8         | 22.2                 |
| Diesel                                                            | 30.4         | 28.6         | 27.6         | 31.1         | 30.1         | 24.1         | 25.3         | 24.1         | 28.0         | 24.3         | 21.7                 |
| Heating Oil                                                       | 27.7         | 28.9         | 35.1         | 31.1         | 14.8         | 11.1         | 9.5          | 18.2         | 23.8         | 23.1         | 20.6                 |
| Aviation Jet                                                      | 7.0          | 6.3          | 6.8          | 8.5          | 7.8          | 8.5          | 8.4          | 6.2          | 5.7          | 8.0          | 7.2                  |
| LPG                                                               | 1.5          | 1.8          | 2.7          | 2.6          | 2.2          | 2.3          | 2.3          | 2.0          | 2.5          | 2.2          | 1.9                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>175.6</b> | <b>168.5</b> | <b>175.5</b> | <b>176.5</b> | <b>174.1</b> | <b>168.5</b> | <b>162.3</b> | <b>146.8</b> | <b>154.6</b> | <b>139.0</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>213.2</b> | <b>201.7</b> | <b>206.0</b> | <b>202.8</b> | <b>194.4</b> | <b>183.8</b> | <b>173.6</b> | <b>163.2</b> | <b>163.6</b> | <b>140.8</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>58.6</b>  | <b>52.4</b>  | <b>52.4</b>  | <b>52.4</b>  | <b>51.1</b>  | <b>50.3</b>  | <b>48.4</b>  | <b>47.5</b>  | <b>46.8</b>  | <b>39.7</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>91.4</b>  | <b>84.8</b>  | <b>85.0</b>  | <b>85.0</b>  | <b>83.7</b>  | <b>80.0</b>  | <b>76.7</b>  | <b>77.3</b>  | <b>75.9</b>  | <b>64.1</b>  | -                    |

\*Heat is included

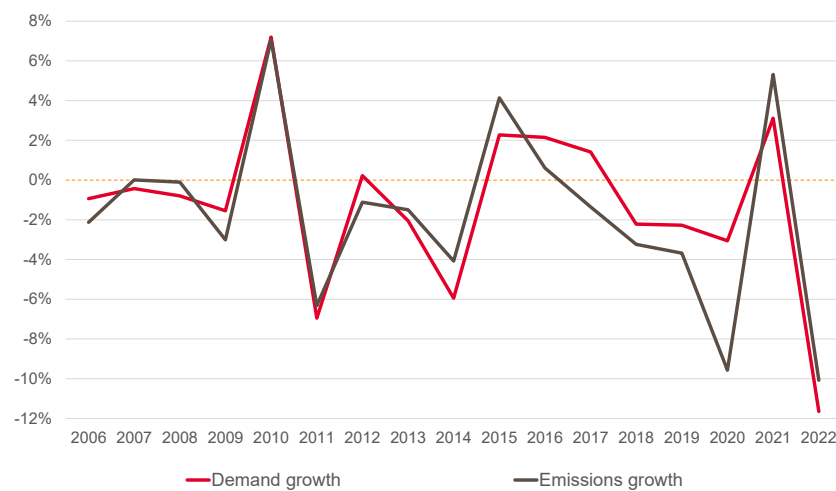
### Primary energy demand mix



### Electricity generation by source



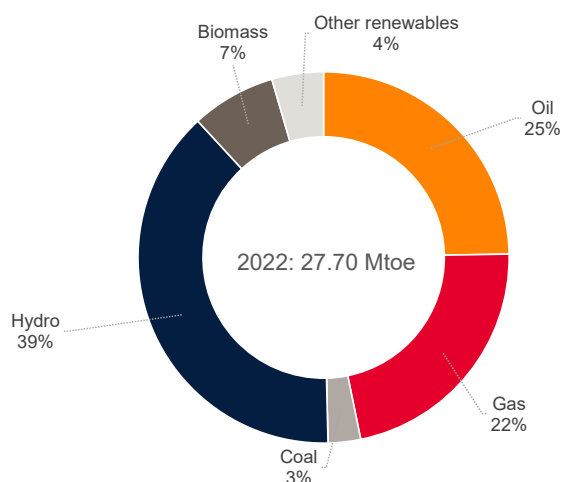
### Primary energy demand and CO<sub>2</sub> emissions growth



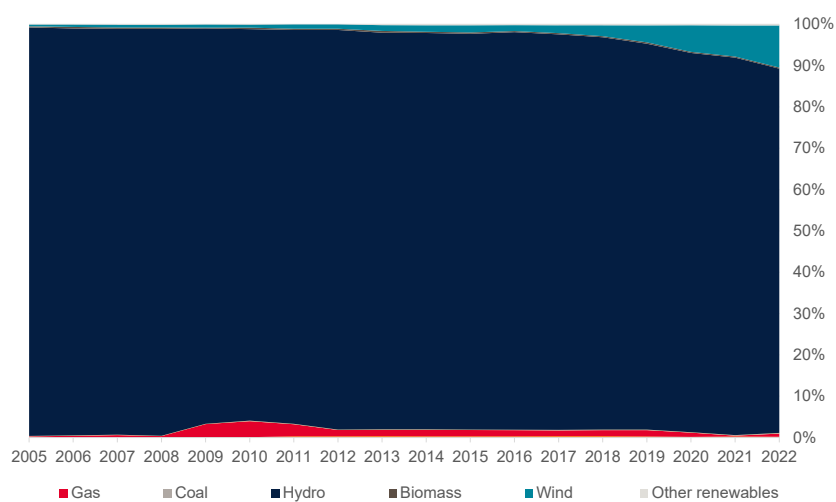
| Norway<br>(Million toe)                                           | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>31.0</b>  | <b>28.4</b>  | <b>25.6</b>  | <b>28.3</b>  | <b>29.8</b>  | <b>29.8</b>  | <b>28.4</b>  | <b>28.0</b>  | <b>29.0</b>  | <b>27.7</b>  | <b>100.0</b>         |
| Oil                                                               | 12.1         | 9.8          | 6.1          | 9.1          | 10.8         | 10.1         | 9.1          | 9.2          | 8.9          | 7.1          | 25.5                 |
| Gas                                                               | 5.6          | 5.7          | 6.2          | 5.6          | 5.0          | 5.6          | 5.0          | 4.6          | 5.1          | 6.3          | 22.9                 |
| Coal                                                              | 0.8          | 0.9          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 0.8          | 2.9                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 11.0         | 11.7         | 11.8         | 12.3         | 12.2         | 12.0         | 10.8         | 12.2         | 12.4         | 11.0         | 39.8                 |
| Biomass                                                           | 1.6          | 1.4          | 1.5          | 1.7          | 1.9          | 1.9          | 2.1          | 1.9          | 2.1          | 2.1          | 7.6                  |
| Other renewables                                                  | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.5          | 0.9          | 1.0          | 1.3          | 4.7                  |
| Electricity balance of trade*                                     | -0.3         | -1.2         | -1.1         | -1.3         | -1.2         | -0.8         | 0.1          | -1.7         | -1.4         | -0.9         | -3.4                 |
| <b>Total final consumption, by source</b>                         | <b>21.2</b>  | <b>20.8</b>  | <b>21.2</b>  | <b>21.3</b>  | <b>21.6</b>  | <b>21.8</b>  | <b>21.7</b>  | <b>21.2</b>  | <b>21.9</b>  | <b>20.8</b>  | <b>100.0</b>         |
| Oil                                                               | 8.4          | 8.4          | 8.4          | 8.3          | 8.2          | 8.3          | 8.0          | 7.7          | 7.8          | 7.6          | 36.5                 |
| Gas                                                               | 0.9          | 0.9          | 1.0          | 0.9          | 1.0          | 0.9          | 1.0          | 0.9          | 0.8          | 0.7          | 3.4                  |
| Coal                                                              | 0.7          | 0.7          | 0.7          | 0.7          | 0.8          | 0.7          | 0.7          | 0.7          | 0.8          | 0.8          | 3.7                  |
| Electricity                                                       | 9.6          | 9.4          | 9.6          | 9.8          | 9.9          | 10.1         | 10.0         | 10.0         | 10.3         | 9.7          | 46.6                 |
| Heat                                                              | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 0.5          | 2.5                  |
| Biomass                                                           | 1.2          | 1.0          | 1.0          | 1.1          | 1.4          | 1.3          | 1.5          | 1.4          | 1.5          | 1.5          | 7.2                  |
| <b>Electricity generation, by source</b>                          | <b>11.5</b>  | <b>12.2</b>  | <b>12.4</b>  | <b>12.8</b>  | <b>12.9</b>  | <b>12.7</b>  | <b>11.6</b>  | <b>13.4</b>  | <b>13.6</b>  | <b>12.6</b>  | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Gas                                                               | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.0          | 0.1          | 0.8                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 11.1         | 11.7         | 11.9         | 12.3         | 12.3         | 12.0         | 10.8         | 12.3         | 12.4         | 11.1         | 88.2                 |
| Biomass                                                           | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3                  |
| Wind                                                              | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.5          | 0.9          | 1.0          | 1.3          | 10.1                 |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| <b>Total final consumption, by sector</b>                         | <b>21.2</b>  | <b>20.8</b>  | <b>21.2</b>  | <b>21.3</b>  | <b>21.6</b>  | <b>21.8</b>  | <b>21.7</b>  | <b>21.2</b>  | <b>21.9</b>  | <b>20.8</b>  | <b>100.0</b>         |
| Industry                                                          | 6.2          | 6.1          | 6.1          | 6.1          | 6.2          | 6.3          | 6.4          | 6.5          | 6.8          | 6.5          | 31.5                 |
| Transport                                                         | 5.2          | 5.3          | 5.3          | 5.3          | 5.3          | 5.1          | 5.1          | 4.8          | 5.0          | 5.2          | 24.8                 |
| Residential/Commercial                                            | 7.0          | 6.5          | 6.7          | 7.0          | 7.0          | 7.1          | 7.0          | 6.8          | 7.0          | 6.5          | 31.1                 |
| <b>Oil final consumption, by sector</b>                           | <b>8.4</b>   | <b>8.4</b>   | <b>8.4</b>   | <b>8.3</b>   | <b>8.2</b>   | <b>8.3</b>   | <b>8.0</b>   | <b>7.7</b>   | <b>7.8</b>   | <b>7.6</b>   | <b>100.0</b>         |
| Industry                                                          | 1.0          | 0.9          | 0.9          | 0.8          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.8          | 10.6                 |
| Transport                                                         | 4.9          | 5.0          | 5.0          | 4.8          | 4.6          | 4.6          | 4.5          | 4.2          | 4.4          | 4.4          | 58.4                 |
| Residential/Commercial                                            | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 3.7                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>0.9</b>   | <b>0.9</b>   | <b>1.0</b>   | <b>0.9</b>   | <b>1.0</b>   | <b>0.9</b>   | <b>1.0</b>   | <b>0.9</b>   | <b>0.8</b>   | <b>0.7</b>   | <b>100.0</b>         |
| Industry                                                          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 36.3                 |
| Transport                                                         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 13.9                 |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 1.5                  |
| <b>Refined products consumption</b>                               | <b>8.4</b>   | <b>8.4</b>   | <b>8.4</b>   | <b>8.3</b>   | <b>8.2</b>   | <b>8.3</b>   | <b>8.0</b>   | <b>7.7</b>   | <b>7.8</b>   | <b>7.6</b>   | <b>100.0</b>         |
| Gasoline                                                          | 1.0          | 1.0          | 0.9          | 0.8          | 0.8          | 0.8          | 0.7          | 0.7          | 0.6          | 0.6          | 8.4                  |
| Diesel                                                            | 4.6          | 4.6          | 4.7          | 4.7          | 4.5          | 4.6          | 4.4          | 4.3          | 4.5          | 4.5          | 58.7                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.5                  |
| Aviation Jet                                                      | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.3          | 0.4          | 0.3          | 0.3          | 0.4          | 5.0                  |
| LPG                                                               | 0.9          | 0.8          | 0.8          | 0.6          | 0.6          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 5.9                  |
| <b>Imports</b>                                                    | <b>6.8</b>   | <b>5.5</b>   | <b>6.5</b>   | <b>6.3</b>   | <b>7.9</b>   | <b>9.1</b>   | <b>9.6</b>   | <b>9.3</b>   | <b>8.9</b>   | <b>9.1</b>   | <b>100.0</b>         |
| Oil                                                               | 6.8          | 5.5          | 6.5          | 6.3          | 7.9          | 9.1          | 9.6          | 9.3          | 8.7          | 9.1          | 99.4                 |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.6                  |
| Gasoline                                                          | 0.2          | 0.2          | 0.3          | 0.4          | 0.4          | 0.4          | 0.5          | 0.4          | 0.5          | 0.7          | 7.4                  |
| Diesel                                                            | 1.3          | 1.1          | 1.7          | 1.8          | 1.8          | 1.6          | 2.1          | 2.5          | 2.7          | 3.9          | 43.1                 |
| Heating Oil                                                       | 1.9          | 1.2          | 1.6          | 1.3          | 1.8          | 1.4          | 1.0          | 0.8          | 0.9          | 1.2          | 13.6                 |
| Aviation Jet                                                      | 0.4          | 0.4          | 0.4          | 0.4          | 0.2          | 0.2          | 0.3          | 0.2          | 0.2          | 0.4          | 4.3                  |
| LPG                                                               | 0.2          | 0.2          | 0.2          | 0.4          | 0.2          | 0.3          | 0.3          | 0.2          | 0.2          | 0.2          | 2.4                  |
| <b>Exports</b>                                                    | <b>169.7</b> | <b>171.5</b> | <b>185.9</b> | <b>185.0</b> | <b>192.4</b> | <b>184.6</b> | <b>177.2</b> | <b>187.6</b> | <b>193.4</b> | <b>196.3</b> | <b>100.0</b>         |
| Oil                                                               | 79.0         | 81.5         | 89.1         | 88.3         | 88.4         | 83.3         | 81.3         | 94.1         | 97.7         | 94.1         | 47.9                 |
| Gas                                                               | 90.7         | 90.0         | 96.7         | 96.8         | 104.0        | 101.3        | 95.9         | 93.5         | 95.7         | 102.2        | 52.1                 |
| Gasoline                                                          | 2.3          | 2.2          | 3.3          | 3.5          | 3.8          | 4.1          | 3.8          | 3.3          | 4.1          | 3.9          | 2.0                  |
| Diesel                                                            | 2.7          | 2.8          | 3.4          | 2.8          | 4.4          | 4.2          | 4.2          | 3.4          | 3.5          | 2.4          | 1.2                  |
| Heating Oil                                                       | 1.9          | 1.5          | 1.4          | 1.0          | 1.4          | 1.4          | 1.6          | 1.6          | 0.8          | 0.1          | 0.1                  |
| Aviation Jet                                                      | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>40.7</b>  | <b>40.9</b>  | <b>41.8</b>  | <b>40.8</b>  | <b>40.8</b>  | <b>40.5</b>  | <b>39.5</b>  | <b>37.8</b>  | <b>36.4</b>  | <b>35.9</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>135.1</b> | <b>133.2</b> | <b>133.6</b> | <b>128.8</b> | <b>125.9</b> | <b>123.7</b> | <b>119.6</b> | <b>115.4</b> | <b>106.9</b> | <b>102.0</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>62.6</b>  | <b>59.9</b>  | <b>59.6</b>  | <b>59.9</b>  | <b>59.1</b>  | <b>58.7</b>  | <b>58.0</b>  | <b>57.2</b>  | <b>57.3</b>  | <b>53.4</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>102.9</b> | <b>92.4</b>  | <b>81.6</b>  | <b>89.4</b>  | <b>92.1</b>  | <b>91.1</b>  | <b>86.0</b>  | <b>85.5</b>  | <b>85.1</b>  | <b>78.8</b>  | <b>-</b>             |

\*Heat is included

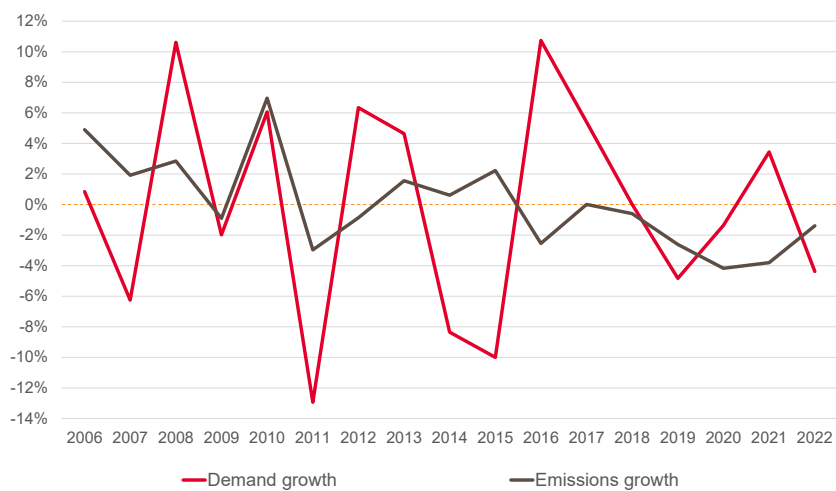
### Primary energy demand mix



### Electricity generation by source



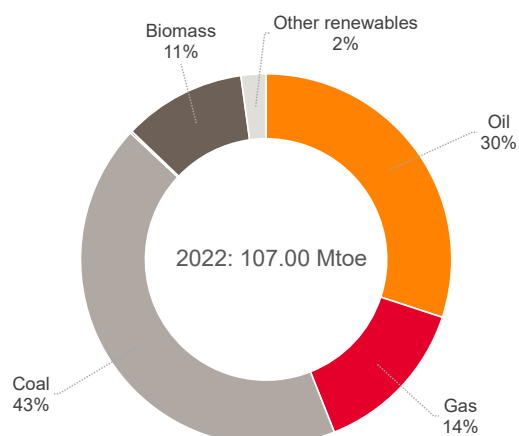
### Primary energy demand and CO<sub>2</sub> emissions growth



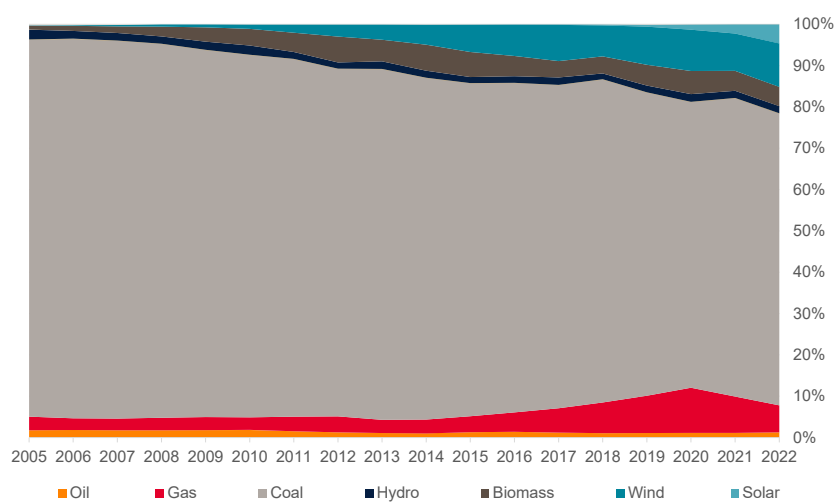
| <b>Poland</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>97.9</b>  | <b>94.2</b>  | <b>95.3</b>  | <b>99.7</b>  | <b>104.2</b> | <b>109.2</b> | <b>105.2</b> | <b>102.1</b> | <b>108.4</b> | <b>107.0</b> | <b>100.0</b>         |
| Oil                                                               | 22.8         | 22.6         | 24.0         | 26.4         | 29.7         | 30.4         | 30.8         | 29.5         | 31.1         | 32.1         | 30.0                 |
| Gas                                                               | 13.7         | 13.4         | 13.8         | 14.6         | 15.4         | 16.1         | 16.2         | 17.1         | 18.2         | 14.9         | 14.0                 |
| Coal                                                              | 52.7         | 48.9         | 48.1         | 48.9         | 49.1         | 49.1         | 43.8         | 40.7         | 45.3         | 46.0         | 43.0                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2                  |
| Biomass                                                           | 8.3          | 8.2          | 8.3          | 8.1          | 8.1          | 11.7         | 11.9         | 11.9         | 11.6         | 11.4         | 10.7                 |
| Other renewables                                                  | 0.5          | 0.7          | 0.9          | 1.1          | 1.3          | 1.1          | 1.4          | 1.5          | 1.7          | 2.3          | 2.2                  |
| Electricity balance of trade*                                     | -0.3         | 0.3          | 0.1          | 0.3          | 0.3          | 0.6          | 1.0          | 1.3          | 0.2          | 0.0          | 0.0                  |
| <b>Total final consumption, by source</b>                         | <b>67.4</b>  | <b>65.9</b>  | <b>67.1</b>  | <b>71.3</b>  | <b>75.7</b>  | <b>79.2</b>  | <b>78.0</b>  | <b>76.2</b>  | <b>79.7</b>  | <b>77.7</b>  | <b>100.0</b>         |
| Oil                                                               | 20.9         | 21.0         | 22.1         | 24.3         | 27.8         | 28.4         | 29.1         | 28.0         | 29.3         | 30.3         | 39.0                 |
| Gas                                                               | 10.5         | 10.0         | 10.3         | 11.0         | 11.0         | 10.9         | 10.8         | 10.9         | 12.5         | 10.7         | 13.7                 |
| Coal                                                              | 13.4         | 12.9         | 12.4         | 12.7         | 13.0         | 12.4         | 10.7         | 10.3         | 10.1         | 9.5          | 12.2                 |
| Electricity                                                       | 10.6         | 10.8         | 11.0         | 11.4         | 11.7         | 12.1         | 12.1         | 11.8         | 12.3         | 12.0         | 15.4                 |
| Heat                                                              | 6.0          | 5.5          | 5.5          | 5.7          | 5.9          | 5.7          | 5.7          | 5.7          | 6.1          | 6.1          | 7.9                  |
| Biomass                                                           | 6.0          | 5.7          | 5.9          | 6.1          | 6.4          | 9.9          | 9.7          | 9.5          | 9.3          | 9.1          | 11.7                 |
| <b>Electricity generation, by source</b>                          | <b>14.2</b>  | <b>13.7</b>  | <b>14.2</b>  | <b>14.3</b>  | <b>14.7</b>  | <b>14.6</b>  | <b>14.1</b>  | <b>13.6</b>  | <b>15.4</b>  | <b>15.4</b>  | <b>100.0</b>         |
| Oil                                                               | 0.2          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 1.3                  |
| Gas                                                               | 0.5          | 0.5          | 0.5          | 0.7          | 0.9          | 1.1          | 1.3          | 1.5          | 1.4          | 1.0          | 6.5                  |
| Coal                                                              | 12.0         | 11.3         | 11.4         | 11.4         | 11.5         | 11.4         | 10.4         | 9.4          | 11.2         | 10.9         | 70.7                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.3          | 0.2          | 0.2          | 0.2          | 0.3          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 1.7                  |
| Biomass                                                           | 0.7          | 0.9          | 0.9          | 0.7          | 0.6          | 0.6          | 0.7          | 0.8          | 0.7          | 0.7          | 4.7                  |
| Wind                                                              | 0.5          | 0.7          | 0.9          | 1.1          | 1.3          | 1.1          | 1.3          | 1.4          | 1.4          | 1.6          | 10.5                 |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.3          | 0.7          | 4.6                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>67.4</b>  | <b>65.9</b>  | <b>67.1</b>  | <b>71.3</b>  | <b>75.7</b>  | <b>79.2</b>  | <b>78.0</b>  | <b>76.2</b>  | <b>79.7</b>  | <b>77.7</b>  | <b>100.0</b>         |
| Industry                                                          | 15.1         | 15.2         | 15.3         | 15.8         | 17.0         | 17.5         | 17.6         | 16.8         | 17.2         | 15.9         | 20.5                 |
| Transport                                                         | 15.4         | 15.4         | 16.2         | 18.2         | 21.0         | 21.9         | 22.4         | 21.4         | 23.2         | 23.6         | 30.4                 |
| Residential/Commercial                                            | 28.5         | 26.7         | 26.7         | 28.3         | 27.9         | 30.3         | 28.6         | 28.4         | 30.3         | 29.0         | 37.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>20.9</b>  | <b>21.0</b>  | <b>22.1</b>  | <b>24.3</b>  | <b>27.8</b>  | <b>28.4</b>  | <b>29.1</b>  | <b>28.0</b>  | <b>29.3</b>  | <b>30.3</b>  | <b>100.0</b>         |
| Industry                                                          | 0.8          | 0.7          | 0.6          | 0.6          | 0.7          | 0.7          | 0.9          | 0.9          | 0.9          | 1.0          | 3.3                  |
| Transport                                                         | 14.4         | 14.5         | 15.3         | 17.4         | 20.2         | 20.7         | 21.1         | 20.1         | 21.8         | 22.1         | 73.0                 |
| Residential/Commercial                                            | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.1          | 1.1          | 1.0          | 1.0          | 0.9          | 3.1                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>10.5</b>  | <b>10.0</b>  | <b>10.3</b>  | <b>11.0</b>  | <b>11.0</b>  | <b>10.9</b>  | <b>10.8</b>  | <b>10.9</b>  | <b>12.5</b>  | <b>10.7</b>  | <b>100.0</b>         |
| Industry                                                          | 3.2          | 3.2          | 3.2          | 3.4          | 3.7          | 3.9          | 3.9          | 3.9          | 4.2          | 3.4          | 31.6                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Residential/Commercial                                            | 5.3          | 4.8          | 4.9          | 5.4          | 5.1          | 4.9          | 5.0          | 5.0          | 6.2          | 5.7          | 53.2                 |
| <b>Refined products consumption</b>                               | <b>20.9</b>  | <b>21.0</b>  | <b>22.1</b>  | <b>24.3</b>  | <b>27.8</b>  | <b>28.4</b>  | <b>29.1</b>  | <b>28.0</b>  | <b>29.3</b>  | <b>30.3</b>  | <b>100.0</b>         |
| Gasoline                                                          | 3.7          | 3.5          | 3.7          | 3.9          | 4.2          | 4.4          | 4.5          | 4.2          | 4.7          | 5.0          | 16.6                 |
| Diesel                                                            | 11.5         | 11.6         | 12.2         | 14.1         | 16.7         | 17.2         | 17.4         | 17.0         | 18.2         | 18.1         | 59.6                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.4                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| LPG                                                               | 2.6          | 2.6          | 2.6          | 2.7          | 2.9          | 2.9          | 3.1          | 2.7          | 2.8          | 2.8          | 9.3                  |
| <b>Imports</b>                                                    | <b>38.6</b>  | <b>38.9</b>  | <b>42.5</b>  | <b>44.8</b>  | <b>48.1</b>  | <b>49.9</b>  | <b>50.6</b>  | <b>48.0</b>  | <b>49.9</b>  | <b>49.9</b>  | <b>100.0</b>         |
| Oil                                                               | 28.4         | 29.2         | 32.5         | 32.6         | 35.1         | 36.9         | 36.2         | 33.5         | 34.5         | 37.7         | 75.6                 |
| Gas                                                               | 10.3         | 9.7          | 10.0         | 12.2         | 13.0         | 13.1         | 14.5         | 14.5         | 15.3         | 12.1         | 24.4                 |
| Gasoline                                                          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.4          | 0.4          | 0.8          | 0.9          | 1.8                  |
| Diesel                                                            | 1.0          | 1.5          | 2.1          | 3.8          | 5.3          | 4.9          | 4.6          | 4.4          | 5.6          | 5.3          | 10.6                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2                  |
| Aviation Jet                                                      | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 2.3          | 2.2          | 2.2          | 2.4          | 2.7          | 2.8          | 2.9          | 2.4          | 2.5          | 2.9          | 5.7                  |
| <b>Exports</b>                                                    | <b>7.0</b>   | <b>7.5</b>   | <b>8.4</b>   | <b>7.9</b>   | <b>6.3</b>   | <b>6.8</b>   | <b>6.5</b>   | <b>5.8</b>   | <b>4.2</b>   | <b>5.4</b>   | <b>100.0</b>         |
| Oil                                                               | 6.9          | 7.4          | 8.4          | 7.2          | 5.3          | 6.2          | 5.4          | 4.7          | 4.1          | 5.4          | 98.8                 |
| Gas                                                               | 0.1          | 0.1          | 0.0          | 0.7          | 1.0          | 0.6          | 1.1          | 1.2          | 0.1          | 0.1          | 1.2                  |
| Gasoline                                                          | 0.9          | 0.7          | 0.8          | 0.5          | 0.2          | 0.4          | 0.3          | 0.2          | 0.1          | 0.1          | 1.8                  |
| Diesel                                                            | 0.6          | 1.0          | 1.8          | 1.1          | 0.2          | 0.0          | 0.1          | 0.3          | 0.1          | 1.2          | 22.5                 |
| Heating Oil                                                       | 2.5          | 2.8          | 2.6          | 2.4          | 2.4          | 2.7          | 2.2          | 1.1          | 1.0          | 1.0          | 19.3                 |
| Aviation Jet                                                      | 0.4          | 0.5          | 0.5          | 0.5          | 0.2          | 0.3          | 0.3          | 0.2          | 0.2          | 0.1          | 2.7                  |
| LPG                                                               | 0.3          | 0.2          | 0.2          | 0.3          | 0.5          | 0.6          | 0.5          | 0.4          | 0.4          | 0.7          | 12.4                 |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>305.7</b> | <b>292.5</b> | <b>296.6</b> | <b>307.3</b> | <b>319.9</b> | <b>318.9</b> | <b>301.6</b> | <b>286.2</b> | <b>315.5</b> | <b>316.3</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>322.8</b> | <b>298.8</b> | <b>290.7</b> | <b>291.9</b> | <b>290.0</b> | <b>274.4</b> | <b>247.7</b> | <b>241.2</b> | <b>251.5</b> | <b>240.4</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>66.0</b>  | <b>62.1</b>  | <b>60.3</b>  | <b>62.4</b>  | <b>63.3</b>  | <b>63.3</b>  | <b>59.5</b>  | <b>59.4</b>  | <b>59.3</b>  | <b>54.9</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>103.4</b> | <b>96.3</b>  | <b>93.4</b>  | <b>94.7</b>  | <b>94.4</b>  | <b>94.0</b>  | <b>86.4</b>  | <b>86.1</b>  | <b>86.4</b>  | <b>81.3</b>  | -                    |

\*Heat is included

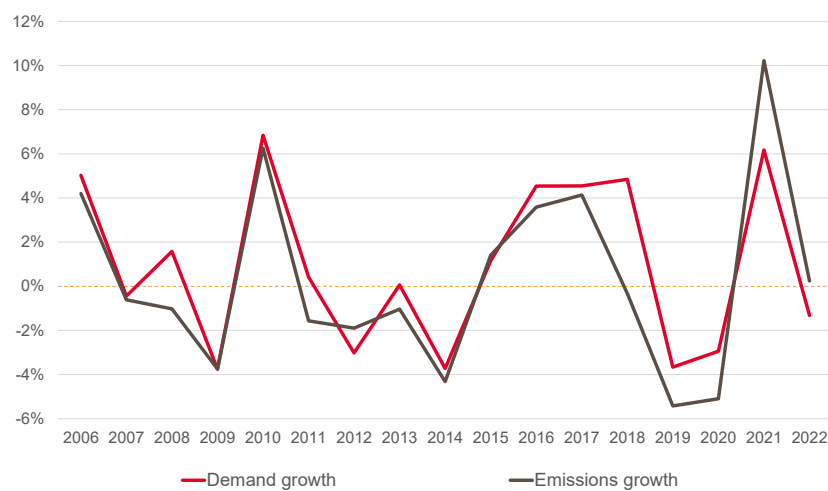
### Primary energy demand mix



### Electricity generation by source



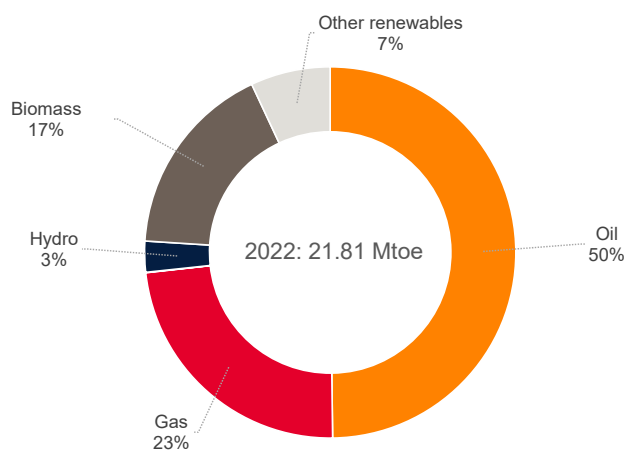
### Primary energy demand and CO<sub>2</sub> emissions growth



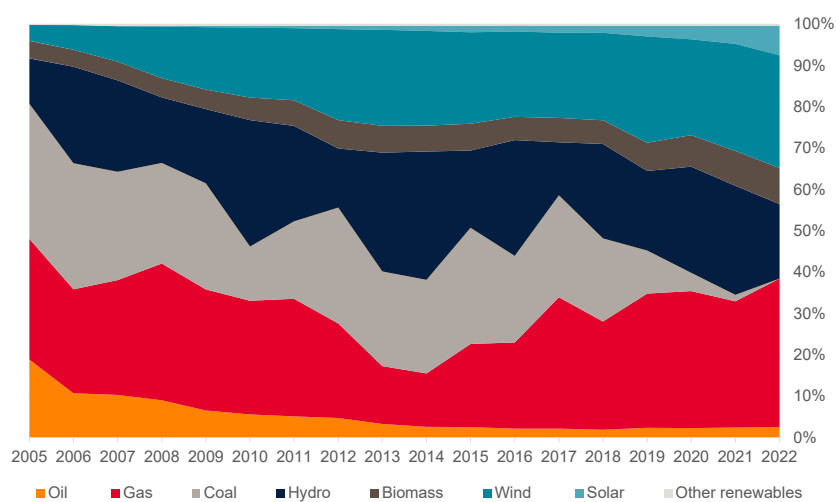
| <b>Portugal</b><br>(Million toe)                                  | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>21.5</b>  | <b>21.2</b>  | <b>22.0</b>  | <b>21.8</b>  | <b>22.8</b>  | <b>22.1</b>  | <b>21.8</b>  | <b>20.2</b>  | <b>20.2</b>  | <b>21.8</b>  | <b>100.0</b>         |
| Oil                                                               | 9.4          | 9.3          | 9.4          | 9.3          | 9.4          | 8.9          | 9.4          | 8.5          | 8.5          | 10.3         | 47.3                 |
| Gas                                                               | 3.8          | 3.5          | 4.1          | 4.3          | 5.4          | 5.0          | 5.3          | 5.2          | 5.0          | 4.9          | 22.3                 |
| Coal                                                              | 2.6          | 2.7          | 3.3          | 2.8          | 3.2          | 2.7          | 1.2          | 0.6          | 0.2          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.2          | 1.3          | 0.7          | 1.4          | 0.5          | 1.1          | 0.8          | 1.0          | 1.0          | 0.6          | 2.6                  |
| Biomass                                                           | 3.0          | 3.0          | 3.0          | 3.1          | 3.1          | 3.1          | 3.2          | 3.3          | 3.4          | 3.5          | 16.2                 |
| Other renewables                                                  | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.2          | 1.3          | 1.2          | 1.3          | 1.4          | 6.6                  |
| Electricity balance of trade*                                     | 0.5          | 0.3          | 0.5          | -0.2         | 0.0          | 0.1          | 0.6          | 0.4          | 0.7          | 1.1          | 4.9                  |
| <b>Total final consumption, by source</b>                         | <b>16.3</b>  | <b>16.2</b>  | <b>16.3</b>  | <b>16.2</b>  | <b>16.5</b>  | <b>16.2</b>  | <b>16.8</b>  | <b>15.6</b>  | <b>16.3</b>  | <b>16.8</b>  | <b>100.0</b>         |
| Oil                                                               | 8.2          | 8.3          | 8.2          | 8.1          | 8.3          | 7.8          | 8.3          | 7.4          | 7.7          | 8.4          | 50.1                 |
| Gas                                                               | 1.6          | 1.5          | 1.6          | 1.6          | 1.7          | 1.8          | 1.8          | 1.7          | 1.9          | 1.5          | 9.2                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity                                                       | 3.9          | 3.9          | 3.9          | 4.0          | 4.0          | 4.1          | 4.1          | 4.0          | 4.1          | 4.2          | 25.0                 |
| Heat                                                              | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 1.8                  |
| Biomass                                                           | 2.2          | 2.1          | 2.2          | 2.2          | 2.2          | 2.2          | 2.2          | 2.2          | 2.2          | 2.3          | 13.8                 |
| <b>Electricity generation, by source</b>                          | <b>4.4</b>   | <b>4.5</b>   | <b>4.5</b>   | <b>5.2</b>   | <b>5.1</b>   | <b>5.1</b>   | <b>4.6</b>   | <b>4.6</b>   | <b>4.4</b>   | <b>4.2</b>   | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.5                  |
| Gas                                                               | 0.6          | 0.6          | 0.9          | 1.1          | 1.6          | 1.3          | 1.5          | 1.5          | 1.3          | 1.5          | 35.9                 |
| Coal                                                              | 1.0          | 1.0          | 1.3          | 1.1          | 1.3          | 1.0          | 0.5          | 0.2          | 0.1          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.3          | 1.4          | 0.8          | 1.5          | 0.7          | 1.2          | 0.9          | 1.2          | 1.2          | 0.8          | 18.0                 |
| Biomass                                                           | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 8.7                  |
| Wind                                                              | 1.0          | 1.0          | 1.0          | 1.1          | 1.1          | 1.1          | 1.2          | 1.1          | 1.1          | 1.1          | 27.2                 |
| Solar                                                             | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.3          | 7.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| <b>Total final consumption, by sector</b>                         | <b>16.3</b>  | <b>16.2</b>  | <b>16.3</b>  | <b>16.2</b>  | <b>16.5</b>  | <b>16.2</b>  | <b>16.8</b>  | <b>15.6</b>  | <b>16.3</b>  | <b>16.8</b>  | <b>100.0</b>         |
| Industry                                                          | 4.6          | 4.4          | 4.4          | 4.4          | 4.5          | 4.5          | 4.6          | 4.4          | 4.5          | 4.5          | 26.5                 |
| Transport                                                         | 5.5          | 5.5          | 5.6          | 5.7          | 5.8          | 5.9          | 6.0          | 5.0          | 5.5          | 6.0          | 35.7                 |
| Residential/Commercial                                            | 4.4          | 4.5          | 4.5          | 4.5          | 4.5          | 4.6          | 4.6          | 4.5          | 4.5          | 4.6          | 27.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>8.2</b>   | <b>8.3</b>   | <b>8.2</b>   | <b>8.1</b>   | <b>8.3</b>   | <b>7.8</b>   | <b>8.3</b>   | <b>7.4</b>   | <b>7.7</b>   | <b>8.4</b>   | <b>100.0</b>         |
| Industry                                                          | 0.7          | 0.7          | 0.7          | 0.6          | 0.6          | 0.6          | 0.5          | 0.6          | 0.5          | 0.7          | 8.0                  |
| Transport                                                         | 5.2          | 5.2          | 5.2          | 5.4          | 5.5          | 5.5          | 5.7          | 4.7          | 5.1          | 5.6          | 66.6                 |
| Residential/Commercial                                            | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.5          | 0.5          | 6.1                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>1.6</b>   | <b>1.5</b>   | <b>1.6</b>   | <b>1.6</b>   | <b>1.7</b>   | <b>1.8</b>   | <b>1.8</b>   | <b>1.7</b>   | <b>1.9</b>   | <b>1.5</b>   | <b>100.0</b>         |
| Industry                                                          | 1.1          | 1.1          | 1.1          | 1.1          | 1.2          | 1.2          | 1.3          | 1.2          | 1.3          | 1.0          | 62.7                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 1.2                  |
| Residential/Commercial                                            | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 32.9                 |
| <b>Refined products consumption</b>                               | <b>8.2</b>   | <b>8.3</b>   | <b>8.2</b>   | <b>8.1</b>   | <b>8.3</b>   | <b>7.8</b>   | <b>8.3</b>   | <b>7.4</b>   | <b>7.7</b>   | <b>8.4</b>   | <b>100.0</b>         |
| Gasoline                                                          | 1.2          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 1.1          | 0.9          | 1.0          | 1.1          | 13.4                 |
| Diesel                                                            | 4.3          | 4.4          | 4.5          | 4.7          | 4.7          | 4.8          | 4.9          | 4.3          | 4.5          | 4.8          | 56.7                 |
| Heating Oil                                                       | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.3          | 3.2                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.3          | 3.2                  |
| LPG                                                               | 0.9          | 1.1          | 0.9          | 0.9          | 0.8          | 0.7          | 0.9          | 0.9          | 0.8          | 0.8          | 9.6                  |
| <b>Imports</b>                                                    | <b>20.0</b>  | <b>18.8</b>  | <b>22.2</b>  | <b>22.0</b>  | <b>23.9</b>  | <b>22.0</b>  | <b>21.7</b>  | <b>19.9</b>  | <b>19.6</b>  | <b>20.9</b>  | <b>100.0</b>         |
| Oil                                                               | 16.2         | 15.3         | 18.1         | 17.8         | 18.4         | 16.9         | 16.5         | 14.7         | 14.7         | 15.8         | 75.7                 |
| Gas                                                               | 3.8          | 3.5          | 4.1          | 4.3          | 5.4          | 5.1          | 5.3          | 5.1          | 5.0          | 5.1          | 24.3                 |
| Gasoline                                                          | 0.1          | 0.2          | 0.1          | 0.2          | 0.1          | 0.2          | 0.3          | 0.2          | 0.2          | 0.2          | 0.9                  |
| Diesel                                                            | 0.6          | 0.7          | 0.8          | 1.0          | 0.9          | 0.9          | 1.3          | 0.9          | 1.5          | 1.3          | 6.2                  |
| Heating Oil                                                       | 0.2          | 0.2          | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.9                  |
| Aviation Jet                                                      | 0.0          | 0.1          | 0.0          | 0.0          | 0.1          | 0.1          | 0.3          | 0.0          | 0.2          | 0.4          | 1.7                  |
| LPG                                                               | 0.7          | 0.9          | 0.8          | 0.8          | 0.7          | 0.6          | 0.8          | 0.8          | 0.8          | 1.0          | 4.8                  |
| <b>Exports</b>                                                    | <b>5.6</b>   | <b>4.8</b>   | <b>6.9</b>   | <b>6.8</b>   | <b>7.0</b>   | <b>5.4</b>   | <b>4.9</b>   | <b>5.3</b>   | <b>5.1</b>   | <b>3.7</b>   | <b>100.0</b>         |
| Oil                                                               | 5.6          | 4.8          | 6.9          | 6.8          | 7.0          | 5.4          | 4.9          | 5.3          | 5.1          | 3.7          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 1.4          | 1.0          | 1.9          | 1.8          | 2.0          | 1.7          | 1.7          | 1.3          | 1.5          | 1.4          | 38.4                 |
| Diesel                                                            | 1.7          | 1.3          | 2.3          | 2.1          | 2.1          | 1.2          | 0.9          | 1.3          | 1.4          | 0.3          | 9.3                  |
| Heating Oil                                                       | 1.5          | 1.5          | 1.6          | 1.6          | 1.5          | 1.2          | 1.1          | 1.5          | 1.5          | 1.4          | 38.8                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.0          | 0.1          | 0.1          | 0.0          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 1.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>45.4</b>  | <b>44.5</b>  | <b>48.5</b>  | <b>47.9</b>  | <b>52.3</b>  | <b>48.4</b>  | <b>43.8</b>  | <b>37.9</b>  | <b>36.3</b>  | <b>38.8</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>151.5</b> | <b>147.3</b> | <b>158.0</b> | <b>152.9</b> | <b>161.1</b> | <b>145.0</b> | <b>127.7</b> | <b>120.8</b> | <b>110.5</b> | <b>110.6</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>49.8</b>  | <b>49.0</b>  | <b>48.7</b>  | <b>48.0</b>  | <b>47.1</b>  | <b>46.4</b>  | <b>45.7</b>  | <b>46.0</b>  | <b>45.6</b>  | <b>44.4</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>71.9</b>  | <b>70.3</b>  | <b>71.6</b>  | <b>69.7</b>  | <b>70.3</b>  | <b>66.1</b>  | <b>63.6</b>  | <b>64.3</b>  | <b>61.3</b>  | <b>62.1</b>  | <b>-</b>             |

\*Heat is included

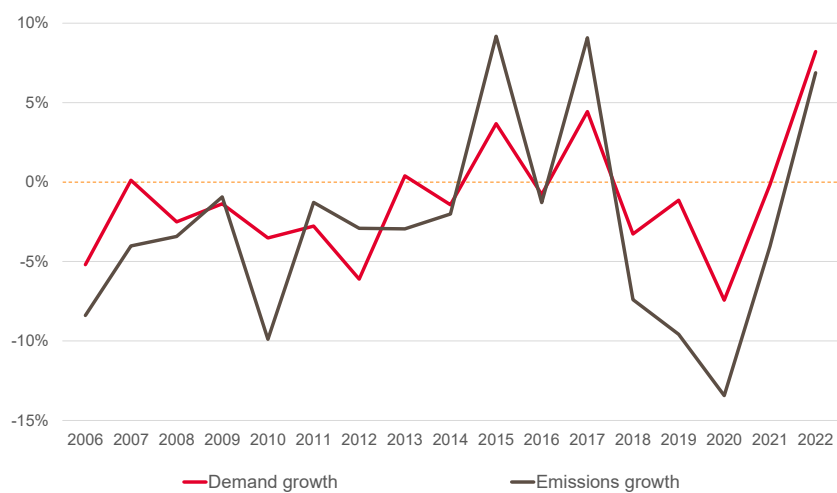
### Primary energy demand mix



### Electricity generation by source



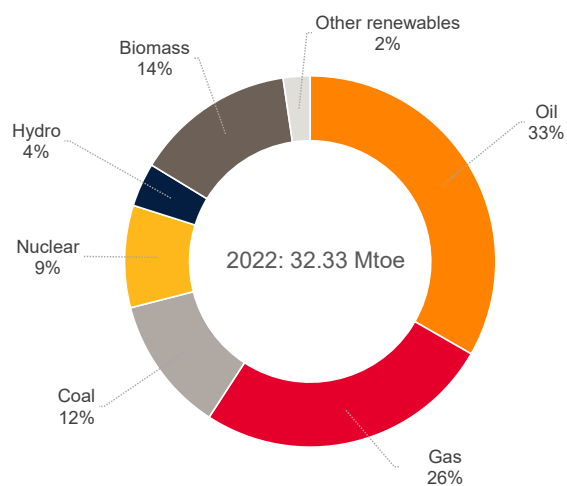
### Primary energy demand and CO<sub>2</sub> emissions growth



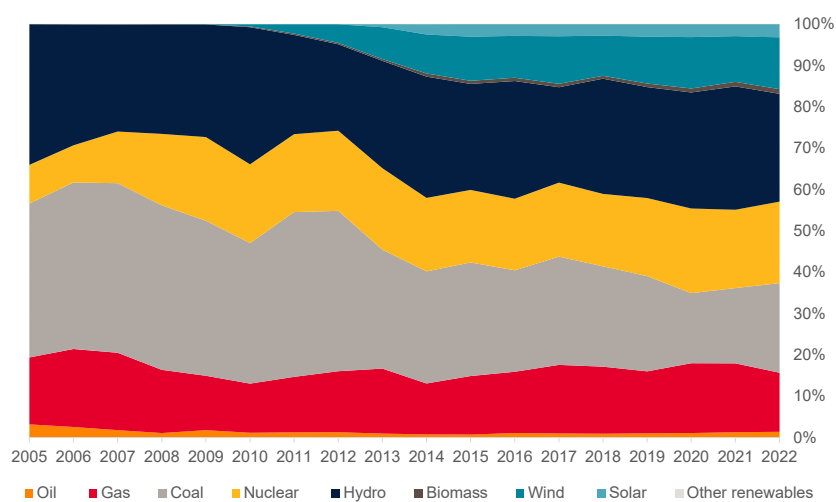
| <b>Romania</b><br>(Million toe)                                   | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>31.9</b>  | <b>31.5</b>  | <b>31.8</b>  | <b>31.7</b>  | <b>33.3</b>  | <b>33.5</b>  | <b>33.1</b>  | <b>32.3</b>  | <b>34.3</b>  | <b>32.3</b>  | <b>100.0</b>         |
| Oil                                                               | 7.9          | 7.8          | 8.5          | 8.6          | 9.4          | 9.6          | 9.8          | 9.7          | 10.5         | 10.7         | 33.2                 |
| Gas                                                               | 9.8          | 9.3          | 8.9          | 9.0          | 9.6          | 9.8          | 9.2          | 9.6          | 9.8          | 8.3          | 25.8                 |
| Coal                                                              | 5.7          | 5.7          | 5.9          | 5.3          | 5.4          | 5.1          | 4.9          | 3.5          | 4.1          | 3.8          | 11.8                 |
| Nuclear                                                           | 3.0          | 3.0          | 3.0          | 2.9          | 3.0          | 3.0          | 2.9          | 3.0          | 2.9          | 2.9          | 8.9                  |
| Hydro                                                             | 1.3          | 1.6          | 1.4          | 1.6          | 1.2          | 1.5          | 1.3          | 1.3          | 1.5          | 1.2          | 3.8                  |
| Biomass                                                           | 3.9          | 3.9          | 3.8          | 4.0          | 4.0          | 4.0          | 4.1          | 4.2          | 4.5          | 4.5          | 13.9                 |
| Other renewables                                                  | 0.4          | 0.7          | 0.8          | 0.7          | 0.8          | 0.7          | 0.7          | 0.7          | 0.7          | 0.8          | 2.3                  |
| Electricity balance of trade*                                     | -0.1         | -0.6         | -0.6         | -0.4         | -0.2         | -0.2         | 0.2          | 0.3          | 0.2          | 0.1          | 0.4                  |
| <b>Total final consumption, by source</b>                         | <b>23.1</b>  | <b>23.0</b>  | <b>22.8</b>  | <b>23.1</b>  | <b>24.0</b>  | <b>24.4</b>  | <b>24.7</b>  | <b>24.6</b>  | <b>26.3</b>  | <b>25.1</b>  | <b>100.0</b>         |
| Oil                                                               | 7.1          | 7.3          | 7.6          | 7.9          | 8.3          | 8.5          | 9.0          | 8.8          | 9.3          | 9.5          | 37.7                 |
| Gas                                                               | 6.5          | 6.3          | 5.6          | 5.5          | 5.9          | 6.1          | 5.9          | 6.2          | 6.9          | 5.9          | 23.4                 |
| Coal                                                              | 0.9          | 0.9          | 1.0          | 0.9          | 0.8          | 0.8          | 0.8          | 0.8          | 0.9          | 0.8          | 3.1                  |
| Electricity                                                       | 3.5          | 3.6          | 3.7          | 3.7          | 3.8          | 3.9          | 3.9          | 3.8          | 4.0          | 3.7          | 14.7                 |
| Heat                                                              | 1.4          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 1.1          | 1.0          | 1.0          | 1.0          | 4.2                  |
| Biomass                                                           | 3.8          | 3.7          | 3.6          | 3.8          | 3.8          | 3.8          | 3.8          | 4.0          | 4.2          | 4.3          | 16.9                 |
| <b>Electricity generation, by source</b>                          | <b>5.1</b>   | <b>5.6</b>   | <b>5.7</b>   | <b>5.6</b>   | <b>5.5</b>   | <b>5.6</b>   | <b>5.1</b>   | <b>4.8</b>   | <b>5.1</b>   | <b>4.8</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 1.4                  |
| Gas                                                               | 0.8          | 0.7          | 0.8          | 0.8          | 0.9          | 0.9          | 0.8          | 0.8          | 0.9          | 0.7          | 14.3                 |
| Coal                                                              | 1.5          | 1.5          | 1.6          | 1.4          | 1.4          | 1.4          | 1.2          | 0.8          | 0.9          | 1.0          | 21.7                 |
| Nuclear                                                           | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 0.9          | 19.7                 |
| Hydro                                                             | 1.3          | 1.7          | 1.5          | 1.6          | 1.3          | 1.6          | 1.4          | 1.4          | 1.5          | 1.3          | 26.1                 |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 1.1                  |
| Wind                                                              | 0.4          | 0.5          | 0.6          | 0.6          | 0.6          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 12.5                 |
| Solar                                                             | 0.0          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.2          | 3.2                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>23.1</b>  | <b>23.0</b>  | <b>22.8</b>  | <b>23.1</b>  | <b>24.0</b>  | <b>24.4</b>  | <b>24.7</b>  | <b>24.6</b>  | <b>26.3</b>  | <b>25.1</b>  | <b>100.0</b>         |
| Industry                                                          | 6.3          | 6.5          | 6.4          | 6.3          | 6.4          | 6.6          | 6.7          | 6.4          | 6.9          | 6.3          | 25.1                 |
| Transport                                                         | 5.2          | 5.3          | 5.4          | 5.8          | 6.2          | 6.4          | 6.6          | 6.5          | 6.9          | 7.0          | 27.9                 |
| Residential/Commercial                                            | 9.6          | 9.2          | 9.2          | 9.3          | 9.6          | 9.6          | 9.5          | 9.6          | 10.4         | 9.7          | 38.7                 |
| <b>Oil final consumption, by sector</b>                           | <b>7.1</b>   | <b>7.3</b>   | <b>7.6</b>   | <b>7.9</b>   | <b>8.3</b>   | <b>8.5</b>   | <b>9.0</b>   | <b>8.8</b>   | <b>9.3</b>   | <b>9.5</b>   | <b>100.0</b>         |
| Industry                                                          | 0.8          | 0.9          | 1.0          | 0.9          | 0.9          | 1.0          | 1.2          | 1.1          | 1.1          | 1.1          | 12.1                 |
| Transport                                                         | 4.9          | 5.0          | 5.1          | 5.4          | 5.8          | 6.0          | 6.1          | 5.9          | 6.3          | 6.4          | 67.7                 |
| Residential/Commercial                                            | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.3          | 0.3          | 0.3          | 3.3                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>6.5</b>   | <b>6.3</b>   | <b>5.6</b>   | <b>5.5</b>   | <b>5.9</b>   | <b>6.1</b>   | <b>5.9</b>   | <b>6.2</b>   | <b>6.9</b>   | <b>5.9</b>   | <b>100.0</b>         |
| Industry                                                          | 2.4          | 2.5          | 2.2          | 2.1          | 2.2          | 2.3          | 2.1          | 2.2          | 2.4          | 2.1          | 35.1                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 3.2          | 2.9          | 3.0          | 3.0          | 3.2          | 3.3          | 3.3          | 3.5          | 4.0          | 3.4          | 57.5                 |
| <b>Refined products consumption</b>                               | <b>7.1</b>   | <b>7.3</b>   | <b>7.5</b>   | <b>7.9</b>   | <b>8.3</b>   | <b>8.5</b>   | <b>9.0</b>   | <b>8.7</b>   | <b>9.2</b>   | <b>9.4</b>   | <b>100.0</b>         |
| Gasoline                                                          | 1.3          | 1.4          | 1.3          | 1.4          | 1.4          | 1.4          | 1.4          | 1.3          | 1.4          | 1.3          | 14.1                 |
| Diesel                                                            | 4.2          | 4.2          | 4.4          | 4.7          | 5.1          | 5.3          | 5.5          | 5.4          | 5.9          | 6.0          | 63.4                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 0.9                  |
| LPG                                                               | 0.4          | 0.5          | 0.4          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 5.0                  |
| <b>Imports</b>                                                    | <b>8.9</b>   | <b>9.7</b>   | <b>9.8</b>   | <b>11.6</b>  | <b>12.1</b>  | <b>12.9</b>  | <b>14.2</b>  | <b>12.4</b>  | <b>14.1</b>  | <b>15.1</b>  | <b>100.0</b>         |
| Oil                                                               | 7.7          | 9.2          | 9.6          | 10.4         | 11.1         | 11.6         | 12.1         | 10.7         | 11.2         | 12.9         | 85.1                 |
| Gas                                                               | 1.2          | 0.5          | 0.2          | 1.2          | 1.0          | 1.2          | 2.1          | 1.7          | 2.8          | 2.2          | 14.9                 |
| Gasoline                                                          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.6                  |
| Diesel                                                            | 1.1          | 1.0          | 1.2          | 1.2          | 1.4          | 1.5          | 1.2          | 1.3          | 1.9          | 2.2          | 14.3                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 0.1          | 0.5                  |
| LPG                                                               | 0.1          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.2          | 0.2          | 0.3          | 0.2          | 1.5                  |
| <b>Exports</b>                                                    | <b>3.9</b>   | <b>4.8</b>   | <b>4.9</b>   | <b>5.3</b>   | <b>5.2</b>   | <b>5.5</b>   | <b>5.6</b>   | <b>4.6</b>   | <b>4.6</b>   | <b>5.7</b>   | <b>100.0</b>         |
| Oil                                                               | 3.9          | 4.8          | 4.9          | 5.3          | 5.2          | 5.5          | 5.6          | 4.5          | 4.1          | 4.9          | 86.5                 |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.6          | 0.8          | 13.5                 |
| Gasoline                                                          | 1.8          | 1.8          | 1.9          | 2.2          | 2.0          | 2.3          | 2.3          | 2.0          | 1.7          | 2.2          | 39.1                 |
| Diesel                                                            | 0.9          | 1.7          | 1.6          | 1.7          | 1.6          | 1.6          | 1.6          | 1.2          | 0.9          | 1.2          | 21.3                 |
| Heating Oil                                                       | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 1.5                  |
| Aviation Jet                                                      | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.2          | 0.2          | 0.3          | 5.8                  |
| LPG                                                               | 0.2          | 0.2          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.3          | 0.3          | 0.4          | 6.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>69.6</b>  | <b>69.1</b>  | <b>69.4</b>  | <b>67.8</b>  | <b>71.1</b>  | <b>71.6</b>  | <b>70.1</b>  | <b>64.9</b>  | <b>71.1</b>  | <b>66.8</b>  | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>173.4</b> | <b>166.3</b> | <b>162.1</b> | <b>151.3</b> | <b>147.7</b> | <b>142.5</b> | <b>133.8</b> | <b>128.8</b> | <b>133.2</b> | <b>119.4</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>54.0</b>  | <b>51.7</b>  | <b>50.6</b>  | <b>49.0</b>  | <b>47.6</b>  | <b>46.4</b>  | <b>45.0</b>  | <b>46.2</b>  | <b>47.0</b>  | <b>42.8</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>79.4</b>  | <b>75.8</b>  | <b>74.2</b>  | <b>70.8</b>  | <b>69.1</b>  | <b>66.7</b>  | <b>63.3</b>  | <b>64.0</b>  | <b>64.2</b>  | <b>57.8</b>  | -                    |

\*Heat is included

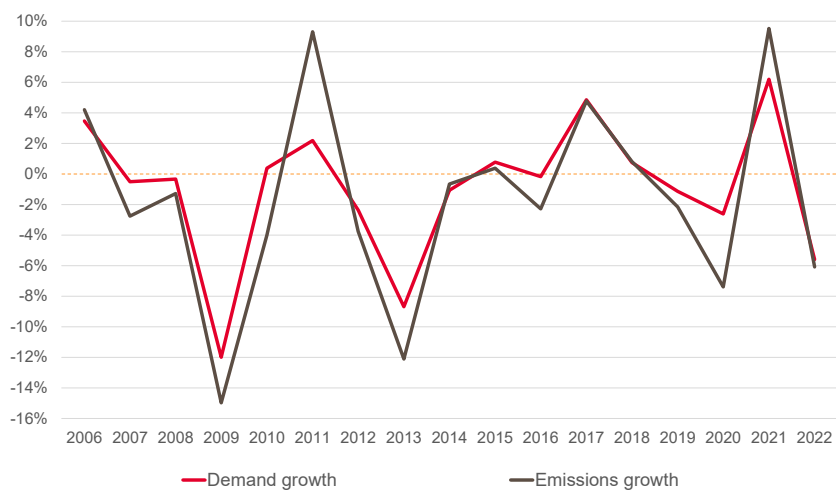
Primary energy demand mix



Electricity generation by source



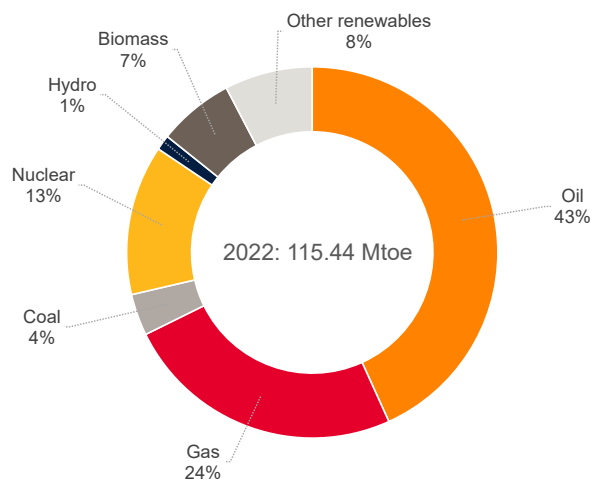
Primary energy demand and CO<sub>2</sub> emissions growth



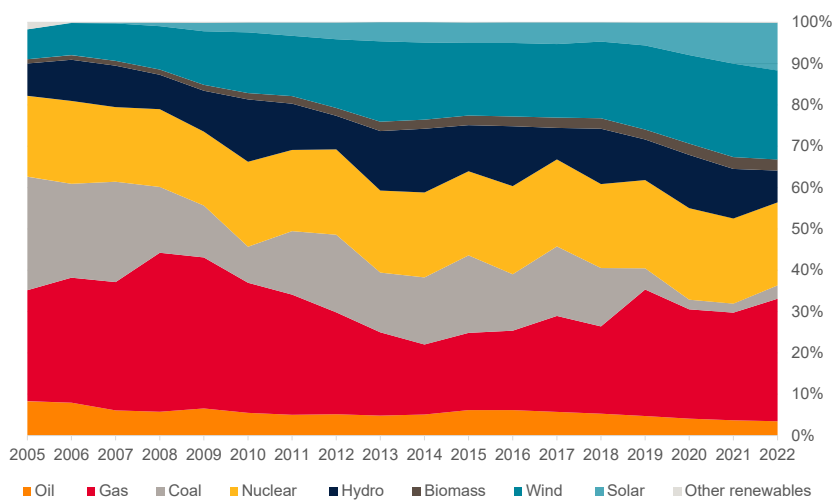
| Spain<br>(Million toe)                                            | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>116.2</b> | <b>113.4</b> | <b>117.5</b> | <b>117.9</b> | <b>124.1</b> | <b>123.7</b> | <b>120.2</b> | <b>108.4</b> | <b>115.0</b> | <b>115.4</b> | <b>100.0</b>         |
| Oil                                                               | 47.5         | 46.5         | 48.6         | 49.9         | 52.6         | 52.7         | 51.3         | 44.1         | 48.4         | 50.5         | 43.7                 |
| Gas                                                               | 26.2         | 23.7         | 24.5         | 25.0         | 27.3         | 27.1         | 30.9         | 27.9         | 29.5         | 28.6         | 24.8                 |
| Coal                                                              | 11.0         | 11.4         | 13.3         | 10.5         | 12.8         | 11.3         | 5.0          | 2.9          | 3.1          | 4.2          | 3.7                  |
| Nuclear                                                           | 14.8         | 14.9         | 14.9         | 15.3         | 15.1         | 14.5         | 15.2         | 15.2         | 14.7         | 15.3         | 13.2                 |
| Hydro                                                             | 3.2          | 3.4          | 2.4          | 3.1          | 1.6          | 3.0          | 2.1          | 2.6          | 2.5          | 1.5          | 1.3                  |
| Biomass                                                           | 7.3          | 7.2          | 7.2          | 6.9          | 7.3          | 7.8          | 7.8          | 7.6          | 7.8          | 7.7          | 6.7                  |
| Other renewables                                                  | 6.6          | 6.4          | 6.2          | 6.2          | 6.3          | 6.2          | 6.9          | 7.4          | 8.4          | 8.9          | 7.7                  |
| Electricity balance of trade*                                     | -0.4         | -0.1         | 0.3          | 0.9          | 1.1          | 1.3          | 0.9          | 0.6          | 0.4          | -1.3         | -1.1                 |
| <b>Total final consumption, by source</b>                         | <b>82.1</b>  | <b>79.8</b>  | <b>80.7</b>  | <b>82.8</b>  | <b>84.9</b>  | <b>87.0</b>  | <b>86.7</b>  | <b>77.8</b>  | <b>83.7</b>  | <b>82.9</b>  | <b>100.0</b>         |
| Oil                                                               | 40.3         | 38.9         | 40.6         | 42.4         | 43.3         | 44.3         | 44.3         | 37.9         | 41.8         | 44.4         | 53.5                 |
| Gas                                                               | 15.2         | 14.7         | 13.3         | 13.8         | 14.0         | 14.7         | 14.9         | 14.2         | 15.3         | 12.4         | 15.0                 |
| Coal                                                              | 1.7          | 1.4          | 1.4          | 1.3          | 1.6          | 1.5          | 1.3          | 1.1          | 1.3          | 1.2          | 1.5                  |
| Electricity                                                       | 19.8         | 19.5         | 19.9         | 20.0         | 20.5         | 20.5         | 20.1         | 18.9         | 19.6         | 19.2         | 23.1                 |
| Heat                                                              | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.4                  |
| Biomass                                                           | 5.0          | 5.0          | 5.2          | 5.0          | 5.3          | 5.7          | 5.8          | 5.4          | 5.4          | 5.4          | 6.5                  |
| <b>Electricity generation, by source</b>                          | <b>24.6</b>  | <b>24.0</b>  | <b>24.2</b>  | <b>23.6</b>  | <b>23.7</b>  | <b>23.6</b>  | <b>23.5</b>  | <b>22.7</b>  | <b>23.6</b>  | <b>25.1</b>  | <b>100.0</b>         |
| Oil                                                               | 1.2          | 1.2          | 1.5          | 1.5          | 1.4          | 1.2          | 1.1          | 0.9          | 0.9          | 0.9          | 3.4                  |
| Gas                                                               | 4.9          | 4.1          | 4.5          | 4.5          | 5.5          | 5.0          | 7.2          | 6.0          | 6.1          | 7.4          | 29.7                 |
| Coal                                                              | 3.6          | 3.9          | 4.5          | 3.2          | 4.0          | 3.3          | 1.2          | 0.5          | 0.5          | 0.8          | 3.2                  |
| Nuclear                                                           | 4.9          | 4.9          | 4.9          | 5.0          | 5.0          | 4.8          | 5.0          | 5.0          | 4.9          | 5.0          | 20.1                 |
| Hydro                                                             | 3.5          | 3.7          | 2.7          | 3.4          | 1.8          | 3.2          | 2.3          | 2.9          | 2.8          | 1.9          | 7.7                  |
| Biomass                                                           | 0.6          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.7          | 0.7          | 2.7                  |
| Wind                                                              | 4.8          | 4.5          | 4.2          | 4.2          | 4.2          | 4.4          | 4.8          | 4.9          | 5.3          | 5.4          | 21.5                 |
| Solar                                                             | 1.1          | 1.2          | 1.2          | 1.2          | 1.2          | 1.1          | 1.3          | 1.8          | 2.3          | 2.9          | 11.5                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| <b>Total final consumption, by sector</b>                         | <b>82.1</b>  | <b>79.8</b>  | <b>80.7</b>  | <b>82.8</b>  | <b>84.9</b>  | <b>87.0</b>  | <b>86.7</b>  | <b>77.8</b>  | <b>83.7</b>  | <b>82.9</b>  | <b>100.0</b>         |
| Industry                                                          | 20.7         | 20.1         | 19.4         | 20.5         | 21.2         | 21.3         | 21.2         | 19.3         | 20.7         | 18.3         | 22.1                 |
| Transport                                                         | 28.3         | 28.5         | 29.4         | 30.6         | 31.7         | 32.5         | 32.9         | 26.1         | 30.3         | 32.3         | 39.0                 |
| Residential/Commercial                                            | 24.9         | 23.9         | 24.7         | 23.9         | 24.2         | 25.0         | 24.3         | 23.5         | 24.0         | 23.5         | 28.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>40.3</b>  | <b>38.9</b>  | <b>40.6</b>  | <b>42.4</b>  | <b>43.3</b>  | <b>44.3</b>  | <b>44.3</b>  | <b>37.9</b>  | <b>41.8</b>  | <b>44.4</b>  | <b>100.0</b>         |
| Industry                                                          | 2.7          | 2.6          | 2.7          | 2.9          | 2.9          | 3.0          | 2.9          | 2.5          | 2.3          | 2.4          | 5.4                  |
| Transport                                                         | 27.0         | 27.1         | 28.0         | 29.1         | 30.0         | 30.4         | 30.8         | 24.2         | 28.4         | 30.6         | 68.9                 |
| Residential/Commercial                                            | 4.3          | 3.9          | 4.1          | 4.0          | 3.9          | 4.1          | 3.6          | 3.5          | 3.6          | 3.8          | 8.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>15.2</b>  | <b>14.7</b>  | <b>13.3</b>  | <b>13.8</b>  | <b>14.0</b>  | <b>14.7</b>  | <b>14.9</b>  | <b>14.2</b>  | <b>15.3</b>  | <b>12.4</b>  | <b>100.0</b>         |
| Industry                                                          | 9.0          | 8.8          | 7.4          | 7.9          | 8.1          | 8.4          | 8.6          | 8.1          | 8.8          | 6.5          | 52.2                 |
| Transport                                                         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 1.4                  |
| Residential/Commercial                                            | 4.7          | 4.5          | 5.1          | 5.1          | 5.2          | 5.6          | 5.4          | 5.4          | 5.7          | 5.3          | 42.5                 |
| <b>Refined products consumption</b>                               | <b>40.3</b>  | <b>38.9</b>  | <b>40.6</b>  | <b>42.4</b>  | <b>43.3</b>  | <b>44.3</b>  | <b>44.3</b>  | <b>37.9</b>  | <b>41.8</b>  | <b>44.4</b>  | <b>100.0</b>         |
| Gasoline                                                          | 4.6          | 4.6          | 4.6          | 4.8          | 4.9          | 5.1          | 5.5          | 4.3          | 5.4          | 5.9          | 13.2                 |
| Diesel                                                            | 25.9         | 25.7         | 27.1         | 27.6         | 28.1         | 28.4         | 28.1         | 24.4         | 26.9         | 27.3         | 61.5                 |
| Heating Oil                                                       | 0.8          | 0.6          | 0.5          | 0.6          | 0.9          | 0.9          | 0.9          | 0.6          | 0.6          | 0.8          | 1.7                  |
| Aviation Jet                                                      | 1.7          | 1.8          | 1.9          | 2.0          | 2.2          | 2.3          | 2.4          | 1.0          | 1.7          | 2.9          | 6.6                  |
| LPG                                                               | 1.8          | 1.9          | 2.1          | 2.8          | 2.6          | 3.0          | 2.7          | 2.4          | 2.0          | 2.3          | 5.1                  |
| <b>Imports</b>                                                    | <b>110.3</b> | <b>112.5</b> | <b>112.8</b> | <b>114.7</b> | <b>120.6</b> | <b>119.8</b> | <b>121.1</b> | <b>103.4</b> | <b>110.0</b> | <b>118.3</b> | <b>100.0</b>         |
| Oil                                                               | 79.5         | 80.8         | 84.7         | 86.5         | 90.5         | 89.5         | 88.8         | 75.1         | 77.9         | 83.7         | 70.8                 |
| Gas                                                               | 30.9         | 31.7         | 28.2         | 28.2         | 30.1         | 30.3         | 32.4         | 28.3         | 32.2         | 34.5         | 29.2                 |
| Gasoline                                                          | 0.1          | 0.1          | 0.1          | 0.2          | 0.4          | 0.5          | 1.5          | 1.1          | 0.5          | 0.8          | 0.7                  |
| Diesel                                                            | 4.8          | 3.9          | 4.8          | 4.9          | 5.2          | 4.9          | 5.1          | 6.0          | 6.8          | 4.9          | 4.1                  |
| Heating Oil                                                       | 4.2          | 5.4          | 4.3          | 5.9          | 6.8          | 7.1          | 6.6          | 3.8          | 4.0          | 5.5          | 4.7                  |
| Aviation Jet                                                      | 1.9          | 2.1          | 2.3          | 2.3          | 2.4          | 1.9          | 1.8          | 1.3          | 0.7          | 1.7          | 1.4                  |
| LPG                                                               | 0.4          | 0.7          | 0.9          | 1.6          | 1.5          | 1.5          | 1.4          | 1.1          | 0.8          | 1.2          | 1.0                  |
| <b>Exports</b>                                                    | <b>27.7</b>  | <b>29.0</b>  | <b>27.8</b>  | <b>28.8</b>  | <b>30.5</b>  | <b>28.6</b>  | <b>25.3</b>  | <b>24.5</b>  | <b>25.5</b>  | <b>25.8</b>  | <b>100.0</b>         |
| Oil                                                               | 22.6         | 21.9         | 23.4         | 25.3         | 28.0         | 25.7         | 24.3         | 23.4         | 22.9         | 20.8         | 80.6                 |
| Gas                                                               | 5.1          | 7.2          | 4.4          | 3.5          | 2.5          | 2.8          | 1.0          | 1.0          | 2.6          | 5.0          | 19.4                 |
| Gasoline                                                          | 3.6          | 3.5          | 5.0          | 4.7          | 4.8          | 4.6          | 5.0          | 4.6          | 4.8          | 4.3          | 16.5                 |
| Diesel                                                            | 5.5          | 5.2          | 5.5          | 5.5          | 6.7          | 6.3          | 6.1          | 7.3          | 6.5          | 5.1          | 19.7                 |
| Heating Oil                                                       | 2.9          | 2.9          | 2.2          | 2.9          | 3.5          | 3.6          | 2.6          | 2.4          | 2.1          | 1.9          | 7.4                  |
| Aviation Jet                                                      | 0.4          | 0.4          | 0.5          | 0.7          | 0.6          | 0.6          | 0.4          | 0.5          | 0.8          | 0.4          | 1.7                  |
| LPG                                                               | 0.4          | 0.5          | 0.4          | 0.5          | 0.6          | 0.5          | 0.6          | 0.5          | 0.6          | 0.6          | 2.3                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>242.0</b> | <b>240.6</b> | <b>256.3</b> | <b>248.2</b> | <b>263.9</b> | <b>259.1</b> | <b>240.2</b> | <b>200.8</b> | <b>216.1</b> | <b>227.6</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>157.2</b> | <b>154.1</b> | <b>158.1</b> | <b>148.6</b> | <b>153.4</b> | <b>147.3</b> | <b>133.7</b> | <b>125.4</b> | <b>128.4</b> | <b>128.2</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>50.1</b>  | <b>48.4</b>  | <b>47.1</b>  | <b>46.6</b>  | <b>46.5</b>  | <b>46.5</b>  | <b>45.3</b>  | <b>45.0</b>  | <b>46.5</b>  | <b>43.6</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>75.4</b>  | <b>72.7</b>  | <b>72.5</b>  | <b>70.6</b>  | <b>72.2</b>  | <b>70.3</b>  | <b>66.9</b>  | <b>67.7</b>  | <b>68.3</b>  | <b>65.0</b>  | -                    |

\*Heat is included

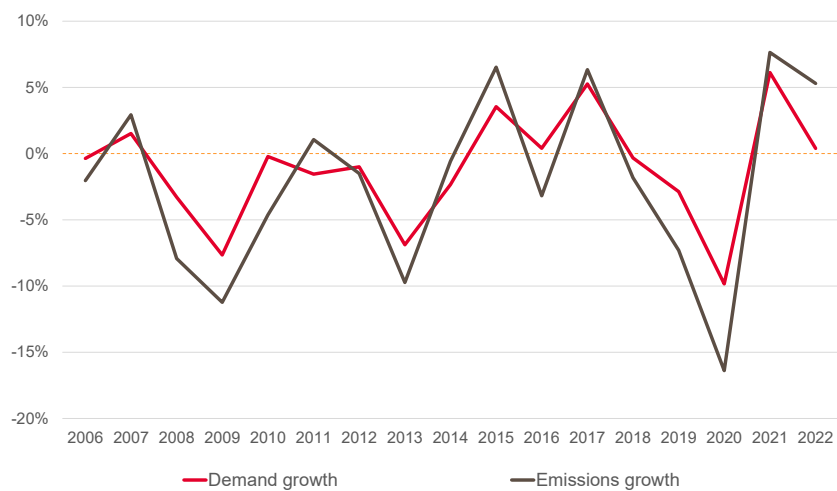
### Primary energy demand mix



### Electricity generation by source



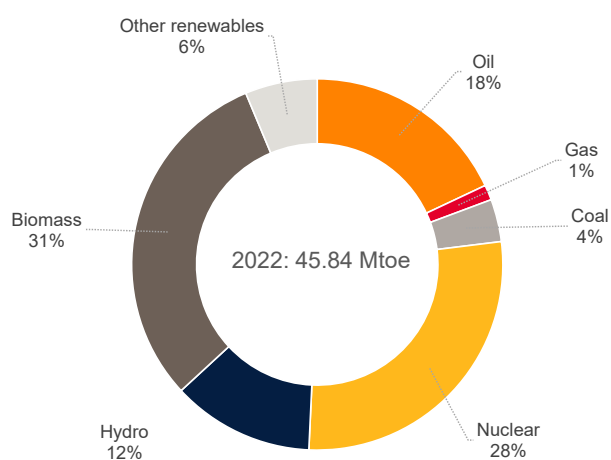
### Primary energy demand and CO<sub>2</sub> emissions growth



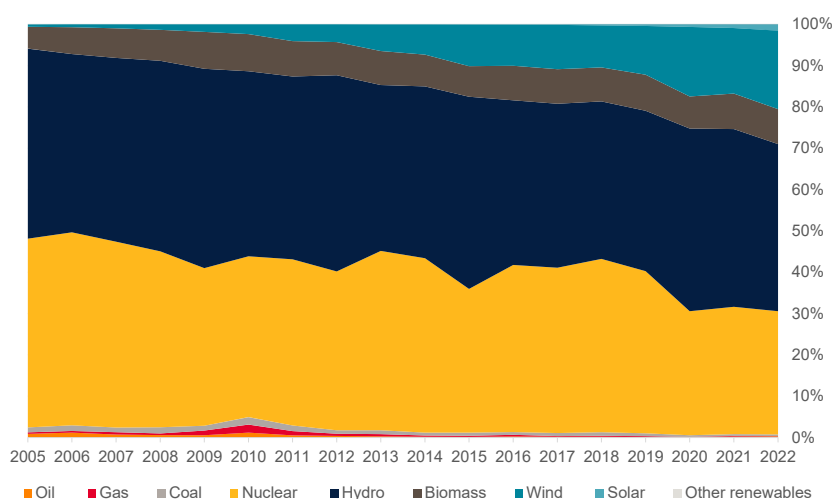
| Sweden<br>(Million toe)                                           | 2013         | 2014         | 2015        | 2016        | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>49.1</b>  | <b>47.8</b>  | <b>44.1</b> | <b>47.5</b> | <b>48.8</b> | <b>49.8</b> | <b>48.6</b> | <b>43.9</b> | <b>47.2</b> | <b>45.8</b> | <b>100.0</b>         |
| Oil                                                               | 11.7         | 11.4         | 8.6         | 10.0        | 9.8         | 10.7        | 9.9         | 8.4         | 9.3         | 8.7         | 19.0                 |
| Gas                                                               | 1.0          | 0.8          | 0.7         | 0.8         | 0.9         | 1.0         | 1.0         | 1.3         | 1.2         | 0.6         | 1.4                  |
| Coal                                                              | 2.2          | 2.1          | 2.1         | 2.1         | 2.0         | 2.2         | 2.0         | 1.5         | 1.7         | 1.8         | 3.9                  |
| Nuclear                                                           | 17.3         | 16.9         | 14.7        | 16.4        | 17.1        | 17.9        | 17.2        | 12.8        | 13.8        | 13.4        | 29.3                 |
| Hydro                                                             | 5.3          | 5.5          | 6.5         | 5.3         | 5.6         | 5.4         | 5.6         | 6.2         | 6.4         | 6.0         | 13.1                 |
| Biomass                                                           | 11.4         | 11.3         | 11.8        | 12.3        | 13.2        | 12.5        | 13.2        | 13.1        | 14.5        | 14.8        | 32.4                 |
| Other renewables                                                  | 0.8          | 1.0          | 1.4         | 1.3         | 1.5         | 1.5         | 1.8         | 2.5         | 2.5         | 3.0         | 6.7                  |
| Electricity balance of trade*                                     | -0.7         | -1.1         | -1.7        | -0.8        | -1.4        | -1.3        | -2.1        | -1.9        | -2.0        | -2.7        | -5.8                 |
| <b>Total final consumption, by source</b>                         | <b>33.3</b>  | <b>32.4</b>  | <b>32.8</b> | <b>33.6</b> | <b>33.9</b> | <b>33.2</b> | <b>33.0</b> | <b>32.0</b> | <b>33.3</b> | <b>32.1</b> | <b>100.0</b>         |
| Oil                                                               | 10.2         | 9.8          | 9.5         | 9.6         | 9.5         | 8.9         | 9.0         | 7.8         | 8.3         | 7.7         | 23.9                 |
| Gas                                                               | 0.6          | 0.6          | 0.7         | 0.6         | 0.8         | 0.8         | 0.8         | 0.8         | 0.6         | 0.5         | 1.4                  |
| Coal                                                              | 1.3          | 1.3          | 1.3         | 1.3         | 1.3         | 1.2         | 1.3         | 1.1         | 1.2         | 1.2         | 3.8                  |
| Electricity                                                       | 10.8         | 10.5         | 10.7        | 11.0        | 10.9        | 11.0        | 10.7        | 10.6        | 11.0        | 10.5        | 32.5                 |
| Heat                                                              | 4.5          | 4.2          | 4.2         | 4.4         | 4.4         | 4.4         | 4.3         | 4.1         | 4.7         | 4.6         | 14.2                 |
| Biomass                                                           | 6.0          | 6.1          | 6.4         | 6.7         | 6.9         | 6.9         | 6.9         | 7.4         | 7.4         | 7.8         | 24.2                 |
| <b>Electricity generation, by source</b>                          | <b>13.2</b>  | <b>13.2</b>  | <b>13.9</b> | <b>13.4</b> | <b>14.1</b> | <b>14.1</b> | <b>14.5</b> | <b>14.1</b> | <b>14.8</b> | <b>14.9</b> | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.3                  |
| Gas                                                               | 0.1          | 0.0          | 0.0         | 0.1         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.1                  |
| Coal                                                              | 0.1          | 0.1          | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.4                  |
| Nuclear                                                           | 5.7          | 5.6          | 4.8         | 5.4         | 5.6         | 5.9         | 5.7         | 4.2         | 4.6         | 4.4         | 29.8                 |
| Hydro                                                             | 5.3          | 5.5          | 6.5         | 5.3         | 5.6         | 5.4         | 5.6         | 6.2         | 6.4         | 6.0         | 40.4                 |
| Biomass                                                           | 1.1          | 1.0          | 1.0         | 1.1         | 1.2         | 1.2         | 1.3         | 1.1         | 1.3         | 1.3         | 8.5                  |
| Wind                                                              | 0.8          | 1.0          | 1.4         | 1.3         | 1.5         | 1.4         | 1.7         | 2.4         | 2.3         | 2.8         | 19.0                 |
| Solar                                                             | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.1         | 0.1         | 0.1         | 0.2         | 1.5                  |
| Other renewables                                                  | -0.0         | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | -0.0        | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>33.3</b>  | <b>32.4</b>  | <b>32.8</b> | <b>33.6</b> | <b>33.9</b> | <b>33.2</b> | <b>33.0</b> | <b>32.0</b> | <b>33.3</b> | <b>32.1</b> | <b>100.0</b>         |
| Industry                                                          | 11.7         | 11.5         | 11.7        | 11.6        | 11.7        | 11.6        | 11.5        | 11.7        | 11.7        | 11.3        | 35.3                 |
| Transport                                                         | 7.3          | 7.3          | 7.5         | 7.5         | 7.7         | 7.5         | 7.4         | 7.0         | 7.2         | 7.4         | 23.0                 |
| Residential/Commercial                                            | 11.4         | 11.0         | 11.2        | 11.6        | 11.5        | 11.4        | 11.2        | 11.0        | 11.9        | 11.4        | 35.5                 |
| <b>Oil final consumption, by sector</b>                           | <b>10.2</b>  | <b>9.8</b>   | <b>9.5</b>  | <b>9.6</b>  | <b>9.5</b>  | <b>8.9</b>  | <b>9.0</b>  | <b>7.8</b>  | <b>8.3</b>  | <b>7.7</b>  | <b>100.0</b>         |
| Industry                                                          | 1.1          | 1.0          | 0.9         | 1.0         | 1.0         | 1.0         | 0.9         | 0.8         | 0.9         | 0.8         | 10.6                 |
| Transport                                                         | 6.4          | 6.2          | 6.3         | 6.0         | 5.9         | 5.6         | 5.6         | 5.1         | 5.2         | 5.1         | 66.1                 |
| Residential/Commercial                                            | 0.3          | 0.3          | 0.3         | 0.2         | 0.2         | 0.2         | 0.2         | 0.3         | 0.3         | 0.3         | 3.3                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>0.6</b>   | <b>0.6</b>   | <b>0.7</b>  | <b>0.6</b>  | <b>0.8</b>  | <b>0.8</b>  | <b>0.8</b>  | <b>0.8</b>  | <b>0.6</b>  | <b>0.5</b>  | <b>100.0</b>         |
| Industry                                                          | 0.3          | 0.3          | 0.4         | 0.3         | 0.4         | 0.3         | 0.3         | 0.3         | 0.4         | 0.3         | 55.4                 |
| Transport                                                         | 0.1          | 0.1          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 1.5                  |
| Residential/Commercial                                            | 0.1          | 0.1          | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 18.1                 |
| <b>Refined products consumption</b>                               | <b>10.2</b>  | <b>9.8</b>   | <b>9.5</b>  | <b>9.6</b>  | <b>9.5</b>  | <b>8.9</b>  | <b>9.0</b>  | <b>7.8</b>  | <b>8.3</b>  | <b>7.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 2.8          | 2.7          | 2.6         | 2.5         | 2.4         | 2.2         | 2.2         | 2.0         | 2.0         | 2.0         | 25.8                 |
| Diesel                                                            | 4.4          | 4.3          | 4.4         | 4.2         | 4.2         | 4.0         | 4.0         | 3.9         | 3.9         | 3.7         | 48.3                 |
| Heating Oil                                                       | 0.5          | 0.4          | 0.3         | 0.3         | 0.3         | 0.3         | 0.3         | 0.3         | 0.2         | 0.2         | 2.8                  |
| Aviation Jet                                                      | 0.2          | 0.2          | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.1         | 0.1         | 0.2         | 2.3                  |
| LPG                                                               | 1.1          | 1.0          | 1.0         | 1.2         | 1.1         | 0.9         | 1.0         | 0.9         | 1.0         | 0.8         | 9.8                  |
| <b>Imports</b>                                                    | <b>25.3</b>  | <b>27.8</b>  | <b>29.1</b> | <b>31.8</b> | <b>30.5</b> | <b>30.6</b> | <b>26.2</b> | <b>27.8</b> | <b>26.8</b> | <b>27.3</b> | <b>100.0</b>         |
| Oil                                                               | 24.4         | 27.1         | 28.4        | 31.0        | 29.6        | 29.6        | 25.3        | 26.5        | 25.6        | 26.6        | 97.6                 |
| Gas                                                               | 1.0          | 0.8          | 0.7         | 0.8         | 0.9         | 1.0         | 1.0         | 1.3         | 1.2         | 0.6         | 2.4                  |
| Gasoline                                                          | 1.3          | 1.9          | 1.8         | 2.0         | 1.6         | 0.8         | 0.6         | 0.9         | 0.9         | 1.2         | 4.5                  |
| Diesel                                                            | 2.2          | 2.4          | 2.6         | 3.1         | 2.9         | 2.3         | 2.6         | 3.4         | 2.7         | 3.0         | 11.0                 |
| Heating Oil                                                       | 0.8          | 0.4          | 0.7         | 2.0         | 1.6         | 1.8         | 0.8         | 0.8         | 0.6         | 0.5         | 1.9                  |
| Aviation Jet                                                      | 0.6          | 0.9          | 0.8         | 1.0         | 1.0         | 1.1         | 1.0         | 0.7         | 0.2         | 0.7         | 2.6                  |
| LPG                                                               | 1.1          | 1.2          | 1.1         | 1.5         | 1.3         | 1.2         | 1.4         | 1.2         | 1.2         | 1.0         | 3.6                  |
| <b>Exports</b>                                                    | <b>10.2</b>  | <b>12.9</b>  | <b>15.5</b> | <b>17.2</b> | <b>18.3</b> | <b>17.4</b> | <b>11.8</b> | <b>13.5</b> | <b>17.1</b> | <b>16.3</b> | <b>100.0</b>         |
| Oil                                                               | 10.2         | 12.9         | 15.5        | 17.2        | 18.3        | 17.4        | 11.8        | 13.5        | 17.0        | 16.3        | 99.9                 |
| Gas                                                               | 0.0          | 0.0          | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.1                  |
| Gasoline                                                          | 2.1          | 3.7          | 4.1         | 3.8         | 4.0         | 3.8         | 2.0         | 2.7         | 3.9         | 4.5         | 27.4                 |
| Diesel                                                            | 3.6          | 4.9          | 5.6         | 5.4         | 7.0         | 6.4         | 3.9         | 4.5         | 6.7         | 6.1         | 37.4                 |
| Heating Oil                                                       | 2.3          | 1.8          | 2.8         | 4.5         | 4.1         | 4.3         | 3.2         | 3.0         | 2.7         | 3.7         | 22.6                 |
| Aviation Jet                                                      | 0.0          | 0.1          | 0.0         | 0.1         | 0.0         | 0.1         | 0.2         | 0.0         | 0.2         | 0.1         | 0.7                  |
| LPG                                                               | 0.3          | 0.4          | 0.6         | 0.8         | 0.7         | 0.6         | 0.8         | 0.7         | 0.9         | 0.7         | 4.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>40.7</b>  | <b>39.3</b>  | <b>39.0</b> | <b>39.1</b> | <b>39.0</b> | <b>36.4</b> | <b>35.7</b> | <b>34.2</b> | <b>36.8</b> | <b>37.0</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>90.6</b>  | <b>85.4</b>  | <b>81.1</b> | <b>79.6</b> | <b>77.4</b> | <b>70.8</b> | <b>68.1</b> | <b>67.3</b> | <b>69.1</b> | <b>67.6</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>69.5</b>  | <b>66.2</b>  | <b>64.5</b> | <b>63.9</b> | <b>62.4</b> | <b>60.5</b> | <b>58.7</b> | <b>59.5</b> | <b>58.9</b> | <b>56.2</b> | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>109.4</b> | <b>103.8</b> | <b>91.6</b> | <b>96.7</b> | <b>96.9</b> | <b>97.0</b> | <b>92.8</b> | <b>86.4</b> | <b>88.7</b> | <b>83.8</b> | -                    |

\*Heat is included

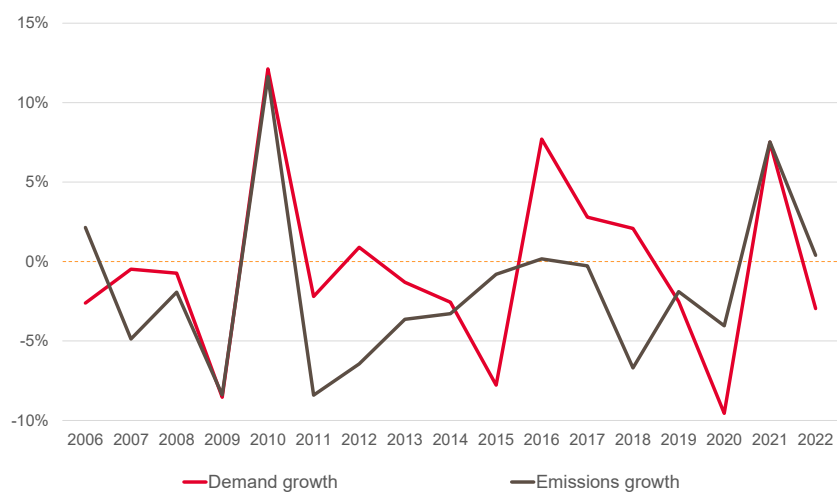
### Primary energy demand mix



### Electricity generation by source



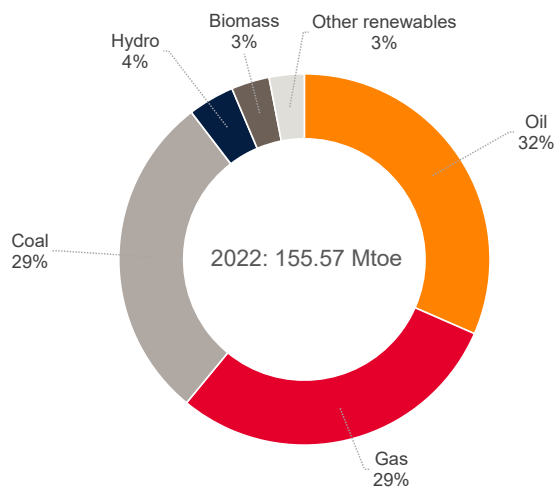
### Primary energy demand and CO<sub>2</sub> emissions growth



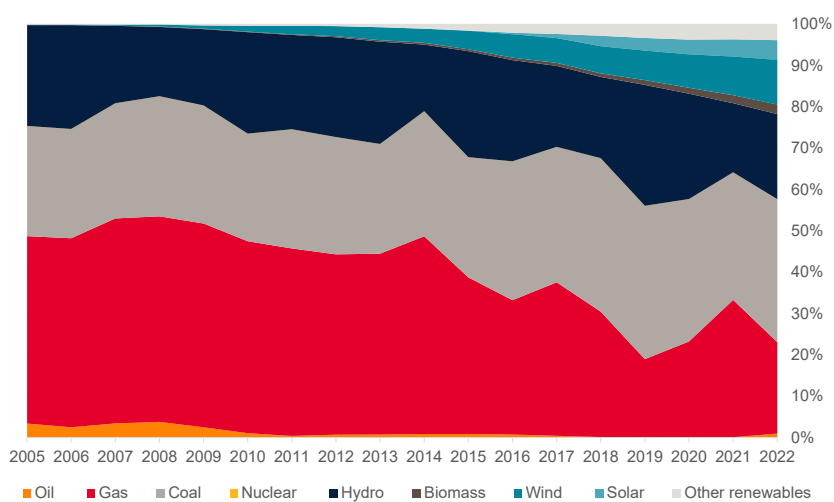
| <b>Turkey</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>113.6</b> | <b>119.4</b> | <b>129.0</b> | <b>137.1</b> | <b>147.3</b> | <b>144.8</b> | <b>146.7</b> | <b>147.4</b> | <b>159.9</b> | <b>155.6</b> | <b>100.0</b>         |
| Oil                                                               | 32.1         | 33.2         | 39.1         | 42.8         | 45.2         | 42.9         | 43.5         | 42.6         | 44.5         | 45.1         | 29.0                 |
| Gas                                                               | 37.6         | 40.2         | 39.4         | 38.3         | 44.2         | 41.0         | 37.0         | 39.7         | 49.1         | 42.0         | 27.0                 |
| Coal                                                              | 30.3         | 33.4         | 34.5         | 38.3         | 40.1         | 40.8         | 41.9         | 40.0         | 41.1         | 40.9         | 26.3                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 5.1          | 3.5          | 5.8          | 5.8          | 5.0          | 5.2          | 7.6          | 6.7          | 4.8          | 5.8          | 3.7                  |
| Biomass                                                           | 3.9          | 3.5          | 3.2          | 3.1          | 3.0          | 3.2          | 3.4          | 3.8          | 4.4          | 4.8          | 3.1                  |
| Other renewables                                                  | 0.6          | 0.7          | 1.0          | 1.4          | 1.8          | 2.4          | 2.7          | 3.1          | 3.9          | 4.4          | 2.8                  |
| Electricity balance of trade*                                     | 4.0          | 4.8          | 6.1          | 7.3          | 8.0          | 9.2          | 10.5         | 11.5         | 12.0         | 12.6         | 8.1                  |
| <b>Total final consumption, by source</b>                         | <b>87.8</b>  | <b>88.3</b>  | <b>95.8</b>  | <b>100.3</b> | <b>107.6</b> | <b>105.6</b> | <b>106.6</b> | <b>109.9</b> | <b>117.7</b> | <b>113.9</b> | <b>100.0</b>         |
| Oil                                                               | 31.5         | 31.2         | 35.4         | 38.2         | 40.7         | 40.1         | 40.1         | 40.4         | 41.9         | 41.9         | 36.8                 |
| Gas                                                               | 18.9         | 19.4         | 21.2         | 21.5         | 24.8         | 24.6         | 25.6         | 26.5         | 29.7         | 27.8         | 24.4                 |
| Coal                                                              | 13.4         | 13.4         | 14.2         | 14.7         | 14.8         | 12.7         | 12.8         | 14.3         | 15.2         | 13.3         | 11.7                 |
| Electricity                                                       | 16.9         | 17.7         | 18.4         | 19.6         | 21.1         | 21.9         | 21.8         | 22.2         | 24.3         | 24.2         | 21.3                 |
| Heat                                                              | 3.5          | 3.5          | 3.7          | 3.6          | 3.7          | 3.8          | 3.8          | 3.9          | 3.9          | 3.9          | 3.4                  |
| Biomass                                                           | 3.7          | 3.3          | 2.9          | 2.7          | 2.5          | 2.5          | 2.5          | 2.6          | 2.7          | 2.8          | 2.5                  |
| <b>Electricity generation, by source</b>                          | <b>20.7</b>  | <b>21.7</b>  | <b>22.5</b>  | <b>23.6</b>  | <b>25.6</b>  | <b>26.2</b>  | <b>26.1</b>  | <b>26.4</b>  | <b>28.8</b>  | <b>28.0</b>  | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.2          | 0.2          | 0.2          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3          | 1.0                  |
| Gas                                                               | 9.0          | 10.4         | 8.5          | 7.7          | 9.5          | 8.0          | 4.9          | 6.1          | 9.6          | 6.2          | 22.1                 |
| Coal                                                              | 5.5          | 6.6          | 6.6          | 7.9          | 8.4          | 9.7          | 9.7          | 9.1          | 8.9          | 9.7          | 34.6                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 5.1          | 3.5          | 5.8          | 5.8          | 5.0          | 5.2          | 7.6          | 6.7          | 4.8          | 5.8          | 20.6                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.3          | 0.4          | 0.6          | 0.6          | 2.3                  |
| Wind                                                              | 0.6          | 0.7          | 1.0          | 1.3          | 1.5          | 1.7          | 1.9          | 2.1          | 2.7          | 3.0          | 10.8                 |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.7          | 0.8          | 0.9          | 1.2          | 1.3          | 4.8                  |
| Other renewables                                                  | 0.1          | 0.2          | 0.3          | 0.5          | 0.6          | 0.7          | 0.9          | 1.0          | 1.0          | 1.1          | 3.8                  |
| <b>Total final consumption, by sector</b>                         | <b>87.8</b>  | <b>88.3</b>  | <b>95.8</b>  | <b>100.3</b> | <b>107.6</b> | <b>105.6</b> | <b>106.6</b> | <b>109.9</b> | <b>117.7</b> | <b>113.9</b> | <b>100.0</b>         |
| Industry                                                          | 26.3         | 27.3         | 28.4         | 28.6         | 34.8         | 35.0         | 32.9         | 35.0         | 39.1         | 37.8         | 33.2                 |
| Transport                                                         | 19.5         | 20.7         | 24.2         | 26.7         | 27.9         | 28.2         | 28.1         | 26.5         | 29.9         | 29.6         | 26.0                 |
| Residential/Commercial                                            | 30.4         | 30.2         | 32.4         | 33.1         | 35.7         | 33.1         | 35.5         | 36.9         | 37.8         | 35.4         | 31.0                 |
| <b>Oil final consumption, by sector</b>                           | <b>31.5</b>  | <b>31.2</b>  | <b>35.4</b>  | <b>38.2</b>  | <b>40.7</b>  | <b>40.1</b>  | <b>40.1</b>  | <b>40.4</b>  | <b>41.9</b>  | <b>41.9</b>  | <b>100.0</b>         |
| Industry                                                          | 1.0          | 0.8          | 1.0          | 0.8          | 4.4          | 4.4          | 3.4          | 4.1          | 3.4          | 3.6          | 8.5                  |
| Transport                                                         | 19.0         | 20.4         | 23.9         | 26.4         | 27.6         | 27.7         | 27.7         | 26.3         | 29.6         | 29.3         | 69.9                 |
| Residential/Commercial                                            | 1.0          | 1.0          | 1.0          | 0.9          | 1.2          | 1.0          | 1.0          | 0.9          | 0.9          | 0.8          | 2.0                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>18.9</b>  | <b>19.4</b>  | <b>21.2</b>  | <b>21.5</b>  | <b>24.8</b>  | <b>24.6</b>  | <b>25.6</b>  | <b>26.5</b>  | <b>29.7</b>  | <b>27.8</b>  | <b>100.0</b>         |
| Industry                                                          | 8.2          | 8.8          | 9.0          | 8.6          | 10.3         | 9.7          | 9.2          | 9.3          | 11.0         | 10.3         | 37.1                 |
| Transport                                                         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2                  |
| Residential/Commercial                                            | 10.4         | 10.1         | 11.7         | 12.1         | 13.9         | 13.7         | 15.6         | 16.4         | 17.7         | 16.5         | 59.5                 |
| <b>Refined products consumption</b>                               | <b>31.5</b>  | <b>31.2</b>  | <b>35.4</b>  | <b>38.2</b>  | <b>40.7</b>  | <b>40.1</b>  | <b>40.1</b>  | <b>40.4</b>  | <b>41.9</b>  | <b>41.9</b>  | <b>100.0</b>         |
| Gasoline                                                          | 2.0          | 2.0          | 2.2          | 2.3          | 2.4          | 2.3          | 2.4          | 2.4          | 3.0          | 3.3          | 7.8                  |
| Diesel                                                            | 17.3         | 18.1         | 20.3         | 22.1         | 23.9         | 23.7         | 23.6         | 23.2         | 25.6         | 24.8         | 59.3                 |
| Heating Oil                                                       | 0.7          | 0.5          | 0.5          | 0.2          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.1          | 0.3                  |
| Aviation Jet                                                      | 0.4          | 1.0          | 1.3          | 1.4          | 1.3          | 1.3          | 1.2          | 0.7          | 0.9          | 1.1          | 2.5                  |
| LPG                                                               | 4.2          | 4.2          | 4.4          | 4.7          | 4.6          | 4.7          | 4.7          | 4.4          | 4.4          | 4.3          | 10.3                 |
| <b>Imports</b>                                                    | <b>77.3</b>  | <b>81.9</b>  | <b>89.8</b>  | <b>89.4</b>  | <b>99.5</b>  | <b>91.3</b>  | <b>90.8</b>  | <b>88.0</b>  | <b>99.5</b>  | <b>100.0</b> | <b>100.0</b>         |
| Oil                                                               | 40.0         | 41.3         | 49.9         | 51.2         | 54.0         | 49.9         | 53.6         | 48.4         | 51.2         | 55.0         | 55.0                 |
| Gas                                                               | 37.3         | 40.6         | 39.9         | 38.2         | 45.5         | 41.4         | 37.2         | 39.6         | 48.3         | 45.0         | 45.0                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 12.2         | 13.3         | 12.8         | 13.3         | 14.9         | 15.3         | 11.5         | 9.1          | 11.2         | 11.0         | 11.0                 |
| Heating Oil                                                       | 0.7          | 1.1          | 1.6          | 1.7          | 2.1          | 2.4          | 2.0          | 2.0          | 1.6          | 2.3          | 2.3                  |
| Aviation Jet                                                      | 0.6          | 0.9          | 0.2          | 0.4          | 0.2          | 0.5          | 0.4          | 0.1          | 0.2          | 0.5          | 0.5                  |
| LPG                                                               | 3.4          | 3.5          | 3.8          | 3.8          | 3.8          | 3.7          | 3.5          | 3.4          | 3.5          | 3.6          | 3.6                  |
| <b>Exports</b>                                                    | <b>9.1</b>   | <b>7.7</b>   | <b>8.3</b>   | <b>7.2</b>   | <b>7.4</b>   | <b>5.6</b>   | <b>9.3</b>   | <b>8.2</b>   | <b>7.9</b>   | <b>10.2</b>  | <b>100.0</b>         |
| Oil                                                               | 8.5          | 7.2          | 7.7          | 6.6          | 6.9          | 5.1          | 8.7          | 7.8          | 7.6          | 9.7          | 95.3                 |
| Gas                                                               | 0.6          | 0.5          | 0.5          | 0.6          | 0.5          | 0.6          | 0.6          | 0.5          | 0.3          | 0.5          | 4.7                  |
| Gasoline                                                          | 2.7          | 2.2          | 3.3          | 3.1          | 3.4          | 2.6          | 3.1          | 2.0          | 1.8          | 2.1          | 20.5                 |
| Diesel                                                            | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.1          | 1.4          | 2.7          | 2.5          | 2.5          | 24.2                 |
| Heating Oil                                                       | 1.9          | 2.6          | 2.5          | 1.6          | 1.5          | 1.1          | 2.1          | 0.2          | 1.2          | 1.5          | 14.9                 |
| Aviation Jet                                                      | 2.9          | 1.0          | 0.3          | 0.2          | 0.3          | 0.1          | 0.7          | 0.6          | 0.0          | 0.3          | 3.1                  |
| LPG                                                               | 0.1          | 0.1          | 0.3          | 0.2          | 0.3          | 0.1          | 0.1          | 0.1          | 0.2          | 0.5          | 4.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>296.1</b> | <b>319.0</b> | <b>331.0</b> | <b>351.4</b> | <b>391.7</b> | <b>388.5</b> | <b>379.7</b> | <b>379.6</b> | <b>411.7</b> | <b>400.5</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>163.0</b> | <b>167.3</b> | <b>163.7</b> | <b>168.2</b> | <b>174.4</b> | <b>168.0</b> | <b>162.7</b> | <b>159.8</b> | <b>156.1</b> | <b>143.9</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>44.4</b>  | <b>43.4</b>  | <b>43.9</b>  | <b>44.1</b>  | <b>45.7</b>  | <b>43.6</b>  | <b>43.4</b>  | <b>43.5</b>  | <b>42.5</b>  | <b>38.8</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>62.5</b>  | <b>62.6</b>  | <b>63.8</b>  | <b>65.6</b>  | <b>65.6</b>  | <b>62.6</b>  | <b>62.9</b>  | <b>62.0</b>  | <b>60.6</b>  | <b>55.9</b>  | <b>-</b>             |

\*Heat is included

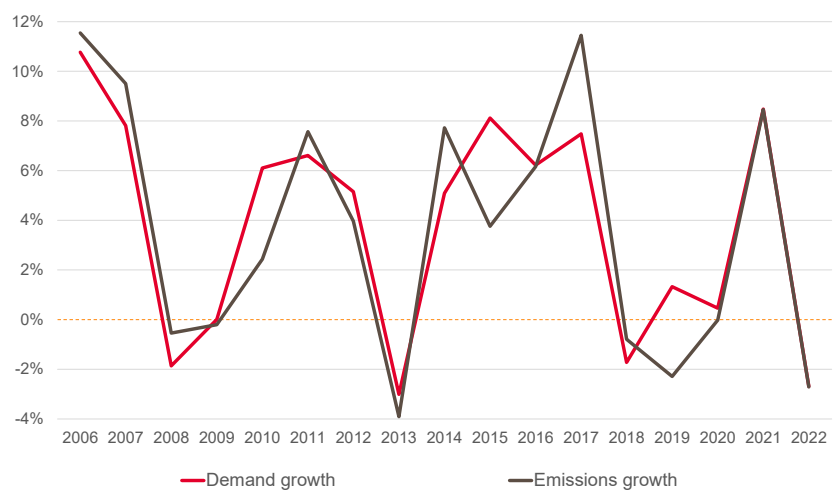
Primary energy demand mix



Electricity generation by source



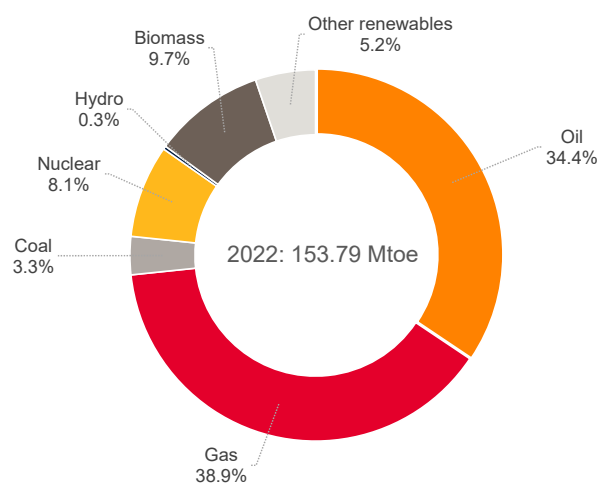
Primary energy demand and CO<sub>2</sub> emissions growth



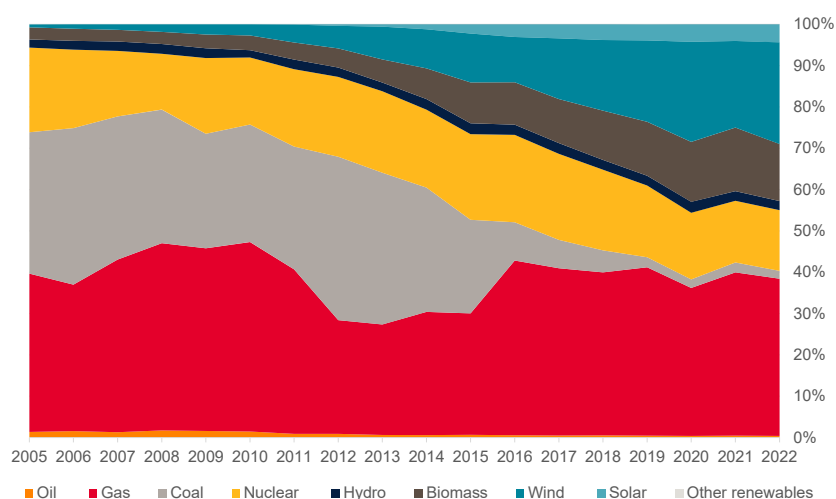
| United Kingdom<br>(Million toe)                                   | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>190.0</b> | <b>179.0</b> | <b>180.9</b> | <b>178.3</b> | <b>175.5</b> | <b>173.7</b> | <b>167.8</b> | <b>153.9</b> | <b>159.0</b> | <b>153.8</b> | <b>100.0</b>         |
| Oil                                                               | 57.1         | 58.3         | 60.2         | 61.2         | 61.7         | 60.7         | 58.7         | 49.3         | 51.7         | 53.0         | 34.5                 |
| Gas                                                               | 65.8         | 59.9         | 61.9         | 69.1         | 67.3         | 66.7         | 65.6         | 61.9         | 65.7         | 60.0         | 39.0                 |
| Coal                                                              | 37.3         | 30.2         | 23.9         | 12.2         | 9.9          | 8.3          | 5.9          | 5.5          | 5.7          | 5.1          | 3.3                  |
| Nuclear                                                           | 18.4         | 16.6         | 18.3         | 18.7         | 18.3         | 17.0         | 14.6         | 13.1         | 12.0         | 12.4         | 8.1                  |
| Hydro                                                             | 0.4          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 0.5          | 0.5          | 0.3                  |
| Biomass                                                           | 7.1          | 8.5          | 10.0         | 10.9         | 11.2         | 12.8         | 13.9         | 14.3         | 14.8         | 15.0         | 9.8                  |
| Other renewables                                                  | 2.6          | 3.1          | 4.1          | 4.1          | 5.3          | 6.0          | 6.6          | 7.6          | 6.6          | 8.1          | 5.3                  |
| Electricity balance of trade*                                     | 1.3          | 1.8          | 1.9          | 1.6          | 1.3          | 1.7          | 1.9          | 1.6          | 2.2          | -0.4         | -0.3                 |
| <b>Total final consumption, by source</b>                         | <b>130.5</b> | <b>123.1</b> | <b>127.0</b> | <b>128.6</b> | <b>128.0</b> | <b>128.4</b> | <b>125.7</b> | <b>115.0</b> | <b>121.1</b> | <b>115.5</b> | <b>100.0</b>         |
| Oil                                                               | 51.6         | 52.0         | 54.0         | 55.5         | 56.2         | 55.1         | 53.4         | 44.9         | 47.3         | 48.0         | 41.5                 |
| Gas                                                               | 42.8         | 36.1         | 38.3         | 39.1         | 38.3         | 39.2         | 38.4         | 37.6         | 40.6         | 35.1         | 30.4                 |
| Coal                                                              | 5.3          | 5.2          | 4.8          | 3.8          | 3.5          | 3.3          | 3.2          | 3.1          | 3.2          | 3.1          | 2.7                  |
| Electricity                                                       | 27.2         | 26.1         | 26.1         | 26.2         | 25.8         | 25.9         | 25.5         | 24.1         | 24.6         | 23.6         | 20.5                 |
| Heat                                                              | 1.2          | 1.2          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 1.1                  |
| Biomass                                                           | 2.3          | 2.6          | 2.6          | 2.7          | 2.8          | 3.5          | 4.0          | 4.1          | 4.1          | 4.4          | 3.8                  |
| <b>Electricity generation, by source</b>                          | <b>30.8</b>  | <b>29.1</b>  | <b>29.2</b>  | <b>29.2</b>  | <b>29.1</b>  | <b>28.7</b>  | <b>27.9</b>  | <b>26.8</b>  | <b>26.5</b>  | <b>27.9</b>  | <b>100.0</b>         |
| Oil                                                               | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.4                  |
| Gas                                                               | 8.2          | 8.7          | 8.6          | 12.3         | 11.8         | 11.3         | 11.3         | 9.6          | 10.5         | 10.6         | 38.1                 |
| Coal                                                              | 11.3         | 8.7          | 6.6          | 2.7          | 2.0          | 1.5          | 0.7          | 0.6          | 0.6          | 0.5          | 1.9                  |
| Nuclear                                                           | 6.1          | 5.5          | 6.0          | 6.2          | 6.0          | 5.6          | 4.8          | 4.3          | 3.9          | 4.1          | 14.7                 |
| Hydro                                                             | 0.7          | 0.8          | 0.8          | 0.7          | 0.8          | 0.7          | 0.7          | 0.7          | 0.6          | 0.6          | 2.2                  |
| Biomass                                                           | 1.7          | 2.2          | 2.9          | 3.0          | 3.1          | 3.4          | 3.6          | 3.9          | 4.1          | 3.9          | 13.8                 |
| Wind                                                              | 2.4          | 2.7          | 3.5          | 3.2          | 4.3          | 4.9          | 5.5          | 6.5          | 5.5          | 6.9          | 24.6                 |
| Solar                                                             | 0.2          | 0.3          | 0.6          | 0.9          | 1.0          | 1.1          | 1.1          | 1.1          | 1.1          | 1.2          | 4.4                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>130.5</b> | <b>123.1</b> | <b>127.0</b> | <b>128.6</b> | <b>128.0</b> | <b>128.4</b> | <b>125.7</b> | <b>115.0</b> | <b>121.1</b> | <b>115.5</b> | <b>100.0</b>         |
| Industry                                                          | 25.8         | 24.9         | 25.1         | 22.9         | 23.0         | 23.2         | 22.6         | 21.3         | 21.9         | 20.8         | 18.0                 |
| Transport                                                         | 39.1         | 39.7         | 40.5         | 41.4         | 41.6         | 41.4         | 41.2         | 33.1         | 36.2         | 37.8         | 32.8                 |
| Residential/Commercial                                            | 57.6         | 50.5         | 53.0         | 55.0         | 53.7         | 54.6         | 53.3         | 52.8         | 56.1         | 50.6         | 43.8                 |
| <b>Oil final consumption, by sector</b>                           | <b>51.6</b>  | <b>52.0</b>  | <b>54.0</b>  | <b>55.5</b>  | <b>56.2</b>  | <b>55.1</b>  | <b>53.4</b>  | <b>44.9</b>  | <b>47.3</b>  | <b>48.0</b>  | <b>100.0</b>         |
| Industry                                                          | 3.7          | 3.7          | 3.8          | 2.1          | 2.4          | 2.4          | 2.0          | 2.0          | 2.2          | 2.1          | 4.4                  |
| Transport                                                         | 37.7         | 38.1         | 39.2         | 40.0         | 40.2         | 39.7         | 39.0         | 31.1         | 34.4         | 35.6         | 74.2                 |
| Residential/Commercial                                            | 3.5          | 3.6          | 3.7          | 5.0          | 4.9          | 5.0          | 4.8          | 4.8          | 4.9          | 4.9          | 10.1                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>42.8</b>  | <b>36.1</b>  | <b>38.3</b>  | <b>39.1</b>  | <b>38.3</b>  | <b>39.2</b>  | <b>38.4</b>  | <b>37.6</b>  | <b>40.6</b>  | <b>35.1</b>  | <b>100.0</b>         |
| Industry                                                          | 8.1          | 7.6          | 7.6          | 7.8          | 8.0          | 8.1          | 8.0          | 7.3          | 7.6          | 7.0          | 19.8                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Residential/Commercial                                            | 34.3         | 27.9         | 30.2         | 30.9         | 29.9         | 30.7         | 29.9         | 29.9         | 32.6         | 27.7         | 78.9                 |
| <b>Refined products consumption</b>                               | <b>51.6</b>  | <b>52.0</b>  | <b>54.0</b>  | <b>55.5</b>  | <b>56.2</b>  | <b>55.1</b>  | <b>53.4</b>  | <b>44.9</b>  | <b>47.3</b>  | <b>48.0</b>  | <b>100.0</b>         |
| Gasoline                                                          | 13.2         | 13.0         | 12.7         | 12.6         | 12.4         | 12.2         | 12.3         | 9.6          | 10.7         | 11.4         | 23.8                 |
| Diesel                                                            | 26.4         | 27.1         | 28.7         | 29.7         | 30.1         | 29.9         | 28.8         | 23.7         | 26.4         | 26.4         | 55.1                 |
| Heating Oil                                                       | 0.2          | 0.3          | 0.3          | 0.3          | 0.5          | 0.3          | 0.2          | 0.1          | 0.1          | 0.1          | 0.3                  |
| Aviation Jet                                                      | 0.8          | 0.8          | 0.8          | 0.8          | 0.9          | 0.9          | 0.9          | 0.4          | 0.3          | 0.7          | 1.4                  |
| LPG                                                               | 2.5          | 2.6          | 3.1          | 3.2          | 3.2          | 3.2          | 3.1          | 2.8          | 2.8          | 2.8          | 5.8                  |
| <b>Imports</b>                                                    | <b>131.2</b> | <b>122.3</b> | <b>123.6</b> | <b>127.1</b> | <b>130.3</b> | <b>130.4</b> | <b>126.1</b> | <b>102.6</b> | <b>111.7</b> | <b>125.2</b> | <b>100.0</b>         |
| Oil                                                               | 89.6         | 85.4         | 85.2         | 86.3         | 90.2         | 90.4         | 86.6         | 65.6         | 68.3         | 77.4         | 61.8                 |
| Gas                                                               | 41.6         | 36.9         | 38.3         | 40.8         | 40.0         | 40.0         | 39.6         | 37.0         | 43.4         | 47.8         | 38.2                 |
| Gasoline                                                          | 4.7          | 3.7          | 4.1          | 4.1          | 3.4          | 3.6          | 3.1          | 2.9          | 2.9          | 3.1          | 2.5                  |
| Diesel                                                            | 11.2         | 13.1         | 15.1         | 17.0         | 15.9         | 16.5         | 15.3         | 11.8         | 13.7         | 14.4         | 11.5                 |
| Heating Oil                                                       | 0.6          | 1.0          | 1.0          | 1.2          | 0.9          | 0.8          | 0.7          | 0.7          | 0.6          | 0.5          | 0.4                  |
| Aviation Jet                                                      | 8.4          | 8.4          | 8.5          | 9.0          | 9.3          | 9.6          | 9.7          | 5.6          | 4.4          | 7.8          | 6.2                  |
| LPG                                                               | 0.5          | 0.5          | 0.8          | 1.0          | 1.1          | 1.1          | 0.9          | 0.4          | 0.2          | 0.2          | 0.2                  |
| <b>Exports</b>                                                    | <b>69.4</b>  | <b>64.1</b>  | <b>70.1</b>  | <b>69.7</b>  | <b>73.0</b>  | <b>75.4</b>  | <b>74.6</b>  | <b>68.4</b>  | <b>60.1</b>  | <b>73.4</b>  | <b>100.0</b>         |
| Oil                                                               | 61.7         | 55.2         | 58.3         | 60.9         | 63.4         | 69.0         | 67.6         | 60.2         | 54.2         | 53.4         | 72.7                 |
| Gas                                                               | 7.7          | 9.0          | 11.9         | 8.9          | 9.6          | 6.4          | 7.0          | 8.2          | 5.9          | 20.0         | 27.3                 |
| Gasoline                                                          | 11.4         | 9.1          | 10.9         | 11.7         | 11.5         | 10.8         | 9.9          | 8.1          | 8.3          | 9.6          | 13.0                 |
| Diesel                                                            | 6.3          | 5.5          | 4.7          | 5.0          | 3.9          | 4.4          | 4.3          | 4.2          | 3.7          | 5.0          | 6.8                  |
| Heating Oil                                                       | 4.5          | 4.0          | 3.2          | 3.2          | 2.9          | 2.4          | 2.1          | 2.7          | 2.5          | 2.6          | 3.5                  |
| Aviation Jet                                                      | 1.0          | 1.1          | 1.2          | 1.3          | 1.3          | 1.6          | 1.5          | 1.2          | 1.2          | 1.2          | 1.6                  |
| LPG                                                               | 1.3          | 1.0          | 0.9          | 1.1          | 1.2          | 1.0          | 1.0          | 0.5          | 0.6          | 0.6          | 0.8                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>455.2</b> | <b>414.6</b> | <b>402.5</b> | <b>381.8</b> | <b>366.8</b> | <b>360.7</b> | <b>345.5</b> | <b>307.6</b> | <b>331.5</b> | <b>322.9</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>172.2</b> | <b>152.3</b> | <b>144.0</b> | <b>133.6</b> | <b>125.7</b> | <b>121.6</b> | <b>114.5</b> | <b>112.4</b> | <b>112.8</b> | <b>105.5</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>46.8</b>  | <b>42.7</b>  | <b>42.8</b>  | <b>42.2</b>  | <b>41.1</b>  | <b>40.7</b>  | <b>39.3</b>  | <b>39.7</b>  | <b>39.4</b>  | <b>36.2</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>71.9</b>  | <b>65.7</b>  | <b>64.7</b>  | <b>62.4</b>  | <b>60.1</b>  | <b>58.5</b>  | <b>55.6</b>  | <b>56.2</b>  | <b>54.1</b>  | <b>50.3</b>  | <b>-</b>             |

\*Heat is included

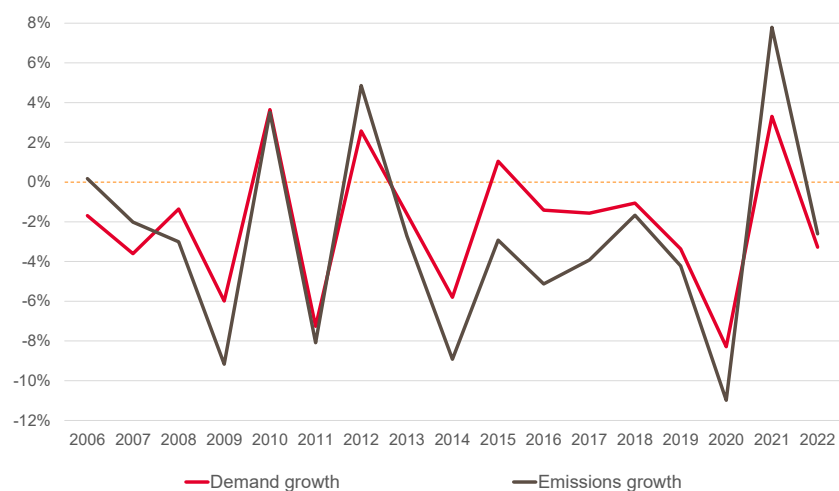
### Primary energy demand mix



### Electricity generation by source

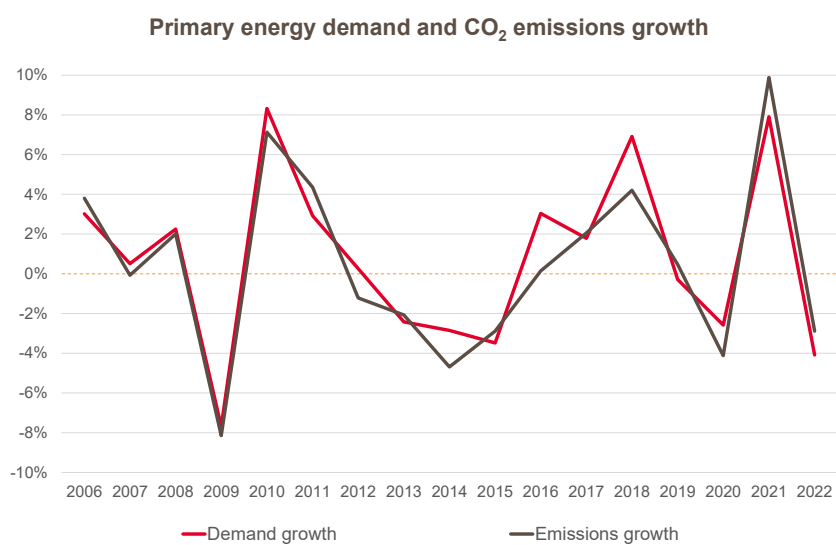
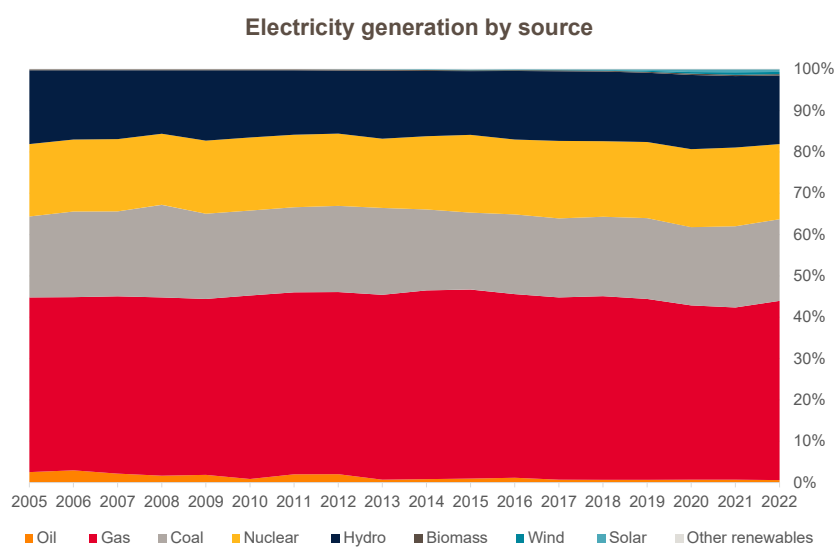
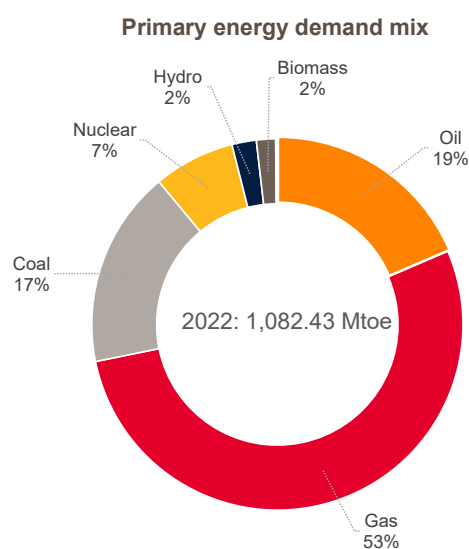


### Primary energy demand and CO<sub>2</sub> emissions growth



| Former Soviet Union<br>(Million toe)                              | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>1,023.9</b> | <b>994.8</b>   | <b>960.1</b>   | <b>989.4</b>   | <b>1,007.0</b> | <b>1,076.6</b> | <b>1,073.6</b> | <b>1,045.9</b> | <b>1,128.5</b> | <b>1,082.4</b> | <b>100.0</b>         |
| Oil                                                               | 199.7          | 199.4          | 192.5          | 210.4          | 209.7          | 209.2          | 209.5          | 205.1          | 221.4          | 200.8          | 18.6                 |
| Gas                                                               | 534.0          | 514.5          | 480.3          | 491.7          | 505.8          | 563.8          | 554.0          | 541.6          | 593.8          | 576.4          | 53.2                 |
| Coal                                                              | 190.0          | 178.0          | 180.8          | 179.6          | 180.5          | 191.6          | 195.1          | 180.3          | 188.0          | 186.0          | 17.2                 |
| Nuclear                                                           | 67.3           | 70.8           | 74.5           | 73.0           | 75.9           | 75.8           | 76.7           | 76.9           | 82.4           | 76.7           | 7.1                  |
| Hydro                                                             | 21.6           | 20.6           | 19.8           | 21.8           | 22.2           | 22.8           | 22.7           | 24.0           | 24.5           | 22.9           | 2.1                  |
| Biomass                                                           | 11.9           | 11.8           | 12.6           | 13.8           | 13.8           | 14.7           | 16.4           | 17.5           | 18.1           | 18.1           | 1.7                  |
| Other renewables                                                  | 0.1            | 0.2            | 0.2            | 0.2            | 0.3            | 0.4            | 0.8            | 1.4            | 1.8            | 1.6            | 0.1                  |
| Electricity balance of trade*                                     | -0.6           | -0.6           | -0.5           | -1.1           | -1.1           | -1.7           | -1.5           | -0.8           | -1.5           | 0.0            | 0.0                  |
| <b>Total final consumption, by source</b>                         | <b>616.6</b>   | <b>620.1</b>   | <b>604.7</b>   | <b>619.6</b>   | <b>643.9</b>   | <b>673.8</b>   | <b>677.9</b>   | <b>669.5</b>   | <b>717.9</b>   | <b>699.0</b>   | <b>100.0</b>         |
| Oil                                                               | 156.4          | 158.9          | 159.5          | 159.2          | 167.1          | 172.6          | 177.2          | 176.9          | 185.9          | 182.3          | 26.1                 |
| Gas                                                               | 163.4          | 168.9          | 165.7          | 175.8          | 190.9          | 209.1          | 208.3          | 206.8          | 232.6          | 225.6          | 32.3                 |
| Coal                                                              | 63.5           | 62.3           | 57.8           | 58.6           | 56.9           | 58.9           | 61.3           | 60.6           | 61.4           | 60.8           | 8.7                  |
| Electricity                                                       | 91.1           | 90.4           | 89.7           | 90.6           | 93.1           | 94.4           | 93.4           | 92.5           | 98.5           | 96.6           | 13.8                 |
| Heat                                                              | 136.4          | 133.9          | 125.7          | 128.2          | 128.6          | 131.0          | 128.6          | 123.7          | 129.9          | 124.3          | 17.8                 |
| Biomass                                                           | 5.8            | 5.7            | 6.3            | 7.2            | 7.3            | 7.9            | 9.1            | 9.1            | 9.5            | 9.4            | 1.3                  |
| <b>Electricity generation, by source</b>                          | <b>132.3</b>   | <b>131.8</b>   | <b>130.4</b>   | <b>132.9</b>   | <b>133.6</b>   | <b>137.0</b>   | <b>137.3</b>   | <b>134.4</b>   | <b>142.6</b>   | <b>139.0</b>   | <b>100.0</b>         |
| Oil                                                               | 0.9            | 1.1            | 1.2            | 1.5            | 0.9            | 0.9            | 0.9            | 0.9            | 1.0            | 0.8            | 0.6                  |
| Gas                                                               | 59.2           | 60.2           | 59.7           | 59.1           | 58.9           | 60.9           | 60.1           | 56.7           | 59.4           | 60.3           | 43.4                 |
| Coal                                                              | 27.8           | 25.8           | 24.2           | 25.6           | 25.6           | 26.3           | 26.9           | 25.5           | 28.0           | 27.5           | 19.8                 |
| Nuclear                                                           | 22.2           | 23.4           | 24.6           | 24.1           | 25.1           | 25.0           | 25.3           | 25.4           | 27.2           | 25.3           | 18.2                 |
| Hydro                                                             | 21.8           | 20.8           | 20.1           | 22.1           | 22.5           | 23.1           | 23.0           | 24.1           | 24.7           | 23.1           | 16.6                 |
| Biomass                                                           | 0.3            | 0.3            | 0.3            | 0.3            | 0.3            | 0.3            | 0.3            | 0.4            | 0.4            | 0.5            | 0.3                  |
| Wind                                                              | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.2            | 0.3            | 0.5            | 0.8            | 0.7            | 0.5                  |
| Solar                                                             | 0.0            | 0.1            | 0.1            | 0.1            | 0.1            | 0.2            | 0.5            | 0.8            | 1.0            | 0.8            | 0.6                  |
| Other renewables                                                  | 0.0            | 0.0            | 0.1            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>616.6</b>   | <b>620.1</b>   | <b>604.7</b>   | <b>619.6</b>   | <b>643.9</b>   | <b>673.8</b>   | <b>677.9</b>   | <b>669.5</b>   | <b>717.9</b>   | <b>699.0</b>   | <b>100.0</b>         |
| Industry                                                          | 214.3          | 210.2          | 202.1          | 212.2          | 212.7          | 202.4          | 206.3          | 202.0          | 216.0          | 210.0          | 30.0                 |
| Transport                                                         | 94.6           | 94.6           | 92.2           | 91.8           | 93.2           | 101.4          | 103.2          | 98.7           | 106.5          | 108.8          | 15.6                 |
| Residential/Commercial                                            | 222.3          | 227.4          | 222.1          | 226.4          | 240.7          | 262.6          | 259.2          | 252.8          | 272.6          | 265.8          | 38.0                 |
| <b>Oil final consumption, by sector</b>                           | <b>156.4</b>   | <b>158.9</b>   | <b>159.5</b>   | <b>159.2</b>   | <b>167.1</b>   | <b>172.6</b>   | <b>177.2</b>   | <b>176.9</b>   | <b>185.9</b>   | <b>182.3</b>   | <b>100.0</b>         |
| Industry                                                          | 18.7           | 17.4           | 19.5           | 21.1           | 20.5           | 11.4           | 13.0           | 12.6           | 13.3           | 12.9           | 7.1                  |
| Transport                                                         | 87.0           | 86.6           | 84.7           | 84.2           | 85.9           | 90.3           | 92.6           | 88.4           | 95.7           | 98.3           | 53.9                 |
| Residential/Commercial                                            | 12.7           | 14.1           | 14.5           | 13.6           | 16.8           | 20.3           | 20.4           | 20.3           | 20.5           | 21.4           | 11.7                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>163.4</b>   | <b>168.9</b>   | <b>165.7</b>   | <b>175.8</b>   | <b>190.9</b>   | <b>209.1</b>   | <b>208.3</b>   | <b>206.8</b>   | <b>232.6</b>   | <b>225.6</b>   | <b>100.0</b>         |
| Industry                                                          | 48.3           | 49.9           | 46.4           | 47.8           | 50.3           | 49.8           | 50.1           | 47.3           | 53.6           | 52.0           | 23.1                 |
| Transport                                                         | 0.7            | 1.1            | 1.1            | 1.2            | 1.2            | 4.9            | 4.2            | 4.5            | 4.6            | 4.3            | 1.9                  |
| Residential/Commercial                                            | 76.3           | 80.2           | 79.2           | 86.7           | 94.3           | 105.3          | 103.4          | 101.9          | 114.7          | 110.8          | 49.1                 |
| <b>Refined products consumption</b>                               | <b>153.0</b>   | <b>158.5</b>   | <b>158.9</b>   | <b>158.6</b>   | <b>166.5</b>   | <b>172.6</b>   | <b>177.2</b>   | <b>176.9</b>   | <b>185.9</b>   | <b>182.3</b>   | <b>100.0</b>         |
| Gasoline                                                          | 52.4           | 52.6           | 51.0           | 50.7           | 48.9           | 50.4           | 49.6           | 47.9           | 52.2           | 53.9           | 29.6                 |
| Diesel                                                            | 43.1           | 45.1           | 45.9           | 44.3           | 47.4           | 49.6           | 53.0           | 52.5           | 56.1           | 57.3           | 31.4                 |
| Heating Oil                                                       | 4.0            | 3.8            | 3.6            | 2.7            | 3.1            | 3.3            | 3.2            | 2.9            | 2.7            | 2.7            | 1.5                  |
| Aviation Jet                                                      | 6.4            | 6.0            | 5.4            | 5.4            | 5.9            | 6.4            | 6.7            | 5.2            | 5.9            | 5.8            | 3.2                  |
| LPG                                                               | 18.6           | 20.6           | 21.0           | 21.5           | 23.5           | 27.4           | 29.2           | 32.8           | 32.9           | 32.3           | 17.7                 |
| <b>Imports</b>                                                    | <b>104.1</b>   | <b>92.5</b>    | <b>93.5</b>    | <b>84.3</b>    | <b>89.5</b>    | <b>91.3</b>    | <b>92.5</b>    | <b>85.5</b>    | <b>82.0</b>    | <b>60.0</b>    | <b>100.0</b>         |
| Oil                                                               | 48.1           | 43.2           | 46.2           | 40.4           | 41.7           | 41.9           | 38.4           | 37.7           | 40.5           | 28.8           | 48.0                 |
| Gas                                                               | 56.0           | 49.3           | 47.3           | 43.9           | 47.8           | 49.4           | 54.2           | 47.8           | 41.5           | 31.2           | 52.0                 |
| Gasoline                                                          | 5.4            | 6.4            | 5.5            | 5.1            | 4.3            | 3.8            | 2.9            | 3.3            | 4.0            | 2.9            | 4.8                  |
| Diesel                                                            | 7.1            | 7.5            | 7.3            | 8.3            | 9.0            | 8.7            | 8.8            | 9.9            | 10.2           | 8.6            | 14.4                 |
| Heating Oil                                                       | 0.3            | 0.3            | 0.7            | 0.7            | 0.7            | 0.3            | 0.3            | 0.3            | 0.3            | 0.4            | 0.7                  |
| Aviation Jet                                                      | 0.4            | 0.4            | 0.4            | 0.6            | 0.7            | 0.7            | 0.5            | 0.3            | 0.4            | 0.6            | 1.0                  |
| LPG                                                               | 1.0            | 1.1            | 1.3            | 1.9            | 2.2            | 2.3            | 2.5            | 2.6            | 2.6            | 2.1            | 3.5                  |
| <b>Exports</b>                                                    | <b>752.9</b>   | <b>728.3</b>   | <b>763.2</b>   | <b>760.2</b>   | <b>783.5</b>   | <b>814.8</b>   | <b>834.6</b>   | <b>755.7</b>   | <b>759.1</b>   | <b>685.3</b>   | <b>100.0</b>         |
| Oil                                                               | 508.6          | 492.2          | 514.3          | 503.6          | 510.1          | 520.5          | 526.0          | 479.2          | 475.7          | 490.0          | 71.5                 |
| Gas                                                               | 244.3          | 236.1          | 248.9          | 256.6          | 273.3          | 294.2          | 308.6          | 276.5          | 283.4          | 195.3          | 28.5                 |
| Gasoline                                                          | 8.5            | 8.1            | 9.2            | 9.4            | 8.3            | 7.9            | 8.4            | 9.2            | 7.6            | 7.8            | 1.1                  |
| Diesel                                                            | 51.2           | 50.4           | 47.9           | 45.7           | 47.3           | 48.2           | 47.0           | 45.9           | 45.0           | 47.2           | 6.9                  |
| Heating Oil                                                       | 71.4           | 72.6           | 75.0           | 57.0           | 54.5           | 56.5           | 55.1           | 47.5           | 49.6           | 46.5           | 6.8                  |
| Aviation Jet                                                      | 2.4            | 3.1            | 3.0            | 3.0            | 2.9            | 3.4            | 3.0            | 2.3            | 2.6            | 2.5            | 0.4                  |
| LPG                                                               | 5.8            | 6.7            | 6.8            | 7.9            | 7.9            | 8.3            | 7.5            | 5.9            | 5.0            | 4.7            | 0.7                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>2,413.5</b> | <b>2,300.3</b> | <b>2,233.9</b> | <b>2,237.1</b> | <b>2,283.2</b> | <b>2,379.1</b> | <b>2,390.4</b> | <b>2,291.9</b> | <b>2,518.4</b> | <b>2,445.7</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>464.5</b>   | <b>440.9</b>   | <b>436.1</b>   | <b>433.8</b>   | <b>432.6</b>   | <b>436.8</b>   | <b>427.0</b>   | <b>420.4</b>   | <b>440.7</b>   | <b>442.0</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>106.3</b>   | <b>106.2</b>   | <b>104.9</b>   | <b>106.8</b>   | <b>107.4</b>   | <b>107.5</b>   | <b>105.0</b>   | <b>105.2</b>   | <b>107.5</b>   | <b>109.1</b>   | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>197.1</b>   | <b>190.7</b>   | <b>187.5</b>   | <b>191.8</b>   | <b>190.8</b>   | <b>197.7</b>   | <b>191.8</b>   | <b>191.8</b>   | <b>197.5</b>   | <b>195.6</b>   | <b>-</b>             |

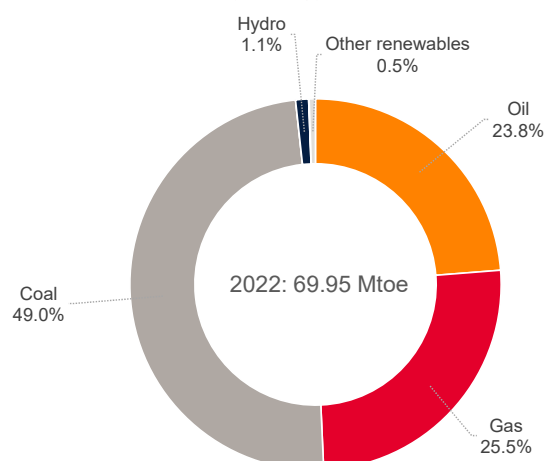
\*Heat is included



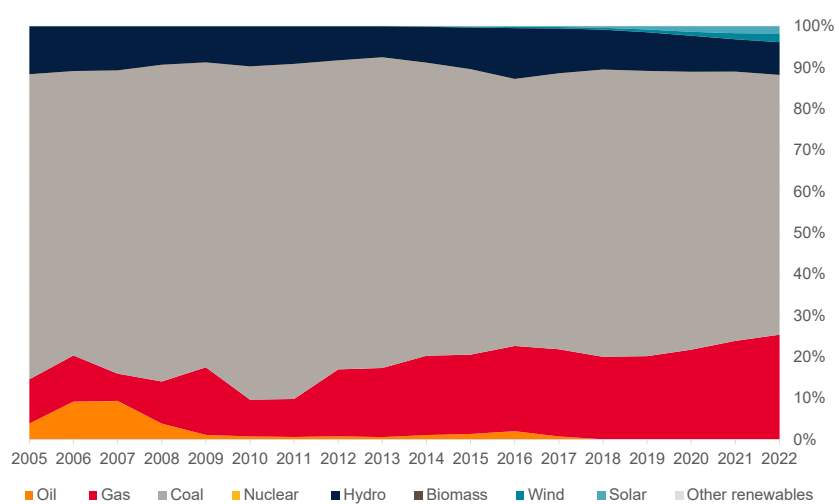
| <b>Kazakhstan</b><br>(Million toe)                                | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>81.5</b>  | <b>65.1</b>  | <b>54.8</b>  | <b>64.0</b>  | <b>65.1</b>  | <b>74.2</b>  | <b>73.2</b>  | <b>65.8</b>  | <b>69.7</b>  | <b>69.9</b>  | <b>100.0</b>         |
| Oil                                                               | 18.0         | 12.6         | 15.9         | 16.8         | 15.4         | 18.4         | 17.6         | 12.0         | 18.2         | 16.6         | 23.7                 |
| Gas                                                               | 25.4         | 14.8         | 10.6         | 14.3         | 14.0         | 18.6         | 20.1         | 20.2         | 17.0         | 17.8         | 25.5                 |
| Coal                                                              | 37.5         | 37.0         | 27.3         | 31.9         | 35.0         | 36.4         | 34.5         | 32.6         | 33.5         | 34.2         | 48.9                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.7          | 0.7          | 0.8          | 1.0          | 1.0          | 0.9          | 0.9          | 0.8          | 0.8          | 0.8          | 1.1                  |
| Biomass                                                           | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.2          | 0.3          | 0.4          | 0.5                  |
| Electricity balance of trade*                                     | -0.1         | -0.1         | 0.0          | -0.1         | -0.4         | -0.3         | -0.0         | -0.1         | -0.0         | 0.1          | 0.2                  |
| <b>Total final consumption, by source</b>                         | <b>43.5</b>  | <b>40.6</b>  | <b>39.2</b>  | <b>39.6</b>  | <b>41.0</b>  | <b>42.1</b>  | <b>39.3</b>  | <b>41.2</b>  | <b>42.4</b>  | <b>45.0</b>  | <b>100.0</b>         |
| Oil                                                               | 13.6         | 10.4         | 12.6         | 13.1         | 12.6         | 12.0         | 11.0         | 12.6         | 12.9         | 13.8         | 30.7                 |
| Gas                                                               | 2.9          | 4.7          | 4.7          | 5.2          | 5.6          | 5.6          | 5.1          | 6.5          | 6.8          | 7.1          | 15.9                 |
| Coal                                                              | 15.2         | 12.9         | 9.6          | 9.5          | 10.2         | 10.4         | 9.8          | 9.5          | 9.9          | 11.0         | 24.5                 |
| Electricity                                                       | 5.7          | 5.8          | 5.8          | 5.8          | 6.5          | 6.9          | 6.2          | 6.0          | 6.3          | 6.3          | 14.0                 |
| Heat                                                              | 6.1          | 6.8          | 6.4          | 5.9          | 5.9          | 7.1          | 7.1          | 6.6          | 6.5          | 6.7          | 14.8                 |
| Biomass                                                           | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.0          | 0.0          | 0.1                  |
| <b>Electricity generation, by source</b>                          | <b>8.9</b>   | <b>8.2</b>   | <b>7.9</b>   | <b>8.1</b>   | <b>8.9</b>   | <b>9.3</b>   | <b>9.2</b>   | <b>9.5</b>   | <b>10.1</b>  | <b>10.0</b>  | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.1          | 0.1          | 0.2          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Gas                                                               | 1.5          | 1.6          | 1.5          | 1.7          | 1.9          | 1.8          | 1.8          | 2.1          | 2.4          | 2.5          | 25.3                 |
| Coal                                                              | 6.7          | 5.8          | 5.5          | 5.3          | 5.9          | 6.4          | 6.3          | 6.4          | 6.6          | 6.3          | 62.9                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.7          | 0.7          | 0.8          | 1.0          | 1.0          | 0.9          | 0.9          | 0.8          | 0.8          | 0.8          | 7.9                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.2          | 2.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.2          | 0.2          | 1.8                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>43.5</b>  | <b>40.6</b>  | <b>39.2</b>  | <b>39.6</b>  | <b>41.0</b>  | <b>42.1</b>  | <b>39.3</b>  | <b>41.2</b>  | <b>42.4</b>  | <b>45.0</b>  | <b>100.0</b>         |
| Industry                                                          | 25.0         | 18.9         | 16.7         | 17.1         | 17.1         | 16.3         | 13.8         | 13.0         | 14.2         | 15.7         | 34.8                 |
| Transport                                                         | 4.9          | 5.2          | 5.5          | 5.7          | 5.5          | 6.3          | 6.1          | 7.6          | 7.9          | 8.4          | 18.6                 |
| Residential/Commercial                                            | 10.7         | 13.7         | 14.7         | 14.3         | 15.8         | 16.4         | 16.4         | 17.4         | 18.1         | 18.6         | 41.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>13.6</b>  | <b>10.4</b>  | <b>12.6</b>  | <b>13.1</b>  | <b>12.6</b>  | <b>12.0</b>  | <b>11.0</b>  | <b>12.6</b>  | <b>12.9</b>  | <b>13.8</b>  | <b>100.0</b>         |
| Industry                                                          | 5.1          | 2.0          | 3.5          | 4.3          | 3.7          | 2.2          | 1.5          | 1.7          | 1.4          | 1.5          | 11.1                 |
| Transport                                                         | 4.6          | 4.7          | 5.0          | 5.2          | 4.9          | 5.7          | 5.6          | 6.4          | 7.3          | 7.8          | 56.3                 |
| Residential/Commercial                                            | 2.7          | 2.5          | 3.0          | 2.6          | 2.7          | 3.1          | 3.0          | 3.5          | 3.2          | 3.4          | 24.8                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>2.9</b>   | <b>4.7</b>   | <b>4.7</b>   | <b>5.2</b>   | <b>5.6</b>   | <b>5.6</b>   | <b>5.1</b>   | <b>6.5</b>   | <b>6.8</b>   | <b>7.1</b>   | <b>100.0</b>         |
| Industry                                                          | 1.6          | 1.8          | 1.3          | 1.4          | 1.9          | 1.4          | 1.1          | 1.4          | 1.4          | 1.5          | 20.8                 |
| Transport                                                         | 0.0          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.1          | 0.9          | 0.3          | 0.3          | 4.4                  |
| Residential/Commercial                                            | 1.1          | 2.6          | 3.1          | 3.4          | 3.3          | 3.5          | 3.5          | 3.8          | 4.8          | 5.0          | 70.4                 |
| <b>Refined products consumption</b>                               | <b>10.2</b>  | <b>10.1</b>  | <b>12.1</b>  | <b>12.6</b>  | <b>12.0</b>  | <b>12.0</b>  | <b>11.0</b>  | <b>12.6</b>  | <b>12.9</b>  | <b>13.8</b>  | <b>100.0</b>         |
| Gasoline                                                          | 4.0          | 4.0          | 4.4          | 4.7          | 4.6          | 4.8          | 4.8          | 4.9          | 5.3          | 5.6          | 40.5                 |
| Diesel                                                            | 3.9          | 3.9          | 4.6          | 5.6          | 4.9          | 4.9          | 3.8          | 5.5          | 5.8          | 6.2          | 45.1                 |
| Heating Oil                                                       | 0.9          | 0.8          | 1.4          | 0.6          | 0.7          | 0.5          | 0.4          | 0.5          | 0.4          | 0.5          | 3.7                  |
| Aviation Jet                                                      | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.3          | 0.1          | 0.3          | 0.3          | 2.3                  |
| LPG                                                               | 0.5          | 0.5          | 0.8          | 0.8          | 0.9          | 1.1          | 1.2          | 1.0          | 0.6          | 0.6          | 4.6                  |
| <b>Imports</b>                                                    | <b>14.6</b>  | <b>6.6</b>   | <b>6.6</b>   | <b>7.8</b>   | <b>7.6</b>   | <b>10.0</b>  | <b>14.5</b>  | <b>12.0</b>  | <b>3.6</b>   | <b>2.5</b>   | <b>100.0</b>         |
| Oil                                                               | 10.2         | 2.9          | 1.9          | 2.0          | 2.1          | 1.7          | 0.6          | 1.0          | 1.6          | 0.9          | 36.1                 |
| Gas                                                               | 4.3          | 3.7          | 4.7          | 5.9          | 5.5          | 8.3          | 13.9         | 11.0         | 2.0          | 1.6          | 63.9                 |
| Gasoline                                                          | 1.2          | 1.2          | 1.4          | 1.2          | 1.1          | 0.6          | 0.0          | 0.0          | 0.4          | 0.0          | 1.8                  |
| Diesel                                                            | 0.6          | 0.6          | 0.2          | 0.4          | 0.5          | 0.5          | 0.3          | 0.7          | 0.9          | 0.4          | 17.8                 |
| Heating Oil                                                       | 0.2          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.1          | 0.2          | 0.3          | 0.2          | 0.0          | 0.0          | 0.1          | 0.1          | 3.2                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>85.7</b>  | <b>89.2</b>  | <b>84.5</b>  | <b>82.9</b>  | <b>96.3</b>  | <b>98.5</b>  | <b>97.6</b>  | <b>92.7</b>  | <b>79.9</b>  | <b>77.4</b>  | <b>100.0</b>         |
| Oil                                                               | 77.1         | 72.2         | 67.2         | 64.4         | 73.8         | 75.5         | 75.1         | 75.2         | 71.5         | 70.6         | 91.2                 |
| Gas                                                               | 8.6          | 17.0         | 17.3         | 18.5         | 22.5         | 23.0         | 22.6         | 17.5         | 8.5          | 6.8          | 8.8                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.5          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 1.8          | 1.8          | 0.2          | 0.1          | 0.1          | 0.2          | 0.0          | 0.1          | 0.2          | 0.1          | 0.1                  |
| Heating Oil                                                       | 2.4          | 2.6          | 1.9          | 1.8          | 2.1          | 2.9          | 2.6          | 1.6          | 1.5          | 1.7          | 2.2                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 1.8          | 2.4          | 2.2          | 2.1          | 2.3          | 2.1          | 2.1          | 2.1          | 1.6          | 1.2          | 1.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>251.2</b> | <b>202.8</b> | <b>176.3</b> | <b>191.4</b> | <b>203.7</b> | <b>205.1</b> | <b>195.3</b> | <b>201.7</b> | <b>213.8</b> | <b>218.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>650.1</b> | <b>503.8</b> | <b>432.6</b> | <b>464.7</b> | <b>475.1</b> | <b>459.5</b> | <b>418.8</b> | <b>443.6</b> | <b>452.1</b> | <b>447.4</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>110.1</b> | <b>99.4</b>  | <b>94.5</b>  | <b>94.7</b>  | <b>94.0</b>  | <b>92.5</b>  | <b>82.8</b>  | <b>88.8</b>  | <b>88.1</b>  | <b>90.6</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>211.0</b> | <b>161.8</b> | <b>134.4</b> | <b>155.5</b> | <b>151.9</b> | <b>166.2</b> | <b>157.0</b> | <b>144.7</b> | <b>147.4</b> | <b>143.3</b> | <b>-</b>             |

\*Heat is included

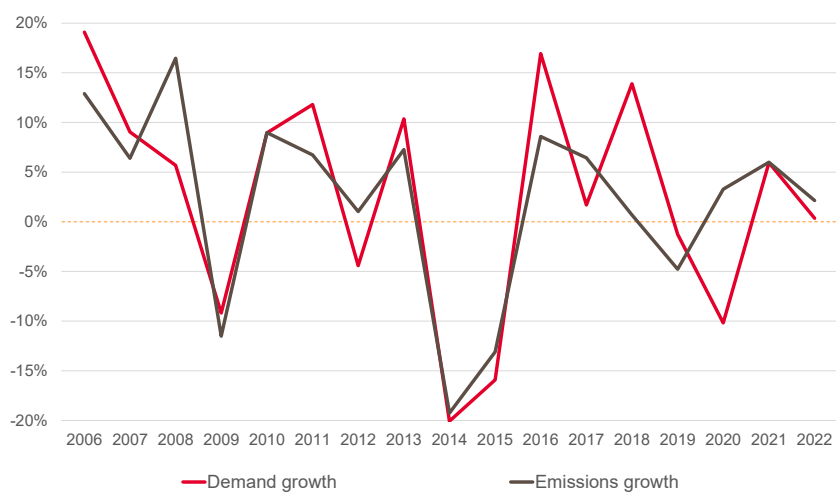
Primary energy demand mix



Electricity generation by source



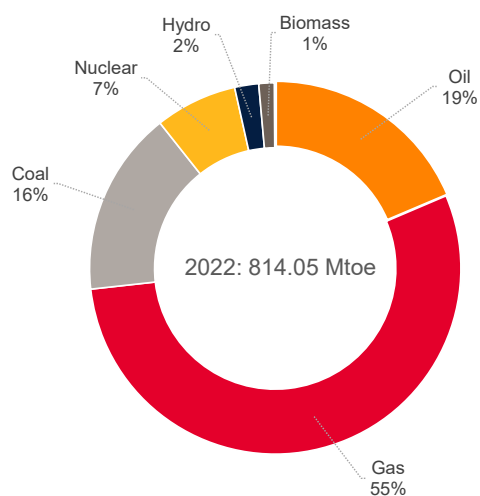
Primary energy demand and CO<sub>2</sub> emissions growth



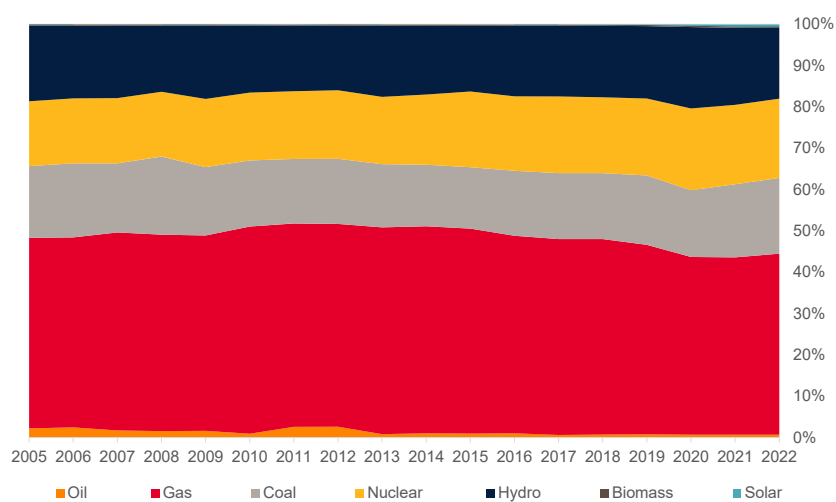
| <b>Russia</b><br>(Million toe)                                    | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>707.2</b>   | <b>709.3</b>   | <b>695.5</b>   | <b>716.8</b>   | <b>730.3</b>   | <b>775.8</b>   | <b>777.3</b>   | <b>761.9</b>   | <b>825.8</b>   | <b>814.0</b>   | <b>100.0</b>         |
| Oil                                                               | 145.1          | 148.7          | 139.4          | 155.2          | 154.0          | 148.3          | 149.4          | 149.8          | 158.4          | 151.5          | 18.6                 |
| Gas                                                               | 386.2          | 385.4          | 364.3          | 371.3          | 384.8          | 428.1          | 418.1          | 408.6          | 458.0          | 444.8          | 54.6                 |
| Coal                                                              | 109.0          | 106.2          | 119.4          | 115.8          | 115.3          | 121.8          | 129.4          | 118.8          | 122.9          | 131.3          | 16.1                 |
| Nuclear                                                           | 45.0           | 47.1           | 50.9           | 51.2           | 52.9           | 53.3           | 54.5           | 56.2           | 57.9           | 58.2           | 7.2                  |
| Hydro                                                             | 15.6           | 15.1           | 14.4           | 15.9           | 15.9           | 16.4           | 16.7           | 18.3           | 18.4           | 17.0           | 2.1                  |
| Biomass                                                           | 7.2            | 7.1            | 7.7            | 8.1            | 7.8            | 8.6            | 10.2           | 10.3           | 10.8           | 11.1           | 1.4                  |
| Other renewables                                                  | 0.0            | 0.0            | 0.0            | 0.1            | 0.1            | 0.1            | 0.1            | 0.3            | 0.5            | 0.5            | 0.1                  |
| Electricity balance of trade*                                     | -0.8           | -0.3           | -0.6           | -0.9           | -0.5           | -0.7           | -1.2           | -0.4           | -1.2           | -0.4           | -0.0                 |
| <b>Total final consumption, by source</b>                         | <b>415.6</b>   | <b>432.7</b>   | <b>431.7</b>   | <b>442.2</b>   | <b>465.3</b>   | <b>489.7</b>   | <b>497.6</b>   | <b>486.0</b>   | <b>527.0</b>   | <b>522.4</b>   | <b>100.0</b>         |
| Oil                                                               | 108.4          | 114.3          | 114.4          | 113.0          | 120.6          | 124.4          | 130.2          | 129.5          | 136.9          | 134.1          | 25.7                 |
| Gas                                                               | 100.7          | 111.3          | 114.1          | 122.3          | 136.3          | 155.3          | 154.9          | 148.5          | 172.1          | 169.9          | 32.5                 |
| Coal                                                              | 32.2           | 33.7           | 35.6           | 35.8           | 35.2           | 35.5           | 38.9           | 38.9           | 38.6           | 40.7           | 7.8                  |
| Electricity                                                       | 61.8           | 61.5           | 61.2           | 62.2           | 63.6           | 63.4           | 63.1           | 62.6           | 66.8           | 68.5           | 13.1                 |
| Heat                                                              | 109.9          | 109.5          | 103.3          | 105.3          | 106.1          | 107.2          | 105.2          | 101.1          | 107.1          | 103.6          | 19.8                 |
| Biomass                                                           | 2.6            | 2.5            | 3.1            | 3.5            | 3.4            | 4.0            | 5.3            | 5.3            | 5.5            | 5.7            | 1.1                  |
| <b>Electricity generation, by source</b>                          | <b>91.1</b>    | <b>91.5</b>    | <b>91.8</b>    | <b>93.8</b>    | <b>94.1</b>    | <b>95.9</b>    | <b>96.4</b>    | <b>93.7</b>    | <b>99.6</b>    | <b>100.2</b>   | <b>100.0</b>         |
| Oil                                                               | 0.7            | 0.9            | 0.9            | 0.9            | 0.6            | 0.7            | 0.7            | 0.6            | 0.7            | 0.7            | 0.7                  |
| Gas                                                               | 45.6           | 45.9           | 45.6           | 44.9           | 44.6           | 45.4           | 44.2           | 40.3           | 42.8           | 43.9           | 43.8                 |
| Coal                                                              | 13.9           | 13.6           | 13.6           | 14.7           | 15.0           | 15.3           | 16.2           | 15.1           | 17.6           | 18.4           | 18.3                 |
| Nuclear                                                           | 14.8           | 15.5           | 16.8           | 16.9           | 17.5           | 17.6           | 18.0           | 18.6           | 19.1           | 19.2           | 19.2                 |
| Hydro                                                             | 15.7           | 15.2           | 14.6           | 16.1           | 16.1           | 16.6           | 16.9           | 18.4           | 18.6           | 17.2           | 17.1                 |
| Biomass                                                           | 0.3            | 0.3            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.3            | 0.3            | 0.3            | 0.3                  |
| Wind                                                              | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.1            | 0.3            | 0.3            | 0.3                  |
| Solar                                                             | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.1            | 0.1            | 0.2            | 0.2            | 0.2            | 0.2                  |
| Other renewables                                                  | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>415.6</b>   | <b>432.7</b>   | <b>431.7</b>   | <b>442.2</b>   | <b>465.3</b>   | <b>489.7</b>   | <b>497.6</b>   | <b>486.0</b>   | <b>527.0</b>   | <b>522.4</b>   | <b>100.0</b>         |
| Industry                                                          | 146.0          | 150.9          | 150.0          | 159.9          | 161.0          | 150.0          | 156.0          | 153.5          | 164.3          | 164.8          | 31.5                 |
| Transport                                                         | 64.9           | 66.0           | 64.8           | 62.9           | 63.8           | 68.2           | 69.4           | 65.1           | 70.9           | 73.6           | 14.1                 |
| Residential/Commercial                                            | 143.9          | 151.9          | 151.0          | 152.0          | 164.2          | 185.2          | 183.8          | 174.3          | 190.7          | 189.2          | 36.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>108.4</b>   | <b>114.3</b>   | <b>114.4</b>   | <b>113.0</b>   | <b>120.6</b>   | <b>124.4</b>   | <b>130.2</b>   | <b>129.5</b>   | <b>136.9</b>   | <b>134.1</b>   | <b>100.0</b>         |
| Industry                                                          | 12.1           | 13.8           | 14.5           | 16.0           | 15.9           | 7.9            | 10.2           | 9.7            | 10.6           | 10.2           | 7.6                  |
| Transport                                                         | 59.2           | 60.1           | 59.4           | 57.4           | 58.7           | 61.5           | 63.7           | 59.8           | 65.2           | 67.7           | 50.5                 |
| Residential/Commercial                                            | 9.2            | 10.7           | 10.5           | 9.8            | 12.9           | 15.6           | 16.0           | 15.6           | 16.0           | 16.7           | 12.4                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>100.7</b>   | <b>111.3</b>   | <b>114.1</b>   | <b>122.3</b>   | <b>136.3</b>   | <b>155.3</b>   | <b>154.9</b>   | <b>148.5</b>   | <b>172.1</b>   | <b>169.9</b>   | <b>100.0</b>         |
| Industry                                                          | 33.7           | 37.2           | 35.5           | 36.7           | 38.3           | 38.3           | 38.5           | 35.6           | 41.3           | 40.8           | 24.0                 |
| Transport                                                         | 0.0            | 0.1            | 0.1            | 0.2            | 0.3            | 1.6            | 0.6            | 0.5            | 0.6            | 0.6            | 0.3                  |
| Residential/Commercial                                            | 35.8           | 41.7           | 44.5           | 49.7           | 56.5           | 70.3           | 69.7           | 65.8           | 76.3           | 75.3           | 44.3                 |
| <b>Refined products consumption</b>                               | <b>108.2</b>   | <b>114.2</b>   | <b>114.3</b>   | <b>113.0</b>   | <b>120.6</b>   | <b>124.3</b>   | <b>130.2</b>   | <b>129.5</b>   | <b>136.9</b>   | <b>134.1</b>   | <b>100.0</b>         |
| Gasoline                                                          | 37.4           | 38.2           | 37.1           | 36.3           | 35.2           | 36.6           | 35.9           | 34.1           | 37.3           | 38.6           | 28.8                 |
| Diesel                                                            | 23.6           | 26.6           | 27.3           | 24.8           | 28.0           | 29.5           | 33.4           | 31.9           | 34.7           | 36.8           | 27.5                 |
| Heating Oil                                                       | 2.0            | 1.8            | 1.0            | 0.9            | 1.3            | 1.6            | 1.6            | 1.3            | 1.2            | 1.1            | 0.8                  |
| Aviation Jet                                                      | 6.1            | 5.7            | 5.1            | 4.9            | 5.4            | 5.7            | 5.9            | 4.8            | 5.4            | 5.3            | 3.9                  |
| LPG                                                               | 14.9           | 16.5           | 16.5           | 16.4           | 18.0           | 21.4           | 22.8           | 27.2           | 27.5           | 28.4           | 21.2                 |
| <b>Imports</b>                                                    | <b>9.4</b>     | <b>10.8</b>    | <b>12.7</b>    | <b>9.3</b>     | <b>9.1</b>     | <b>9.3</b>     | <b>8.7</b>     | <b>8.9</b>     | <b>9.1</b>     | <b>10.2</b>    | <b>100.0</b>         |
| Oil                                                               | 2.7            | 3.7            | 5.5            | 1.9            | 1.8            | 1.6            | 1.2            | 1.5            | 1.3            | 1.9            | 19.0                 |
| Gas                                                               | 6.7            | 7.1            | 7.2            | 7.3            | 7.2            | 7.7            | 7.5            | 7.4            | 7.8            | 8.3            | 81.0                 |
| Gasoline                                                          | 0.6            | 1.1            | 0.9            | 0.2            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| Diesel                                                            | 0.2            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.4            | 0.0            | 0.0            | 0.1                  |
| Heating Oil                                                       | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.1            | 0.1            | 0.1            | 0.1            | 1.4                  |
| Aviation Jet                                                      | 0.1            | 0.0            | 0.0            | 0.0            | 0.1            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| LPG                                                               | 0.1            | 0.2            | 0.1            | 0.1            | 0.2            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.8                  |
| <b>Exports</b>                                                    | <b>542.7</b>   | <b>514.1</b>   | <b>547.7</b>   | <b>555.5</b>   | <b>568.8</b>   | <b>593.2</b>   | <b>613.8</b>   | <b>555.2</b>   | <b>559.7</b>   | <b>508.3</b>   | <b>100.0</b>         |
| Oil                                                               | 368.6          | 358.4          | 382.8          | 380.3          | 381.3          | 391.8          | 400.2          | 358.9          | 357.2          | 371.2          | 73.0                 |
| Gas                                                               | 174.1          | 155.8          | 165.0          | 175.1          | 187.6          | 201.4          | 213.5          | 196.2          | 202.5          | 137.1          | 27.0                 |
| Gasoline                                                          | 4.6            | 3.8            | 5.0            | 5.5            | 4.6            | 4.4            | 5.4            | 5.5            | 4.1            | 4.2            | 0.8                  |
| Diesel                                                            | 43.2           | 41.0           | 39.1           | 38.8           | 41.3           | 42.8           | 41.2           | 40.8           | 39.0           | 41.1           | 8.1                  |
| Heating Oil                                                       | 61.6           | 63.3           | 65.4           | 49.7           | 47.1           | 47.9           | 47.9           | 42.6           | 44.3           | 41.2           | 8.1                  |
| Aviation Jet                                                      | 1.9            | 2.5            | 2.4            | 2.5            | 2.3            | 2.7            | 2.5            | 2.0            | 2.5            | 2.4            | 0.5                  |
| LPG                                                               | 3.4            | 3.7            | 4.1            | 5.4            | 4.9            | 5.4            | 4.9            | 3.4            | 3.0            | 3.1            | 0.6                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>1,603.1</b> | <b>1,585.1</b> | <b>1,591.2</b> | <b>1,571.3</b> | <b>1,615.2</b> | <b>1,689.0</b> | <b>1,716.6</b> | <b>1,626.8</b> | <b>1,792.5</b> | <b>1,789.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>448.9</b>   | <b>440.7</b>   | <b>451.3</b>   | <b>444.7</b>   | <b>449.0</b>   | <b>456.7</b>   | <b>454.2</b>   | <b>442.3</b>   | <b>464.9</b>   | <b>473.8</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>101.1</b>   | <b>104.5</b>   | <b>105.6</b>   | <b>107.9</b>   | <b>110.0</b>   | <b>110.9</b>   | <b>110.0</b>   | <b>108.6</b>   | <b>112.3</b>   | <b>115.1</b>   | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>198.1</b>   | <b>197.2</b>   | <b>197.2</b>   | <b>202.9</b>   | <b>203.0</b>   | <b>209.8</b>   | <b>205.6</b>   | <b>207.1</b>   | <b>214.2</b>   | <b>215.6</b>   | <b>-</b>             |

\*Heat is included

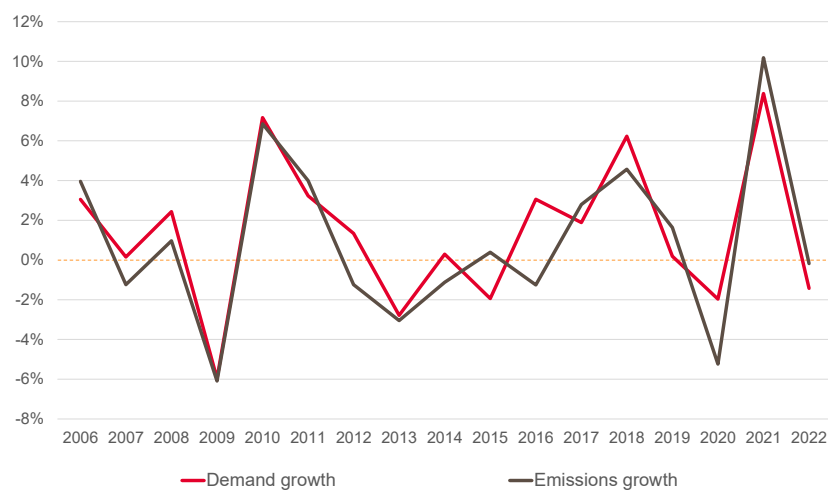
### Primary energy demand mix



### Electricity generation by source

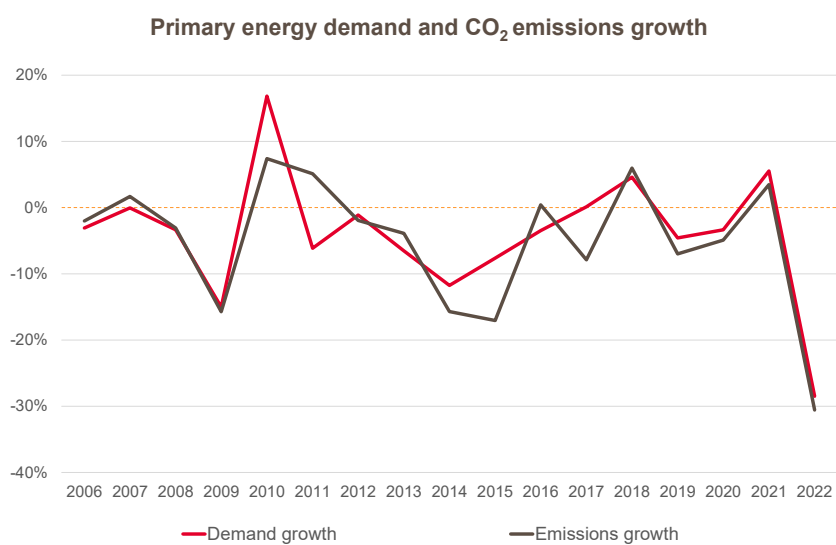
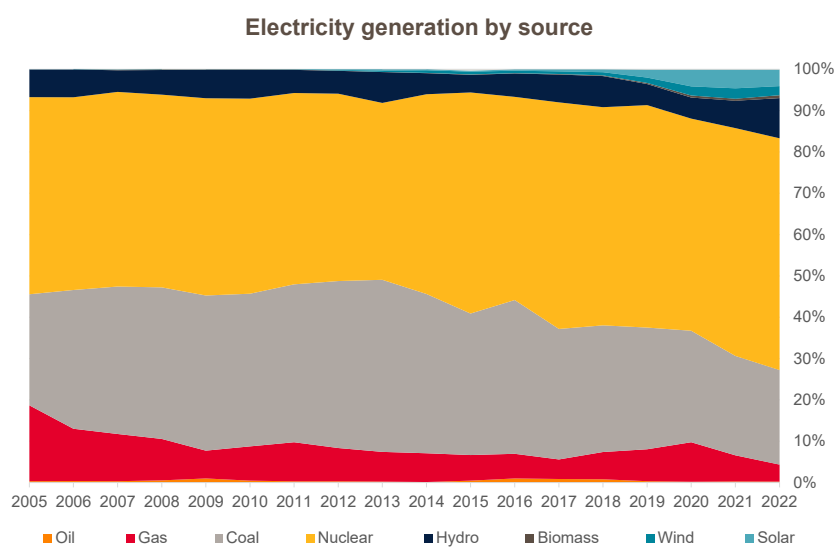
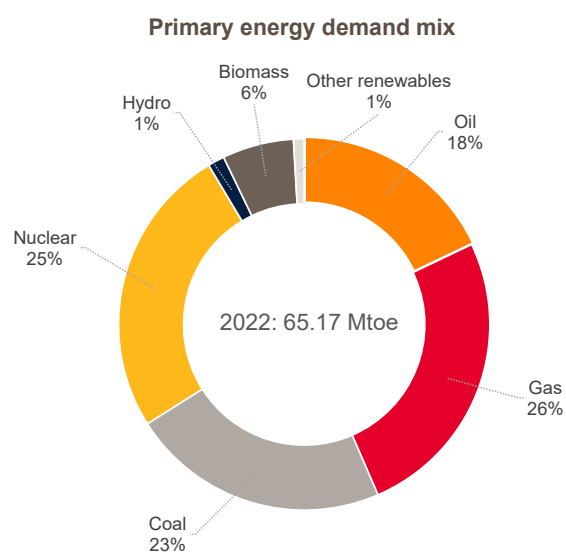


### Primary energy demand and CO<sub>2</sub> emissions growth



| <b>Ukraine</b><br>(Million toe)                                   | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>113.7</b> | <b>100.3</b> | <b>92.7</b>  | <b>89.4</b>  | <b>89.5</b>  | <b>93.6</b>  | <b>89.4</b>  | <b>86.4</b>  | <b>91.1</b>  | <b>65.2</b>  | <b>100.0</b>         |
| Oil                                                               | 10.1         | 10.8         | 10.7         | 11.3         | 13.0         | 13.7         | 13.7         | 14.3         | 14.9         | 11.7         | 17.9                 |
| Gas                                                               | 39.5         | 33.4         | 26.1         | 25.6         | 24.5         | 25.7         | 23.4         | 23.8         | 22.3         | 16.7         | 25.6                 |
| Coal                                                              | 39.1         | 30.2         | 29.9         | 27.5         | 25.7         | 28.0         | 25.9         | 22.8         | 25.4         | 14.7         | 22.5                 |
| Nuclear                                                           | 21.7         | 23.0         | 22.8         | 21.1         | 22.3         | 22.0         | 21.6         | 19.9         | 22.4         | 16.5         | 25.4                 |
| Hydro                                                             | 1.2          | 0.7          | 0.5          | 0.7          | 0.8          | 0.9          | 0.6          | 0.7          | 0.9          | 0.9          | 1.5                  |
| Biomass                                                           | 1.9          | 1.9          | 2.1          | 2.8          | 3.0          | 3.2          | 3.4          | 4.3          | 4.4          | 4.1          | 6.2                  |
| Other renewables                                                  | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.4          | 0.8          | 0.9          | 0.6          | 0.9                  |
| Electricity balance of trade*                                     | 0.2          | 0.0          | 0.5          | 0.3          | 0.1          | 0.0          | 0.3          | -0.2         | -0.1         | -0.0         | -0.0                 |
| <b>Total final consumption, by source</b>                         | <b>72.6</b>  | <b>63.0</b>  | <b>53.3</b>  | <b>54.6</b>  | <b>51.9</b>  | <b>53.5</b>  | <b>51.2</b>  | <b>50.1</b>  | <b>52.2</b>  | <b>38.3</b>  | <b>100.0</b>         |
| Oil                                                               | 11.8         | 10.1         | 9.4          | 9.6          | 9.8          | 10.4         | 10.4         | 9.6          | 10.2         | 8.5          | 22.1                 |
| Gas                                                               | 22.7         | 18.7         | 14.6         | 14.3         | 13.6         | 13.6         | 12.0         | 12.6         | 12.4         | 9.9          | 25.7                 |
| Coal                                                              | 13.5         | 13.1         | 10.3         | 10.6         | 8.8          | 10.0         | 9.6          | 8.9          | 9.9          | 5.9          | 15.5                 |
| Electricity                                                       | 11.8         | 11.0         | 10.2         | 10.1         | 10.0         | 10.2         | 10.0         | 9.7          | 10.4         | 7.1          | 18.5                 |
| Heat                                                              | 11.7         | 8.9          | 7.5          | 8.3          | 7.8          | 7.5          | 7.2          | 7.2          | 7.0          | 4.9          | 12.8                 |
| Biomass                                                           | 1.1          | 1.2          | 1.3          | 1.7          | 1.8          | 1.9          | 2.1          | 2.2          | 2.2          | 2.1          | 5.4                  |
| <b>Electricity generation, by source</b>                          | <b>16.7</b>  | <b>15.7</b>  | <b>14.1</b>  | <b>14.2</b>  | <b>13.4</b>  | <b>13.7</b>  | <b>13.3</b>  | <b>12.8</b>  | <b>13.4</b>  | <b>9.7</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Gas                                                               | 1.2          | 1.1          | 0.9          | 0.8          | 0.6          | 0.9          | 1.0          | 1.2          | 0.9          | 0.4          | 4.1                  |
| Coal                                                              | 7.0          | 6.1          | 4.8          | 5.3          | 4.2          | 4.2          | 3.9          | 3.4          | 3.2          | 2.2          | 22.9                 |
| Nuclear                                                           | 7.2          | 7.6          | 7.5          | 7.0          | 7.4          | 7.3          | 7.1          | 6.6          | 7.4          | 5.5          | 56.1                 |
| Hydro                                                             | 1.2          | 0.8          | 0.6          | 0.8          | 0.9          | 1.0          | 0.7          | 0.7          | 0.9          | 0.9          | 9.7                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.7                  |
| Wind                                                              | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.3          | 0.3          | 0.2          | 2.2                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.3          | 0.5          | 0.6          | 0.4          | 4.0                  |
| Other renewables                                                  | -0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| <b>Total final consumption, by sector</b>                         | <b>72.6</b>  | <b>63.0</b>  | <b>53.3</b>  | <b>54.6</b>  | <b>51.9</b>  | <b>53.5</b>  | <b>51.2</b>  | <b>50.1</b>  | <b>52.2</b>  | <b>38.3</b>  | <b>100.0</b>         |
| Industry                                                          | 27.0         | 24.8         | 20.6         | 20.1         | 18.9         | 20.3         | 19.6         | 19.2         | 20.3         | 13.0         | 34.0                 |
| Transport                                                         | 9.5          | 8.0          | 7.1          | 7.7          | 7.9          | 8.0          | 8.3          | 7.3          | 7.7          | 6.5          | 16.9                 |
| Residential/Commercial                                            | 29.2         | 25.0         | 20.5         | 22.0         | 20.9         | 21.0         | 18.9         | 18.5         | 18.8         | 14.8         | 38.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>11.8</b>  | <b>10.1</b>  | <b>9.4</b>   | <b>9.6</b>   | <b>9.8</b>   | <b>10.4</b>  | <b>10.4</b>  | <b>9.6</b>   | <b>10.2</b>  | <b>8.5</b>   | <b>100.0</b>         |
| Industry                                                          | 1.0          | 0.9          | 0.8          | 0.2          | 0.4          | 0.4          | 0.5          | 0.6          | 0.7          | 0.6          | 6.8                  |
| Transport                                                         | 8.7          | 7.3          | 6.5          | 7.1          | 7.3          | 7.3          | 7.6          | 6.7          | 7.1          | 6.1          | 71.9                 |
| Residential/Commercial                                            | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 1.6                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>22.7</b>  | <b>18.7</b>  | <b>14.6</b>  | <b>14.3</b>  | <b>13.6</b>  | <b>13.6</b>  | <b>12.0</b>  | <b>12.6</b>  | <b>12.4</b>  | <b>9.9</b>   | <b>100.0</b>         |
| Industry                                                          | 4.4          | 3.3          | 2.8          | 2.5          | 2.7          | 2.9          | 2.7          | 2.8          | 2.8          | 2.2          | 22.4                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Residential/Commercial                                            | 14.1         | 12.5         | 9.4          | 9.9          | 9.6          | 9.6          | 7.7          | 7.4          | 7.3          | 5.8          | 58.4                 |
| <b>Refined products consumption</b>                               | <b>11.8</b>  | <b>10.1</b>  | <b>9.4</b>   | <b>9.6</b>   | <b>9.8</b>   | <b>10.4</b>  | <b>10.4</b>  | <b>9.6</b>   | <b>10.2</b>  | <b>8.5</b>   | <b>100.0</b>         |
| Gasoline                                                          | 4.2          | 3.3          | 2.5          | 2.3          | 2.1          | 1.9          | 1.7          | 1.8          | 1.9          | 1.7          | 19.5                 |
| Diesel                                                            | 6.1          | 5.3          | 5.2          | 5.1          | 5.2          | 5.4          | 5.8          | 5.2          | 5.5          | 4.8          | 56.9                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.9          | 1.0          | 0.9          | 1.5          | 1.7          | 1.9          | 2.1          | 1.5          | 1.6          | 1.2          | 14.7                 |
| <b>Imports</b>                                                    | <b>30.7</b>  | <b>24.0</b>  | <b>21.4</b>  | <b>18.4</b>  | <b>22.1</b>  | <b>19.9</b>  | <b>21.2</b>  | <b>19.3</b>  | <b>19.1</b>  | <b>13.1</b>  | <b>100.0</b>         |
| Oil                                                               | 8.1          | 8.3          | 8.1          | 9.6          | 10.8         | 11.5         | 11.7         | 11.9         | 12.7         | 9.4          | 71.7                 |
| Gas                                                               | 22.6         | 15.7         | 13.3         | 8.8          | 11.3         | 8.5          | 9.5          | 7.4          | 6.4          | 3.7          | 28.3                 |
| Gasoline                                                          | 1.9          | 2.3          | 1.5          | 1.5          | 1.3          | 1.2          | 1.1          | 1.1          | 1.3          | 1.1          | 8.6                  |
| Diesel                                                            | 4.3          | 4.8          | 4.9          | 5.2          | 5.5          | 5.6          | 6.3          | 6.1          | 6.6          | 5.7          | 43.8                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.2          | 0.4          | 0.3          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.4          | 0.5          | 0.7          | 1.2          | 1.2          | 1.4          | 1.6          | 1.7          | 1.7          | 1.5          | 11.1                 |
| <b>Exports</b>                                                    | <b>1.0</b>   | <b>0.8</b>   | <b>0.1</b>   | <b>0.0</b>   | <b>0.4</b>   | <b>0.3</b>   | <b>0.8</b>   | <b>0.3</b>   | <b>0.4</b>   | <b>0.1</b>   | <b>100.0</b>         |
| Oil                                                               | 1.0          | 0.8          | 0.1          | 0.0          | 0.4          | 0.3          | 0.8          | 0.3          | 0.3          | 0.1          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.2          | 0.2          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.1          | 0.1          | 0.0          | 0.0          | 0.2          | 0.2          | 0.3          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.6          | 0.5          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>273.8</b> | <b>230.8</b> | <b>191.5</b> | <b>192.3</b> | <b>177.1</b> | <b>187.6</b> | <b>174.5</b> | <b>165.9</b> | <b>171.7</b> | <b>119.2</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>510.2</b> | <b>478.3</b> | <b>439.7</b> | <b>430.9</b> | <b>387.8</b> | <b>397.0</b> | <b>357.8</b> | <b>353.5</b> | <b>353.7</b> | <b>352.2</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>126.1</b> | <b>123.3</b> | <b>114.8</b> | <b>115.9</b> | <b>108.1</b> | <b>107.6</b> | <b>99.3</b>  | <b>98.9</b>  | <b>99.7</b>  | <b>105.1</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>211.8</b> | <b>207.9</b> | <b>212.8</b> | <b>200.5</b> | <b>196.1</b> | <b>198.2</b> | <b>183.2</b> | <b>184.0</b> | <b>187.7</b> | <b>192.5</b> | <b>-</b>             |

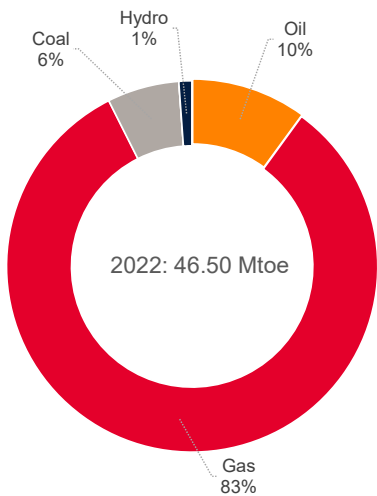
\*Heat is included



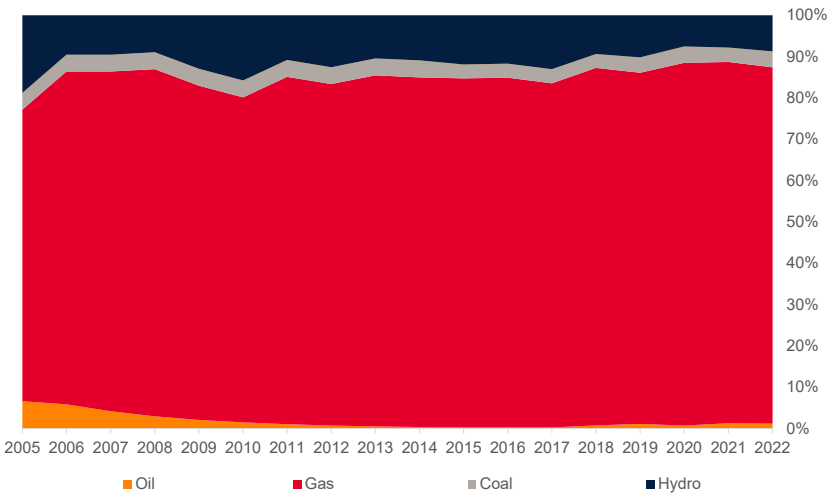
| <b>Uzbekistan</b><br>(Million toe)                                | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>40.0</b>  | <b>37.3</b>  | <b>35.7</b>  | <b>37.7</b>  | <b>39.7</b>  | <b>48.1</b>  | <b>47.1</b>  | <b>45.3</b>  | <b>49.9</b>  | <b>46.5</b>  | <b>100.0</b>         |
| Oil                                                               | 3.8          | 3.4          | 3.4          | 3.6          | 3.7          | 4.0          | 3.9          | 4.3          | 4.4          | 4.6          | 10.0                 |
| Gas                                                               | 33.8         | 31.5         | 30.3         | 31.9         | 33.7         | 41.2         | 40.4         | 37.4         | 42.1         | 38.1         | 82.0                 |
| Coal                                                              | 2.0          | 1.9          | 1.5          | 1.8          | 1.7          | 2.4          | 2.1          | 2.9          | 2.6          | 2.9          | 6.2                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.5          | 0.5          | 0.6          | 0.6          | 0.7          | 0.5          | 0.6          | 0.4          | 0.5          | 0.5          | 1.1                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity balance of trade*                                     | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.0         | 0.1          | 0.2          | 0.3          | 0.3          | 0.6                  |
| <b>Total final consumption, by source</b>                         | <b>29.6</b>  | <b>27.0</b>  | <b>25.1</b>  | <b>26.8</b>  | <b>28.5</b>  | <b>28.8</b>  | <b>29.4</b>  | <b>32.6</b>  | <b>33.5</b>  | <b>32.0</b>  | <b>100.0</b>         |
| Oil                                                               | 3.0          | 3.2          | 3.2          | 3.4          | 3.4          | 3.6          | 3.6          | 3.9          | 3.7          | 3.9          | 12.3                 |
| Gas                                                               | 19.7         | 17.0         | 15.1         | 16.3         | 18.1         | 17.1         | 17.7         | 20.2         | 21.6         | 19.8         | 61.7                 |
| Coal                                                              | 0.8          | 0.6          | 0.4          | 0.7          | 0.5          | 0.9          | 0.8          | 1.3          | 1.1          | 1.3          | 3.9                  |
| Electricity                                                       | 3.4          | 3.5          | 3.6          | 3.7          | 3.8          | 4.5          | 4.5          | 4.4          | 4.7          | 4.6          | 14.5                 |
| Heat                                                              | 2.7          | 2.7          | 2.7          | 2.7          | 2.6          | 2.7          | 2.9          | 2.7          | 2.3          | 2.4          | 7.6                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Electricity generation, by source</b>                          | <b>4.7</b>   | <b>4.8</b>   | <b>4.9</b>   | <b>5.0</b>   | <b>5.2</b>   | <b>5.4</b>   | <b>5.5</b>   | <b>5.7</b>   | <b>6.1</b>   | <b>6.1</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.1          | 0.1          | 1.2                  |
| Gas                                                               | 4.0          | 4.1          | 4.2          | 4.3          | 4.4          | 4.7          | 4.6          | 5.0          | 5.3          | 5.2          | 86.2                 |
| Coal                                                              | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 3.9                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.5          | 0.5          | 0.6          | 0.6          | 0.7          | 0.5          | 0.6          | 0.4          | 0.5          | 0.5          | 8.7                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>29.6</b>  | <b>27.0</b>  | <b>25.1</b>  | <b>26.8</b>  | <b>28.5</b>  | <b>28.8</b>  | <b>29.4</b>  | <b>32.6</b>  | <b>33.5</b>  | <b>32.0</b>  | <b>100.0</b>         |
| Industry                                                          | 7.1          | 6.5          | 6.0          | 6.4          | 6.9          | 6.6          | 7.2          | 6.8          | 7.3          | 6.9          | 21.6                 |
| Transport                                                         | 2.4          | 2.3          | 2.3          | 2.4          | 2.4          | 5.0          | 5.5          | 5.7          | 5.9          | 5.9          | 18.4                 |
| Residential/Commercial                                            | 15.9         | 14.2         | 12.9         | 13.8         | 15.2         | 14.8         | 14.7         | 17.0         | 17.9         | 16.9         | 52.8                 |
| <b>Oil final consumption, by sector</b>                           | <b>3.0</b>   | <b>3.2</b>   | <b>3.2</b>   | <b>3.4</b>   | <b>3.4</b>   | <b>3.6</b>   | <b>3.6</b>   | <b>3.9</b>   | <b>3.7</b>   | <b>3.9</b>   | <b>100.0</b>         |
| Industry                                                          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.1          | 3.7                  |
| Transport                                                         | 2.2          | 2.2          | 2.2          | 2.3          | 2.3          | 2.6          | 2.6          | 3.1          | 2.8          | 3.0          | 77.2                 |
| Residential/Commercial                                            | 0.1          | 0.3          | 0.3          | 0.3          | 0.3          | 0.5          | 0.6          | 0.5          | 0.5          | 0.5          | 12.9                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>19.7</b>  | <b>17.0</b>  | <b>15.1</b>  | <b>16.3</b>  | <b>18.1</b>  | <b>17.1</b>  | <b>17.7</b>  | <b>20.2</b>  | <b>21.6</b>  | <b>19.8</b>  | <b>100.0</b>         |
| Industry                                                          | 5.2          | 4.5          | 4.0          | 4.4          | 4.8          | 4.5          | 4.9          | 4.3          | 4.8          | 4.4          | 22.3                 |
| Transport                                                         | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 2.3          | 2.8          | 2.5          | 3.1          | 2.8          | 14.2                 |
| Residential/Commercial                                            | 14.3         | 12.3         | 10.9         | 11.8         | 13.1         | 10.0         | 9.9          | 12.1         | 13.0         | 11.9         | 60.3                 |
| <b>Refined products consumption</b>                               | <b>3.0</b>   | <b>3.2</b>   | <b>3.2</b>   | <b>3.4</b>   | <b>3.4</b>   | <b>3.6</b>   | <b>3.6</b>   | <b>3.9</b>   | <b>3.7</b>   | <b>3.9</b>   | <b>100.0</b>         |
| Gasoline                                                          | 1.2          | 1.1          | 1.1          | 1.2          | 1.1          | 1.1          | 1.1          | 1.4          | 1.4          | 1.5          | 38.7                 |
| Diesel                                                            | 1.1          | 0.9          | 0.9          | 1.0          | 1.1          | 1.1          | 1.1          | 1.4          | 1.1          | 1.2          | 29.9                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 2.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.5                  |
| LPG                                                               | 0.3          | 0.8          | 0.8          | 0.8          | 0.8          | 0.9          | 0.9          | 0.8          | 0.8          | 0.9          | 22.3                 |
| <b>Imports</b>                                                    | <b>0.8</b>   | <b>0.7</b>   | <b>0.8</b>   | <b>1.1</b>   | <b>1.1</b>   | <b>1.3</b>   | <b>0.9</b>   | <b>1.5</b>   | <b>3.4</b>   | <b>1.7</b>   | <b>100.0</b>         |
| Oil                                                               | 0.8          | 0.7          | 0.8          | 1.1          | 1.1          | 1.3          | 0.9          | 1.5          | 1.6          | 1.7          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 1.8          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3          | 0.1          | 0.1          | 7.5                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.4          | 0.4          | 0.4          | 22.5                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 14.4                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>9.2</b>   | <b>7.9</b>   | <b>8.9</b>   | <b>8.6</b>   | <b>7.6</b>   | <b>10.0</b>  | <b>10.0</b>  | <b>2.5</b>   | <b>4.5</b>   | <b>4.7</b>   | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.1          | 2.0                  |
| Gas                                                               | 9.1          | 7.8          | 8.8          | 8.5          | 7.5          | 9.9          | 9.9          | 2.5          | 4.4          | 4.6          | 98.0                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>106.6</b> | <b>99.8</b>  | <b>94.1</b>  | <b>100.2</b> | <b>104.8</b> | <b>107.8</b> | <b>111.9</b> | <b>109.7</b> | <b>119.3</b> | <b>111.9</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>584.3</b> | <b>511.5</b> | <b>450.1</b> | <b>452.4</b> | <b>453.1</b> | <b>442.6</b> | <b>434.7</b> | <b>418.2</b> | <b>423.3</b> | <b>375.9</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>160.2</b> | <b>136.9</b> | <b>118.5</b> | <b>119.8</b> | <b>121.8</b> | <b>117.2</b> | <b>113.5</b> | <b>123.6</b> | <b>118.3</b> | <b>107.0</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>219.4</b> | <b>191.3</b> | <b>170.8</b> | <b>170.3</b> | <b>171.8</b> | <b>197.5</b> | <b>182.8</b> | <b>172.5</b> | <b>177.2</b> | <b>156.1</b> | <b>-</b>             |

\*Heat is included

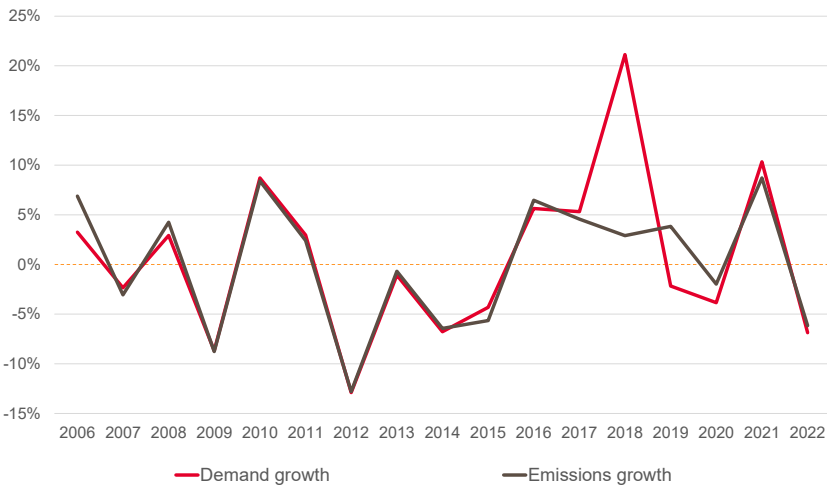
Primary energy demand mix



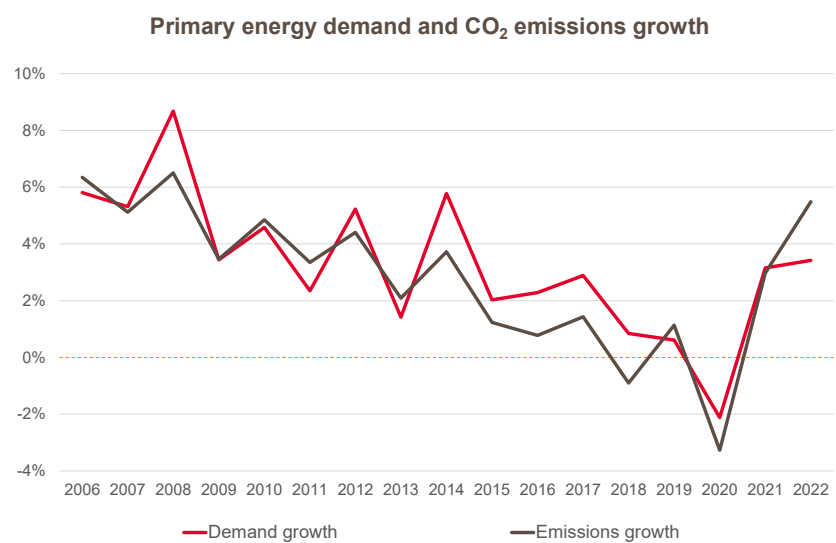
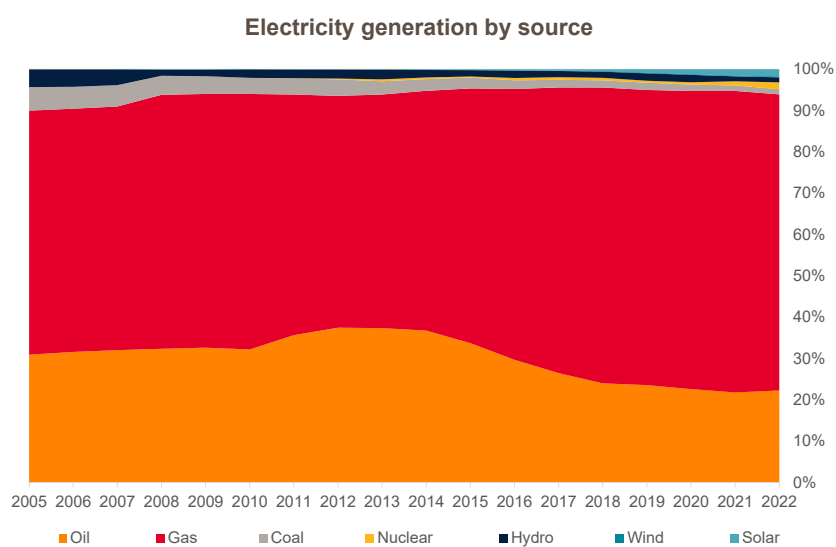
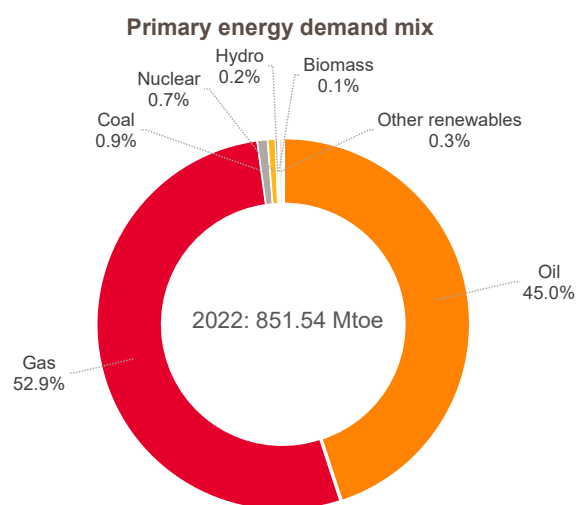
Electricity generation by source



Primary energy demand and CO<sub>2</sub> emissions growth

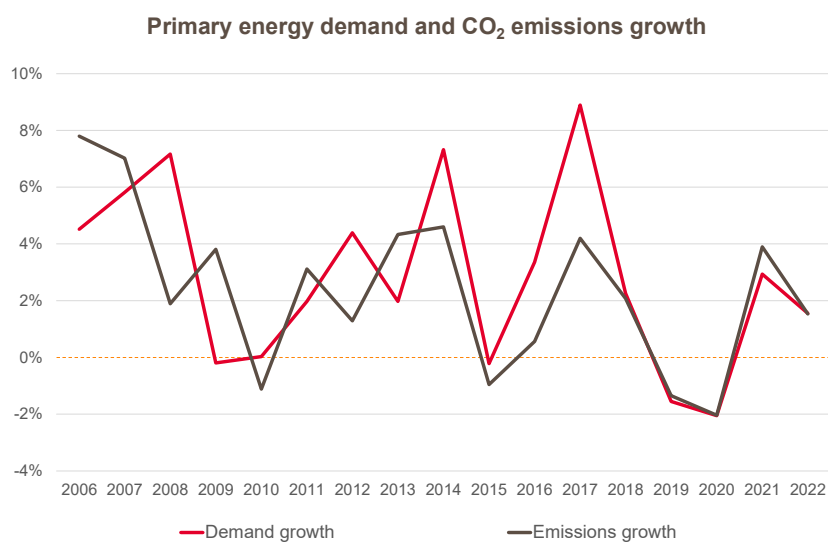
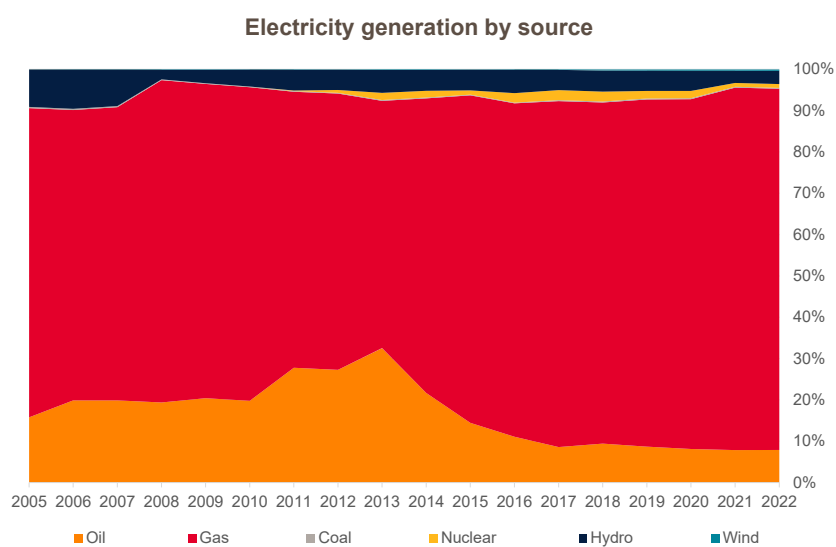
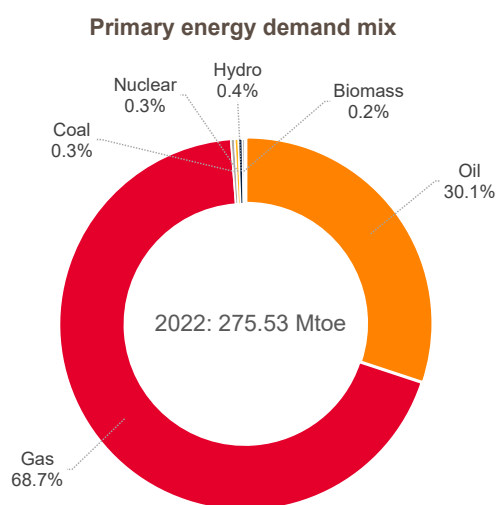


| <b>Middle East</b><br>(Million toe)                               | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>707.6</b>   | <b>748.5</b>   | <b>763.7</b>   | <b>781.2</b>   | <b>803.7</b>   | <b>810.5</b>   | <b>815.5</b>   | <b>798.2</b>   | <b>823.4</b>   | <b>851.5</b>   | <b>100.0</b>         |
| Oil                                                               | 340.9          | 364.7          | 357.6          | 358.4          | 366.2          | 366.5          | 359.4          | 336.7          | 349.9          | 382.1          | 44.9                 |
| Gas                                                               | 351.5          | 368.8          | 391.7          | 408.0          | 422.9          | 428.7          | 439.5          | 445.4          | 456.4          | 449.4          | 52.8                 |
| Coal                                                              | 10.4           | 10.3           | 9.9            | 8.9            | 8.8            | 8.3            | 8.0            | 8.0            | 7.7            | 7.6            | 0.9                  |
| Nuclear                                                           | 1.2            | 1.2            | 0.8            | 1.7            | 2.0            | 1.9            | 1.5            | 1.9            | 3.5            | 5.9            | 0.7                  |
| Hydro                                                             | 2.0            | 1.7            | 1.5            | 1.8            | 1.6            | 1.6            | 1.9            | 1.9            | 1.4            | 1.5            | 0.2                  |
| Biomass                                                           | 0.9            | 0.9            | 0.9            | 1.1            | 1.1            | 1.1            | 1.1            | 1.2            | 1.2            | 1.2            | 0.1                  |
| Other renewables                                                  | 0.1            | 0.2            | 0.2            | 0.3            | 0.4            | 0.6            | 1.2            | 1.6            | 1.9            | 2.3            | 0.3                  |
| Electricity balance of trade*                                     | 0.5            | 0.7            | 1.1            | 1.0            | 0.8            | 1.7            | 2.8            | 1.4            | 1.5            | 1.6            | 0.2                  |
| <b>Total final consumption, by source</b>                         | <b>496.4</b>   | <b>522.4</b>   | <b>528.1</b>   | <b>535.2</b>   | <b>537.5</b>   | <b>539.2</b>   | <b>547.9</b>   | <b>526.3</b>   | <b>547.2</b>   | <b>571.7</b>   | <b>100.0</b>         |
| Oil                                                               | 247.5          | 260.5          | 257.4          | 258.5          | 266.3          | 266.3          | 265.8          | 243.0          | 254.7          | 273.2          | 47.8                 |
| Gas                                                               | 171.8          | 179.2          | 187.3          | 189.4          | 180.6          | 181.1          | 189.7          | 190.6          | 194.9          | 197.4          | 34.5                 |
| Coal                                                              | 3.2            | 3.7            | 3.2            | 3.4            | 3.7            | 3.7            | 3.6            | 3.9            | 4.2            | 4.2            | 0.7                  |
| Electricity                                                       | 72.6           | 77.7           | 78.7           | 82.5           | 85.4           | 86.5           | 87.2           | 87.2           | 91.8           | 95.3           | 16.7                 |
| Heat                                                              | 0.5            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.6            | 0.7            | 0.7            | 0.7            | 0.1                  |
| Biomass                                                           | 0.8            | 0.8            | 0.8            | 0.9            | 0.9            | 1.0            | 1.0            | 1.0            | 1.0            | 1.0            | 0.2                  |
| <b>Electricity generation, by source</b>                          | <b>87.1</b>    | <b>93.1</b>    | <b>97.5</b>    | <b>100.8</b>   | <b>105.4</b>   | <b>106.5</b>   | <b>109.1</b>   | <b>109.8</b>   | <b>114.5</b>   | <b>119.4</b>   | <b>100.0</b>         |
| Oil                                                               | 32.5           | 34.2           | 32.9           | 29.9           | 27.9           | 25.6           | 25.7           | 24.8           | 25.0           | 26.6           | 22.3                 |
| Gas                                                               | 49.2           | 54.0           | 60.1           | 66.1           | 72.9           | 76.3           | 77.9           | 79.2           | 83.5           | 85.6           | 71.7                 |
| Coal                                                              | 2.8            | 2.6            | 2.6            | 2.1            | 2.0            | 1.8            | 1.9            | 1.7            | 1.5            | 1.5            | 1.3                  |
| Nuclear                                                           | 0.4            | 0.4            | 0.3            | 0.6            | 0.6            | 0.6            | 0.5            | 0.6            | 1.1            | 1.9            | 1.6                  |
| Hydro                                                             | 2.0            | 1.7            | 1.5            | 1.8            | 1.6            | 1.6            | 1.9            | 1.9            | 1.4            | 1.5            | 1.2                  |
| Biomass                                                           | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| Wind                                                              | 0.0            | 0.0            | 0.0            | 0.1            | 0.1            | 0.1            | 0.1            | 0.2            | 0.2            | 0.2            | 0.2                  |
| Solar                                                             | 0.1            | 0.1            | 0.1            | 0.2            | 0.3            | 0.5            | 0.9            | 1.3            | 1.7            | 2.1            | 1.7                  |
| Other renewables                                                  | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>496.4</b>   | <b>522.4</b>   | <b>528.1</b>   | <b>535.2</b>   | <b>537.5</b>   | <b>539.2</b>   | <b>547.9</b>   | <b>526.3</b>   | <b>547.2</b>   | <b>571.7</b>   | <b>100.0</b>         |
| Industry                                                          | 146.1          | 157.3          | 158.7          | 154.6          | 147.7          | 143.4          | 150.6          | 147.8          | 149.5          | 154.2          | 27.0                 |
| Transport                                                         | 136.2          | 139.0          | 138.6          | 141.3          | 145.3          | 146.3          | 145.8          | 130.4          | 138.5          | 148.7          | 26.0                 |
| Residential/Commercial                                            | 118.0          | 120.2          | 124.6          | 130.1          | 129.0          | 133.4          | 133.3          | 131.5          | 138.1          | 142.4          | 24.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>247.5</b>   | <b>260.5</b>   | <b>257.4</b>   | <b>258.5</b>   | <b>266.3</b>   | <b>266.3</b>   | <b>265.8</b>   | <b>243.0</b>   | <b>254.7</b>   | <b>273.2</b>   | <b>100.0</b>         |
| Industry                                                          | 28.5           | 32.9           | 31.4           | 28.4           | 28.6           | 27.3           | 25.7           | 22.0           | 21.4           | 24.6           | 9.0                  |
| Transport                                                         | 130.5          | 133.0          | 132.3          | 134.8          | 138.8          | 139.5          | 139.1          | 123.6          | 131.5          | 141.7          | 51.9                 |
| Residential/Commercial                                            | 17.6           | 15.7           | 14.8           | 15.0           | 14.9           | 15.4           | 15.0           | 13.3           | 14.0           | 14.7           | 5.4                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>171.8</b>   | <b>179.2</b>   | <b>187.3</b>   | <b>189.4</b>   | <b>180.6</b>   | <b>181.1</b>   | <b>189.7</b>   | <b>190.6</b>   | <b>194.9</b>   | <b>197.4</b>   | <b>100.0</b>         |
| Industry                                                          | 97.6           | 102.5          | 108.3          | 104.8          | 96.8           | 93.2           | 101.9          | 102.5          | 103.6          | 105.1          | 53.3                 |
| Transport                                                         | 5.6            | 6.0            | 6.3            | 6.5            | 6.5            | 6.7            | 6.7            | 6.7            | 7.0            | 7.0            | 3.6                  |
| Residential/Commercial                                            | 47.3           | 48.0           | 49.9           | 53.8           | 50.7           | 53.9           | 53.9           | 53.9           | 56.3           | 56.6           | 28.7                 |
| <b>Refined products consumption</b>                               | <b>247.3</b>   | <b>259.9</b>   | <b>257.2</b>   | <b>256.7</b>   | <b>264.0</b>   | <b>263.5</b>   | <b>264.2</b>   | <b>242.1</b>   | <b>253.6</b>   | <b>270.5</b>   | <b>100.0</b>         |
| Gasoline                                                          | 72.1           | 73.4           | 74.5           | 76.9           | 81.2           | 81.3           | 80.8           | 69.4           | 75.6           | 80.1           | 29.6                 |
| Diesel                                                            | 73.9           | 74.3           | 71.0           | 70.4           | 69.8           | 70.9           | 71.2           | 65.9           | 68.6           | 75.2           | 27.8                 |
| Heating Oil                                                       | 16.3           | 20.2           | 20.2           | 15.6           | 15.3           | 13.4           | 13.2           | 11.2           | 9.4            | 10.1           | 3.7                  |
| Aviation Jet                                                      | 2.0            | 2.1            | 2.3            | 2.3            | 2.5            | 2.4            | 2.4            | 1.7            | 1.9            | 2.1            | 0.8                  |
| LPG                                                               | 26.9           | 29.6           | 26.6           | 25.8           | 26.0           | 25.2           | 25.4           | 26.3           | 27.0           | 28.6           | 10.6                 |
| <b>Imports</b>                                                    | <b>132.0</b>   | <b>133.9</b>   | <b>142.2</b>   | <b>137.3</b>   | <b>134.6</b>   | <b>156.0</b>   | <b>135.3</b>   | <b>134.6</b>   | <b>138.9</b>   | <b>145.3</b>   | <b>100.0</b>         |
| Oil                                                               | 106.3          | 105.9          | 110.5          | 105.9          | 102.7          | 125.0          | 103.7          | 101.7          | 107.3          | 113.6          | 78.2                 |
| Gas                                                               | 25.7           | 28.0           | 31.8           | 31.3           | 31.9           | 31.0           | 31.6           | 32.9           | 31.6           | 31.7           | 21.8                 |
| Gasoline                                                          | 18.7           | 19.5           | 22.8           | 24.2           | 27.0           | 36.5           | 26.5           | 23.0           | 24.5           | 26.1           | 18.0                 |
| Diesel                                                            | 24.2           | 22.8           | 23.3           | 20.2           | 13.0           | 18.1           | 8.7            | 7.2            | 10.3           | 8.4            | 5.8                  |
| Heating Oil                                                       | 22.5           | 21.1           | 22.2           | 21.2           | 20.8           | 26.6           | 27.3           | 28.9           | 28.1           | 30.3           | 20.8                 |
| Aviation Jet                                                      | 0.6            | 0.6            | 0.6            | 0.8            | 0.8            | 0.8            | 0.9            | 0.3            | 0.3            | 0.3            | 0.2                  |
| LPG                                                               | 1.9            | 1.6            | 1.6            | 1.8            | 1.3            | 1.3            | 1.3            | 1.2            | 1.2            | 1.2            | 0.8                  |
| <b>Exports</b>                                                    | <b>1,219.1</b> | <b>1,193.9</b> | <b>1,251.1</b> | <b>1,390.9</b> | <b>1,339.2</b> | <b>1,375.9</b> | <b>1,285.9</b> | <b>1,194.0</b> | <b>1,212.5</b> | <b>1,366.9</b> | <b>100.0</b>         |
| Oil                                                               | 1,078.2        | 1,054.8        | 1,116.5        | 1,254.3        | 1,202.0        | 1,237.0        | 1,141.1        | 1,050.2        | 1,064.1        | 1,193.0        | 87.3                 |
| Gas                                                               | 140.9          | 139.2          | 134.6          | 136.7          | 137.1          | 138.9          | 144.8          | 143.9          | 148.4          | 173.9          | 12.7                 |
| Gasoline                                                          | 3.3            | 6.1            | 9.9            | 14.0           | 13.1           | 20.6           | 11.6           | 11.8           | 13.8           | 17.8           | 1.3                  |
| Diesel                                                            | 27.3           | 34.9           | 47.4           | 55.6           | 56.2           | 70.0           | 59.9           | 53.0           | 65.2           | 67.4           | 4.9                  |
| Heating Oil                                                       | 26.7           | 20.4           | 24.5           | 28.6           | 32.6           | 35.2           | 32.1           | 27.7           | 31.8           | 35.9           | 2.6                  |
| Aviation Jet                                                      | 11.4           | 9.4            | 8.9            | 10.0           | 11.1           | 12.8           | 10.5           | 9.2            | 9.6            | 10.7           | 0.8                  |
| LPG                                                               | 44.1           | 39.0           | 42.9           | 48.0           | 48.2           | 50.7           | 45.0           | 40.3           | 46.3           | 53.8           | 3.9                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>1,766.4</b> | <b>1,832.1</b> | <b>1,854.6</b> | <b>1,869.0</b> | <b>1,895.8</b> | <b>1,878.6</b> | <b>1,899.9</b> | <b>1,837.9</b> | <b>1,892.5</b> | <b>1,996.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>370.8</b>   | <b>373.4</b>   | <b>371.5</b>   | <b>359.0</b>   | <b>361.9</b>   | <b>354.5</b>   | <b>355.3</b>   | <b>357.5</b>   | <b>355.5</b>   | <b>354.1</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>86.0</b>    | <b>86.9</b>    | <b>86.5</b>    | <b>83.7</b>    | <b>82.5</b>    | <b>81.9</b>    | <b>82.4</b>    | <b>81.9</b>    | <b>82.3</b>    | <b>81.2</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>148.5</b>   | <b>152.5</b>   | <b>152.9</b>   | <b>150.0</b>   | <b>153.4</b>   | <b>153.1</b>   | <b>152.6</b>   | <b>155.6</b>   | <b>155.0</b>   | <b>151.4</b>   | <b>-</b>             |



| Iran<br>(Million toe)                                             | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>221.8</b> | <b>238.0</b> | <b>237.5</b> | <b>245.5</b> | <b>267.3</b> | <b>273.4</b> | <b>269.1</b> | <b>263.6</b> | <b>271.3</b> | <b>275.5</b> | <b>100.0</b>         |
| Oil                                                               | 89.0         | 88.8         | 78.8         | 74.6         | 85.9         | 85.8         | 83.5         | 76.2         | 80.9         | 83.0         | 30.1                 |
| Gas                                                               | 129.3        | 145.9        | 155.3        | 166.4        | 176.7        | 182.8        | 181.4        | 183.3        | 187.5        | 189.4        | 68.7                 |
| Coal                                                              | 1.2          | 1.0          | 1.1          | 1.1          | 1.3          | 1.2          | 1.0          | 1.0          | 1.0          | 1.0          | 0.3                  |
| Nuclear                                                           | 1.2          | 1.2          | 0.8          | 1.7          | 2.0          | 1.9          | 1.5          | 1.5          | 0.8          | 0.8          | 0.3                  |
| Hydro                                                             | 1.3          | 1.2          | 1.2          | 1.4          | 1.3          | 1.4          | 1.4          | 1.4          | 0.9          | 1.0          | 0.4                  |
| Biomass                                                           | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.2                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0                  |
| Electricity balance of trade*                                     | -0.7         | -0.5         | -0.2         | -0.2         | -0.4         | -0.3         | -0.3         | -0.3         | -0.3         | -0.3         | -0.1                 |
| <b>Total final consumption, by source</b>                         | <b>170.4</b> | <b>181.6</b> | <b>181.6</b> | <b>188.6</b> | <b>195.0</b> | <b>201.1</b> | <b>199.3</b> | <b>194.7</b> | <b>203.8</b> | <b>206.8</b> | <b>100.0</b>         |
| Oil                                                               | 62.4         | 67.4         | 66.9         | 64.8         | 68.6         | 70.9         | 69.7         | 63.6         | 67.0         | 68.7         | 33.2                 |
| Gas                                                               | 88.9         | 93.6         | 94.9         | 101.5        | 102.6        | 106.1        | 105.3        | 106.4        | 110.7        | 111.4        | 53.9                 |
| Coal                                                              | 1.0          | 1.1          | 1.1          | 1.1          | 1.2          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 0.6                  |
| Electricity                                                       | 17.6         | 19.0         | 18.2         | 20.7         | 22.1         | 22.3         | 22.5         | 22.9         | 24.3         | 24.9         | 12.0                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.2                  |
| <b>Electricity generation, by source</b>                          | <b>22.6</b>  | <b>23.6</b>  | <b>24.1</b>  | <b>24.9</b>  | <b>26.5</b>  | <b>26.6</b>  | <b>27.7</b>  | <b>27.9</b>  | <b>29.6</b>  | <b>30.3</b>  | <b>100.0</b>         |
| Oil                                                               | 7.3          | 5.1          | 3.5          | 2.8          | 2.3          | 2.5          | 2.4          | 2.3          | 2.3          | 2.4          | 7.9                  |
| Gas                                                               | 13.5         | 16.8         | 19.1         | 20.1         | 22.2         | 22.0         | 23.2         | 23.6         | 26.0         | 26.5         | 87.4                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2                  |
| Nuclear                                                           | 0.4          | 0.4          | 0.3          | 0.6          | 0.6          | 0.6          | 0.5          | 0.5          | 0.3          | 0.3          | 0.9                  |
| Hydro                                                             | 1.3          | 1.2          | 1.2          | 1.4          | 1.3          | 1.4          | 1.4          | 1.4          | 0.9          | 1.0          | 3.2                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2                  |
| Other renewables                                                  | 0.0          | -0.0         | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | -0.0         | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>170.4</b> | <b>181.6</b> | <b>181.6</b> | <b>188.6</b> | <b>195.0</b> | <b>201.1</b> | <b>199.3</b> | <b>194.7</b> | <b>203.8</b> | <b>206.8</b> | <b>100.0</b>         |
| Industry                                                          | 42.2         | 48.2         | 45.7         | 45.5         | 47.4         | 48.8         | 48.5         | 48.8         | 50.9         | 51.4         | 24.9                 |
| Transport                                                         | 43.4         | 44.4         | 42.9         | 44.2         | 46.3         | 47.9         | 47.3         | 44.4         | 46.3         | 47.4         | 22.9                 |
| Residential/Commercial                                            | 59.6         | 60.4         | 62.1         | 66.2         | 63.6         | 65.4         | 65.0         | 64.6         | 67.4         | 68.1         | 32.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>62.4</b>  | <b>67.4</b>  | <b>66.9</b>  | <b>64.8</b>  | <b>68.6</b>  | <b>70.9</b>  | <b>69.7</b>  | <b>63.6</b>  | <b>67.0</b>  | <b>68.7</b>  | <b>100.0</b>         |
| Industry                                                          | 5.3          | 8.4          | 8.0          | 4.1          | 3.9          | 3.9          | 3.9          | 3.6          | 3.7          | 3.8          | 5.6                  |
| Transport                                                         | 37.7         | 38.4         | 36.6         | 37.6         | 39.8         | 41.1         | 40.6         | 37.6         | 39.3         | 40.4         | 58.8                 |
| Residential/Commercial                                            | 7.3          | 6.4          | 6.1          | 6.1          | 5.5          | 5.5          | 5.4          | 4.3          | 4.5          | 4.6          | 6.7                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>88.9</b>  | <b>93.6</b>  | <b>94.9</b>  | <b>101.5</b> | <b>102.6</b> | <b>106.1</b> | <b>105.3</b> | <b>106.4</b> | <b>110.7</b> | <b>111.4</b> | <b>100.0</b>         |
| Industry                                                          | 30.1         | 32.5         | 32.1         | 33.6         | 35.2         | 36.4         | 36.2         | 36.5         | 38.1         | 38.4         | 34.4                 |
| Transport                                                         | 5.6          | 6.0          | 6.3          | 6.5          | 6.5          | 6.7          | 6.7          | 6.7          | 7.0          | 7.0          | 6.3                  |
| Residential/Commercial                                            | 43.3         | 44.0         | 45.3         | 49.0         | 46.3         | 47.9         | 47.6         | 48.1         | 49.9         | 50.2         | 45.1                 |
| <b>Refined products consumption</b>                               | <b>62.4</b>  | <b>67.4</b>  | <b>66.9</b>  | <b>64.8</b>  | <b>68.6</b>  | <b>70.9</b>  | <b>69.7</b>  | <b>63.6</b>  | <b>67.0</b>  | <b>68.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 19.2         | 19.5         | 19.9         | 21.0         | 22.6         | 23.2         | 22.9         | 21.4         | 22.3         | 22.9         | 33.4                 |
| Diesel                                                            | 24.2         | 24.0         | 21.5         | 21.3         | 22.1         | 23.2         | 23.0         | 21.3         | 22.1         | 22.7         | 33.0                 |
| Heating Oil                                                       | 3.3          | 6.3          | 5.8          | 2.0          | 1.1          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.5                  |
| Aviation Jet                                                      | 0.8          | 0.8          | 0.8          | 0.9          | 1.0          | 0.9          | 0.8          | 0.6          | 0.7          | 0.8          | 1.2                  |
| LPG                                                               | 2.6          | 2.3          | 2.4          | 2.4          | 2.4          | 2.5          | 2.5          | 2.5          | 2.6          | 2.6          | 3.8                  |
| <b>Imports</b>                                                    | <b>7.7</b>   | <b>10.1</b>  | <b>11.7</b>  | <b>10.2</b>  | <b>8.6</b>   | <b>8.3</b>   | <b>5.9</b>   | <b>5.4</b>   | <b>5.4</b>   | <b>5.3</b>   | <b>100.0</b>         |
| Oil                                                               | 3.2          | 3.8          | 4.4          | 5.2          | 5.4          | 6.5          | 5.9          | 5.3          | 5.4          | 5.3          | 99.7                 |
| Gas                                                               | 4.5          | 6.4          | 7.2          | 5.0          | 3.3          | 1.8          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3                  |
| Gasoline                                                          | 1.0          | 1.3          | 2.8          | 3.4          | 3.5          | 4.7          | 4.0          | 3.6          | 3.6          | 3.4          | 63.7                 |
| Diesel                                                            | 0.2          | 0.3          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>82.1</b>  | <b>85.2</b>  | <b>92.3</b>  | <b>156.9</b> | <b>154.1</b> | <b>141.5</b> | <b>85.4</b>  | <b>69.9</b>  | <b>89.3</b>  | <b>97.3</b>  | <b>100.0</b>         |
| Oil                                                               | 74.2         | 77.0         | 84.6         | 149.2        | 142.9        | 129.7        | 70.0         | 56.3         | 74.0         | 80.6         | 82.8                 |
| Gas                                                               | 7.9          | 8.2          | 7.7          | 7.7          | 11.2         | 11.8         | 15.5         | 13.6         | 15.3         | 16.7         | 17.2                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.2          | 0.0          | 1.8          | 3.5          | 2.1          | 2.1          | 2.2          | 2.2          | 2.6          | 3.1          | 3.2                  |
| Heating Oil                                                       | 8.1          | 6.1          | 9.1          | 15.2         | 15.2         | 15.3         | 16.0         | 15.8         | 16.4         | 17.1         | 17.6                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 2.0          | 3.3          | 3.2          | 3.1          | 2.9          | 2.9          | 3.0          | 3.0          | 3.2          | 3.4          | 3.5                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>561.5</b> | <b>587.3</b> | <b>581.7</b> | <b>584.9</b> | <b>609.5</b> | <b>622.1</b> | <b>613.8</b> | <b>601.3</b> | <b>624.7</b> | <b>634.2</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>513.7</b> | <b>511.8</b> | <b>514.3</b> | <b>475.3</b> | <b>481.9</b> | <b>503.3</b> | <b>503.2</b> | <b>484.5</b> | <b>480.6</b> | <b>476.0</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>139.3</b> | <b>139.6</b> | <b>139.6</b> | <b>132.5</b> | <b>130.5</b> | <b>137.4</b> | <b>138.4</b> | <b>133.4</b> | <b>132.9</b> | <b>131.6</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>202.9</b> | <b>207.5</b> | <b>210.0</b> | <b>199.5</b> | <b>211.4</b> | <b>221.1</b> | <b>220.6</b> | <b>212.4</b> | <b>208.8</b> | <b>206.8</b> | <b>-</b>             |

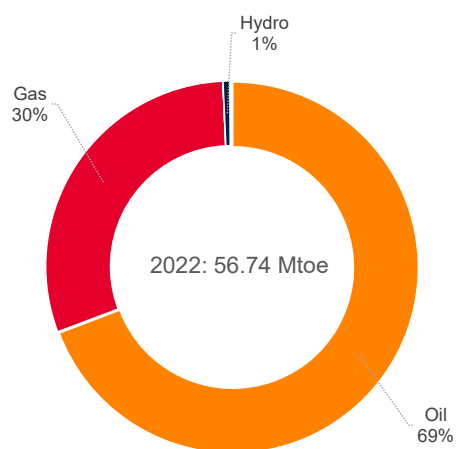
\*Heat is included



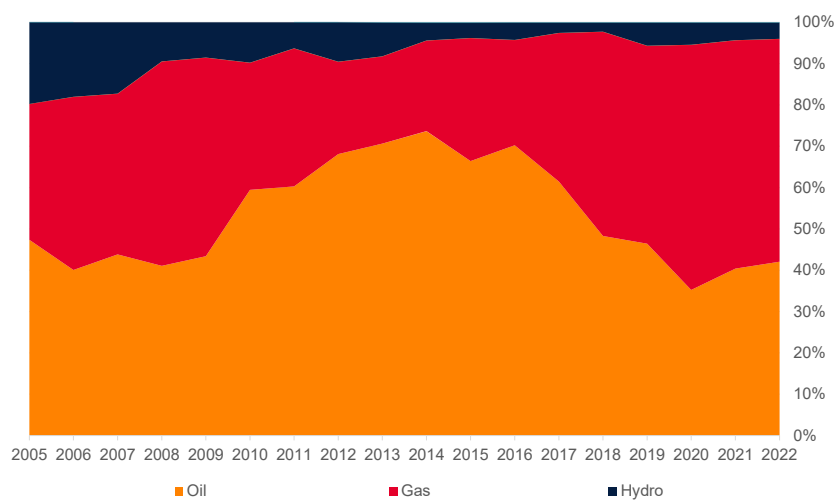
| <b>Iraq</b><br>(Million toe)                                      | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>41.5</b>  | <b>39.6</b>  | <b>37.5</b>  | <b>40.3</b>  | <b>46.6</b>  | <b>52.8</b>  | <b>56.4</b>  | <b>45.7</b>  | <b>49.2</b>  | <b>56.7</b>  | <b>100.0</b>         |
| Oil                                                               | 34.3         | 32.7         | 30.4         | 32.7         | 35.9         | 38.6         | 38.8         | 28.8         | 31.8         | 38.0         | 67.0                 |
| Gas                                                               | 5.7          | 5.5          | 5.7          | 6.2          | 9.5          | 12.1         | 14.1         | 14.8         | 15.3         | 16.5         | 29.0                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.4          | 0.3          | 0.2          | 0.3          | 0.2          | 0.2          | 0.4          | 0.4          | 0.3          | 0.3          | 0.6                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity balance of trade*                                     | 1.0          | 1.1          | 1.1          | 1.0          | 1.0          | 1.9          | 3.0          | 1.6          | 1.7          | 1.8          | 3.2                  |
| <b>Total final consumption, by source</b>                         | <b>24.6</b>  | <b>19.6</b>  | <b>17.0</b>  | <b>17.8</b>  | <b>19.6</b>  | <b>22.1</b>  | <b>23.6</b>  | <b>21.1</b>  | <b>24.7</b>  | <b>27.7</b>  | <b>100.0</b>         |
| Oil                                                               | 18.3         | 14.2         | 12.7         | 13.0         | 14.8         | 17.0         | 17.9         | 15.6         | 18.3         | 20.7         | 74.5                 |
| Gas                                                               | 2.4          | 1.6          | 1.2          | 1.4          | 1.3          | 1.4          | 1.8          | 1.9          | 2.4          | 2.7          | 9.8                  |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity                                                       | 3.9          | 3.8          | 3.1          | 3.3          | 3.4          | 3.7          | 3.8          | 3.6          | 4.0          | 4.3          | 15.6                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| <b>Electricity generation, by source</b>                          | <b>5.0</b>   | <b>5.8</b>   | <b>5.9</b>   | <b>6.9</b>   | <b>7.5</b>   | <b>7.1</b>   | <b>7.6</b>   | <b>7.9</b>   | <b>8.0</b>   | <b>8.6</b>   | <b>100.0</b>         |
| Oil                                                               | 3.6          | 4.3          | 3.9          | 4.8          | 4.6          | 3.4          | 3.5          | 2.8          | 3.2          | 3.6          | 42.1                 |
| Gas                                                               | 1.1          | 1.3          | 1.8          | 1.8          | 2.7          | 3.5          | 3.7          | 4.7          | 4.4          | 4.7          | 54.0                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.4          | 0.3          | 0.2          | 0.3          | 0.2          | 0.2          | 0.4          | 0.4          | 0.3          | 0.3          | 3.9                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Other renewables                                                  | 0.0          | -0.0         | -0.0         | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>24.6</b>  | <b>19.6</b>  | <b>17.0</b>  | <b>17.8</b>  | <b>19.6</b>  | <b>22.1</b>  | <b>23.6</b>  | <b>21.1</b>  | <b>24.7</b>  | <b>27.7</b>  | <b>100.0</b>         |
| Industry                                                          | 5.2          | 4.1          | 3.3          | 3.4          | 3.6          | 4.1          | 4.6          | 4.1          | 4.8          | 5.5          | 19.9                 |
| Transport                                                         | 10.6         | 8.4          | 8.1          | 8.2          | 9.4          | 10.9         | 11.6         | 9.6          | 11.9         | 13.6         | 49.2                 |
| Residential/Commercial                                            | 7.3          | 6.1          | 5.1          | 5.8          | 6.2          | 6.6          | 6.7          | 6.6          | 7.1          | 7.5          | 27.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>18.3</b>  | <b>14.2</b>  | <b>12.7</b>  | <b>13.0</b>  | <b>14.8</b>  | <b>17.0</b>  | <b>17.9</b>  | <b>15.6</b>  | <b>18.3</b>  | <b>20.7</b>  | <b>100.0</b>         |
| Industry                                                          | 2.5          | 1.9          | 1.8          | 1.8          | 2.0          | 2.5          | 2.6          | 2.2          | 2.5          | 2.8          | 13.7                 |
| Transport                                                         | 10.6         | 8.4          | 8.1          | 8.2          | 9.4          | 10.9         | 11.6         | 9.6          | 11.9         | 13.6         | 66.0                 |
| Residential/Commercial                                            | 4.3          | 3.2          | 2.6          | 2.9          | 3.2          | 3.3          | 3.3          | 3.4          | 3.5          | 3.6          | 17.5                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>2.4</b>   | <b>1.6</b>   | <b>1.2</b>   | <b>1.4</b>   | <b>1.3</b>   | <b>1.4</b>   | <b>1.8</b>   | <b>1.9</b>   | <b>2.4</b>   | <b>2.7</b>   | <b>100.0</b>         |
| Industry                                                          | 1.9          | 1.4          | 1.0          | 1.2          | 1.1          | 1.2          | 1.5          | 1.5          | 2.0          | 2.3          | 83.4                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Refined products consumption</b>                               | <b>18.3</b>  | <b>14.2</b>  | <b>12.7</b>  | <b>13.0</b>  | <b>14.8</b>  | <b>17.0</b>  | <b>17.9</b>  | <b>15.6</b>  | <b>18.3</b>  | <b>20.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 6.1          | 5.0          | 4.8          | 5.0          | 5.7          | 6.4          | 6.7          | 5.5          | 7.2          | 8.4          | 40.4                 |
| Diesel                                                            | 6.6          | 5.0          | 4.8          | 4.7          | 5.4          | 6.6          | 7.2          | 6.2          | 6.9          | 7.9          | 38.2                 |
| Heating Oil                                                       | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.2          | 0.1          | 0.2          | 0.2          | 0.9                  |
| Aviation Jet                                                      | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| LPG                                                               | 2.2          | 1.8          | 1.3          | 1.5          | 1.7          | 1.8          | 1.8          | 1.8          | 1.9          | 2.0          | 9.9                  |
| <b>Imports</b>                                                    | <b>4.6</b>   | <b>4.4</b>   | <b>4.4</b>   | <b>4.8</b>   | <b>6.2</b>   | <b>8.2</b>   | <b>10.1</b>  | <b>9.9</b>   | <b>9.1</b>   | <b>10.4</b>  | <b>100.0</b>         |
| Oil                                                               | 4.6          | 4.4          | 4.4          | 4.8          | 5.0          | 4.8          | 5.1          | 4.0          | 5.3          | 5.7          | 55.3                 |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 1.2          | 3.4          | 5.0          | 5.9          | 3.8          | 4.6          | 44.7                 |
| Gasoline                                                          | 2.2          | 2.0          | 2.1          | 2.3          | 2.6          | 2.7          | 2.9          | 2.1          | 3.7          | 4.0          | 38.1                 |
| Diesel                                                            | 1.4          | 1.5          | 1.4          | 1.8          | 1.8          | 1.4          | 1.6          | 1.5          | 1.1          | 1.3          | 12.2                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.3          | 0.3          | 0.4          | 0.5          | 0.4          | 0.4          | 0.4          | 0.2          | 0.2          | 0.2          | 1.8                  |
| LPG                                                               | 0.5          | 0.4          | 0.3          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>119.9</b> | <b>127.2</b> | <b>152.8</b> | <b>192.3</b> | <b>195.3</b> | <b>196.2</b> | <b>204.6</b> | <b>180.6</b> | <b>179.0</b> | <b>192.0</b> | <b>100.0</b>         |
| Oil                                                               | 119.9        | 127.2        | 152.8        | 192.3        | 195.3        | 196.2        | 204.6        | 180.6        | 179.0        | 192.0        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.5          | 0.4          | 0.4          | 0.3          | 3.5          | 1.1          | 3.7          | 6.3          | 7.5          | 7.2          | 3.7                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>111.5</b> | <b>105.6</b> | <b>100.3</b> | <b>106.6</b> | <b>119.3</b> | <b>127.6</b> | <b>139.1</b> | <b>122.6</b> | <b>140.2</b> | <b>155.5</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>336.9</b> | <b>318.4</b> | <b>288.9</b> | <b>269.8</b> | <b>307.6</b> | <b>320.5</b> | <b>331.0</b> | <b>329.0</b> | <b>366.0</b> | <b>375.4</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>69.9</b>  | <b>56.2</b>  | <b>47.4</b>  | <b>44.0</b>  | <b>49.3</b>  | <b>54.1</b>  | <b>54.5</b>  | <b>54.7</b>  | <b>62.1</b>  | <b>64.5</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>125.3</b> | <b>119.3</b> | <b>108.0</b> | <b>102.0</b> | <b>120.2</b> | <b>132.6</b> | <b>134.2</b> | <b>122.5</b> | <b>128.6</b> | <b>137.0</b> | <b>-</b>             |

\*Heat is included

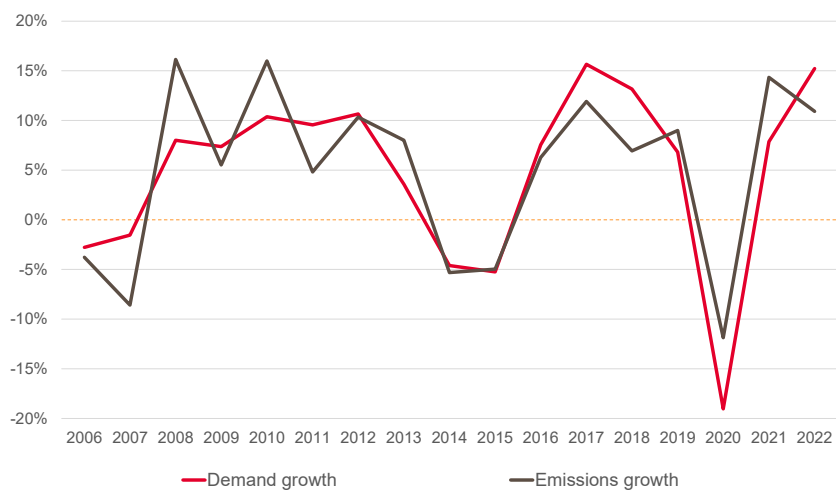
Primary energy demand mix



Electricity generation by source



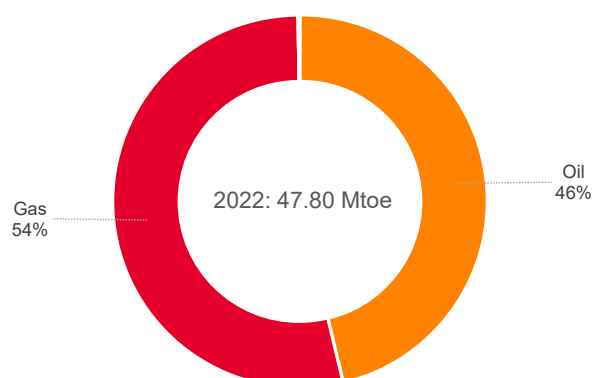
Primary energy demand and CO<sub>2</sub> emissions growth



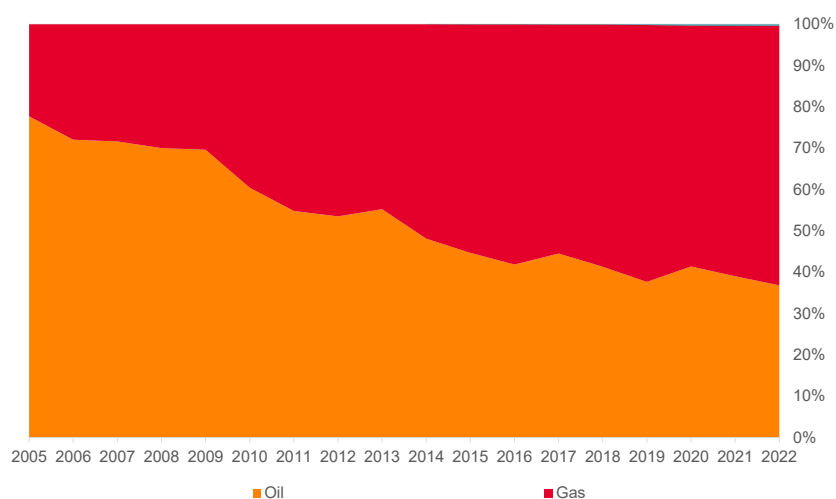
| <b>Kuwait</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>29.7</b>  | <b>26.9</b>  | <b>33.1</b>  | <b>36.1</b>  | <b>34.4</b>  | <b>34.2</b>  | <b>36.2</b>  | <b>38.8</b>  | <b>44.1</b>  | <b>47.8</b>  | <b>100.0</b>         |
| Oil                                                               | 14.6         | 11.9         | 16.0         | 18.0         | 16.0         | 15.5         | 15.9         | 16.1         | 20.1         | 22.1         | 46.3                 |
| Gas                                                               | 15.1         | 15.0         | 17.1         | 18.0         | 18.3         | 18.7         | 20.2         | 22.6         | 23.9         | 25.6         | 53.6                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1                  |
| Electricity balance of trade*                                     | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0                  |
| <b>Total final consumption, by source</b>                         | <b>15.6</b>  | <b>16.2</b>  | <b>17.3</b>  | <b>17.7</b>  | <b>18.5</b>  | <b>19.1</b>  | <b>19.0</b>  | <b>18.0</b>  | <b>19.8</b>  | <b>20.8</b>  | <b>100.0</b>         |
| Oil                                                               | 8.4          | 8.8          | 9.0          | 9.1          | 9.2          | 9.6          | 9.2          | 8.1          | 9.4          | 9.9          | 47.8                 |
| Gas                                                               | 4.1          | 2.9          | 3.6          | 3.8          | 4.3          | 4.4          | 4.6          | 4.8          | 4.8          | 5.2          | 24.7                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity                                                       | 3.1          | 4.5          | 4.7          | 4.8          | 5.0          | 5.1          | 5.2          | 5.1          | 5.6          | 5.7          | 27.5                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Electricity generation, by source</b>                          | <b>5.2</b>   | <b>5.6</b>   | <b>5.9</b>   | <b>6.0</b>   | <b>6.3</b>   | <b>6.4</b>   | <b>6.5</b>   | <b>6.4</b>   | <b>6.9</b>   | <b>7.2</b>   | <b>100.0</b>         |
| Oil                                                               | 2.9          | 2.7          | 2.6          | 2.5          | 2.8          | 2.6          | 2.4          | 2.7          | 2.7          | 2.6          | 36.8                 |
| Gas                                                               | 2.3          | 2.9          | 3.2          | 3.5          | 3.5          | 3.7          | 4.0          | 3.7          | 4.2          | 4.5          | 62.8                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3                  |
| Other renewables                                                  | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | -0.0         | 0.0          | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>15.6</b>  | <b>16.2</b>  | <b>17.3</b>  | <b>17.7</b>  | <b>18.5</b>  | <b>19.1</b>  | <b>19.0</b>  | <b>18.0</b>  | <b>19.8</b>  | <b>20.8</b>  | <b>100.0</b>         |
| Industry                                                          | 5.5          | 5.1          | 5.7          | 5.9          | 6.4          | 6.5          | 6.7          | 6.8          | 7.0          | 7.5          | 35.8                 |
| Transport                                                         | 4.4          | 4.5          | 4.7          | 4.8          | 5.1          | 5.3          | 5.4          | 4.4          | 5.2          | 5.7          | 27.4                 |
| Residential/Commercial                                            | 2.7          | 3.4          | 3.5          | 3.7          | 3.9          | 3.9          | 4.0          | 3.9          | 4.2          | 4.4          | 20.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>8.4</b>   | <b>8.8</b>   | <b>9.0</b>   | <b>9.1</b>   | <b>9.2</b>   | <b>9.6</b>   | <b>9.2</b>   | <b>8.1</b>   | <b>9.4</b>   | <b>9.9</b>   | <b>100.0</b>         |
| Industry                                                          | 0.9          | 0.9          | 0.9          | 0.8          | 0.7          | 0.7          | 0.7          | 0.6          | 0.7          | 0.7          | 7.5                  |
| Transport                                                         | 4.4          | 4.5          | 4.7          | 4.8          | 5.1          | 5.3          | 5.4          | 4.4          | 5.2          | 5.7          | 57.4                 |
| Residential/Commercial                                            | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.4          | 0.3          | 0.3          | 0.3          | 0.3          | 3.3                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>4.1</b>   | <b>2.9</b>   | <b>3.6</b>   | <b>3.8</b>   | <b>4.3</b>   | <b>4.4</b>   | <b>4.6</b>   | <b>4.8</b>   | <b>4.8</b>   | <b>5.2</b>   | <b>100.0</b>         |
| Industry                                                          | 4.1          | 2.9          | 3.6          | 3.8          | 4.3          | 4.4          | 4.6          | 4.8          | 4.8          | 5.2          | 100.0                |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Refined products consumption</b>                               | <b>8.4</b>   | <b>8.8</b>   | <b>9.0</b>   | <b>9.1</b>   | <b>9.2</b>   | <b>9.6</b>   | <b>9.2</b>   | <b>8.1</b>   | <b>9.4</b>   | <b>9.9</b>   | <b>100.0</b>         |
| Gasoline                                                          | 3.0          | 3.1          | 3.3          | 3.2          | 3.4          | 3.6          | 3.5          | 2.7          | 3.4          | 3.7          | 37.1                 |
| Diesel                                                            | 2.3          | 2.3          | 2.3          | 2.4          | 2.4          | 2.5          | 2.6          | 2.2          | 2.6          | 2.8          | 27.7                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 2.0                  |
| <b>Imports</b>                                                    | <b>1.8</b>   | <b>2.7</b>   | <b>3.3</b>   | <b>4.1</b>   | <b>4.5</b>   | <b>4.1</b>   | <b>4.2</b>   | <b>5.0</b>   | <b>8.1</b>   | <b>8.5</b>   | <b>100.0</b>         |
| Oil                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 1.5          | 1.2          | 13.9                 |
| Gas                                                               | 1.8          | 2.7          | 3.3          | 4.1          | 4.5          | 4.1          | 4.2          | 5.0          | 6.6          | 7.3          | 86.1                 |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 1.5          | 1.2          | 13.9                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>140.3</b> | <b>139.0</b> | <b>138.1</b> | <b>143.0</b> | <b>133.4</b> | <b>135.8</b> | <b>130.0</b> | <b>117.5</b> | <b>113.6</b> | <b>121.1</b> | <b>100.0</b>         |
| Oil                                                               | 140.3        | 139.0        | 138.1        | 143.0        | 133.4        | 135.8        | 130.0        | 117.5        | 113.6        | 121.1        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.0          | 0.2          | 0.5          | 0.7          | 0.6          | 0.5          | 0.4          | 0.3          | 0.0          | 0.1          | 0.1                  |
| Diesel                                                            | 10.4         | 10.3         | 8.4          | 7.3          | 6.1          | 5.9          | 5.9          | 6.2          | 6.2          | 7.3          | 6.0                  |
| Heating Oil                                                       | 3.3          | 3.6          | 4.9          | 4.4          | 3.7          | 3.6          | 3.1          | 0.3          | 0.9          | 0.9          | 0.8                  |
| Aviation Jet                                                      | 2.0          | 1.8          | 1.9          | 1.6          | 0.9          | 1.0          | 0.7          | 1.0          | 0.9          | 1.1          | 0.9                  |
| LPG                                                               | 4.9          | 5.0          | 5.4          | 6.3          | 7.2          | 7.3          | 6.0          | 6.0          | 5.4          | 5.8          | 4.8                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>85.4</b>  | <b>83.6</b>  | <b>87.9</b>  | <b>89.5</b>  | <b>89.3</b>  | <b>91.5</b>  | <b>92.2</b>  | <b>90.9</b>  | <b>104.7</b> | <b>113.3</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>476.9</b> | <b>464.4</b> | <b>485.4</b> | <b>479.8</b> | <b>502.7</b> | <b>502.8</b> | <b>509.4</b> | <b>550.8</b> | <b>626.2</b> | <b>626.6</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>70.8</b>  | <b>72.4</b>  | <b>77.8</b>  | <b>77.8</b>  | <b>86.6</b>  | <b>87.2</b>  | <b>89.4</b>  | <b>91.8</b>  | <b>99.4</b>  | <b>97.6</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>165.7</b> | <b>149.3</b> | <b>182.5</b> | <b>193.4</b> | <b>193.4</b> | <b>188.1</b> | <b>199.8</b> | <b>235.0</b> | <b>263.6</b> | <b>264.4</b> | <b>-</b>             |

\*Heat is included

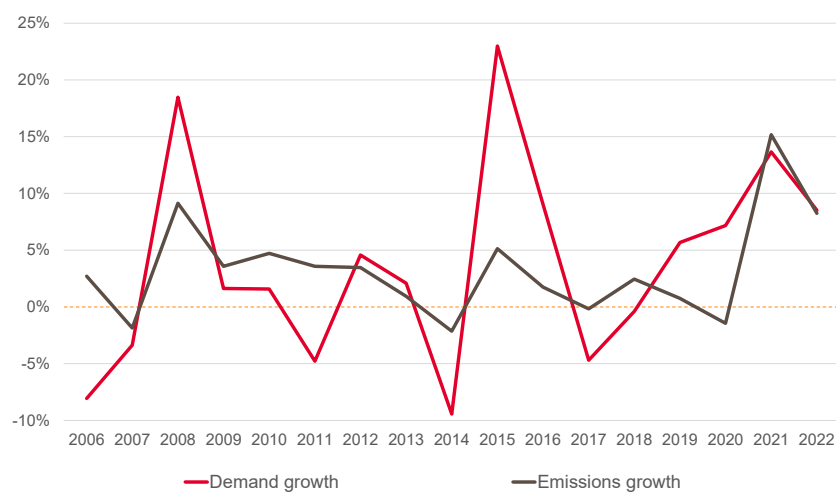
Primary energy demand mix



Electricity generation by source



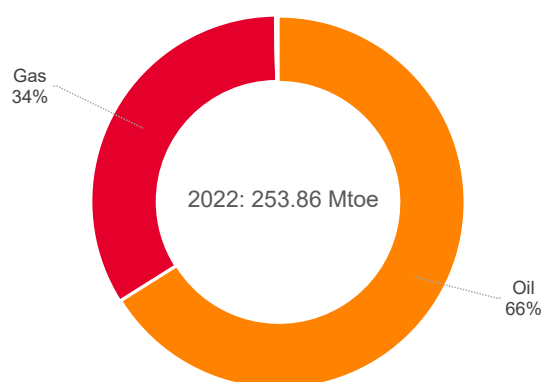
Primary energy demand and CO<sub>2</sub> emissions growth



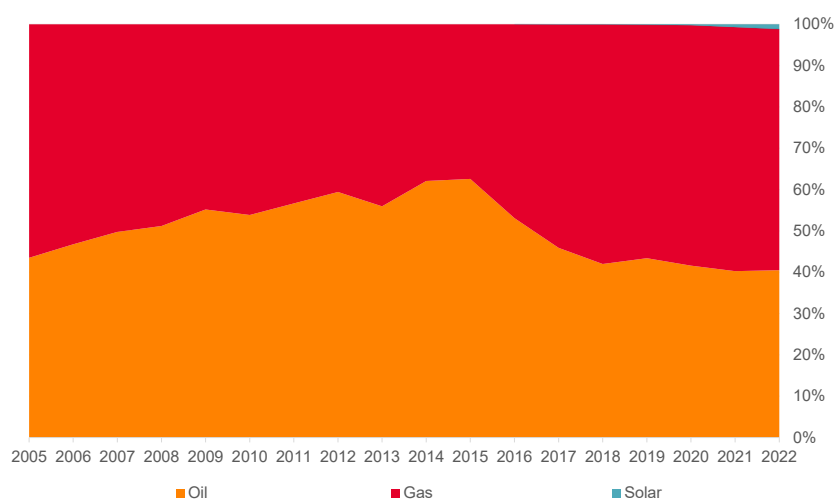
| <b>Saudi Arabia</b><br>(Million toe)                              | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>207.0</b> | <b>229.1</b> | <b>234.1</b> | <b>236.0</b> | <b>240.1</b> | <b>231.9</b> | <b>232.2</b> | <b>229.9</b> | <b>234.1</b> | <b>253.9</b> | <b>100.0</b>         |
| Oil                                                               | 140.0        | 159.6        | 162.8        | 161.8        | 162.1        | 152.7        | 151.9        | 149.1        | 152.1        | 167.8        | 66.1                 |
| Gas                                                               | 66.9         | 69.5         | 71.3         | 74.2         | 78.0         | 79.1         | 80.2         | 80.7         | 81.8         | 85.7         | 33.7                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.4          | 0.2                  |
| Electricity balance of trade*                                     | -0.0         | -0.0         | -0.0         | -0.1         | -0.0         | -0.0         | 0.0          | -0.0         | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by source</b>                         | <b>152.5</b> | <b>167.7</b> | <b>171.8</b> | <b>166.8</b> | <b>163.1</b> | <b>158.8</b> | <b>160.6</b> | <b>152.2</b> | <b>154.3</b> | <b>166.2</b> | <b>100.0</b>         |
| Oil                                                               | 101.0        | 110.0        | 112.5        | 113.0        | 113.0        | 106.4        | 108.5        | 100.7        | 101.6        | 110.7        | 66.6                 |
| Gas                                                               | 27.9         | 32.6         | 33.1         | 27.4         | 23.6         | 25.7         | 26.3         | 25.4         | 25.5         | 26.7         | 16.1                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity                                                       | 23.6         | 25.1         | 26.2         | 26.4         | 26.5         | 26.6         | 25.8         | 26.0         | 27.2         | 28.8         | 17.3                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Electricity generation, by source</b>                          | <b>26.1</b>  | <b>29.0</b>  | <b>31.0</b>  | <b>31.7</b>  | <b>32.6</b>  | <b>33.5</b>  | <b>33.3</b>  | <b>34.0</b>  | <b>35.1</b>  | <b>37.2</b>  | <b>100.0</b>         |
| Oil                                                               | 14.6         | 18.0         | 19.4         | 16.8         | 15.0         | 14.1         | 14.5         | 14.1         | 14.1         | 15.1         | 40.5                 |
| Gas                                                               | 11.5         | 11.0         | 11.6         | 14.9         | 17.7         | 19.4         | 18.8         | 19.8         | 20.7         | 21.7         | 58.4                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.2          | 0.4          | 1.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>152.5</b> | <b>167.7</b> | <b>171.8</b> | <b>166.8</b> | <b>163.1</b> | <b>158.8</b> | <b>160.6</b> | <b>152.2</b> | <b>154.3</b> | <b>166.2</b> | <b>100.0</b>         |
| Industry                                                          | 41.5         | 47.5         | 48.1         | 42.3         | 38.9         | 39.0         | 38.7         | 35.6         | 34.0         | 37.5         | 22.5                 |
| Transport                                                         | 43.1         | 45.6         | 49.1         | 48.9         | 47.8         | 45.5         | 45.7         | 40.9         | 42.7         | 46.6         | 28.0                 |
| Residential/Commercial                                            | 20.8         | 22.3         | 24.1         | 24.3         | 24.3         | 24.2         | 23.4         | 23.2         | 24.6         | 26.1         | 15.7                 |
| <b>Oil final consumption, by sector</b>                           | <b>101.0</b> | <b>110.0</b> | <b>112.5</b> | <b>113.0</b> | <b>113.0</b> | <b>106.4</b> | <b>108.5</b> | <b>100.7</b> | <b>101.6</b> | <b>110.7</b> | <b>100.0</b>         |
| Industry                                                          | 14.4         | 15.9         | 16.3         | 16.5         | 16.9         | 14.8         | 13.8         | 11.5         | 9.7          | 12.0         | 10.8                 |
| Transport                                                         | 43.1         | 45.6         | 49.1         | 48.9         | 47.8         | 45.5         | 45.7         | 40.9         | 42.7         | 46.6         | 42.1                 |
| Residential/Commercial                                            | 1.6          | 1.5          | 1.7          | 1.8          | 1.8          | 1.8          | 1.8          | 1.5          | 1.9          | 2.0          | 1.8                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>27.9</b>  | <b>32.6</b>  | <b>33.1</b>  | <b>27.4</b>  | <b>23.6</b>  | <b>25.7</b>  | <b>26.3</b>  | <b>25.4</b>  | <b>25.5</b>  | <b>26.7</b>  | <b>100.0</b>         |
| Industry                                                          | 23.1         | 27.7         | 28.4         | 22.3         | 18.5         | 20.4         | 21.2         | 20.2         | 20.2         | 21.2         | 79.3                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Refined products consumption</b>                               | <b>100.8</b> | <b>109.4</b> | <b>112.2</b> | <b>111.2</b> | <b>110.7</b> | <b>103.6</b> | <b>107.0</b> | <b>99.8</b>  | <b>100.5</b> | <b>108.0</b> | <b>100.0</b>         |
| Gasoline                                                          | 23.1         | 23.9         | 25.6         | 25.5         | 26.1         | 24.4         | 24.3         | 20.4         | 22.0         | 22.9         | 21.2                 |
| Diesel                                                            | 23.2         | 24.9         | 26.8         | 26.2         | 23.8         | 22.5         | 22.9         | 22.5         | 22.8         | 26.0         | 24.1                 |
| Heating Oil                                                       | 10.1         | 11.2         | 11.7         | 11.0         | 11.6         | 9.7          | 9.7          | 8.0          | 6.0          | 6.4          | 5.9                  |
| Aviation Jet                                                      | 0.8          | 0.8          | 0.9          | 0.9          | 0.9          | 0.9          | 1.0          | 0.6          | 0.5          | 0.6          | 0.6                  |
| LPG                                                               | 16.6         | 19.4         | 18.1         | 17.2         | 17.1         | 16.0         | 16.1         | 17.2         | 17.6         | 18.6         | 17.2                 |
| <b>Imports</b>                                                    | <b>23.9</b>  | <b>23.4</b>  | <b>28.9</b>  | <b>27.7</b>  | <b>24.0</b>  | <b>42.9</b>  | <b>16.8</b>  | <b>18.4</b>  | <b>18.7</b>  | <b>18.6</b>  | <b>100.0</b>         |
| Oil                                                               | 23.9         | 23.4         | 28.9         | 27.7         | 24.0         | 42.9         | 16.8         | 18.4         | 18.7         | 18.6         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 6.1          | 7.2          | 10.1         | 9.4          | 9.1          | 15.0         | 4.2          | 4.6          | 3.8          | 4.2          | 22.6                 |
| Diesel                                                            | 12.5         | 11.9         | 12.6         | 11.1         | 4.5          | 9.9          | 1.0          | 0.5          | 4.6          | 3.2          | 17.3                 |
| Heating Oil                                                       | 5.4          | 3.2          | 5.2          | 7.2          | 10.1         | 16.0         | 10.7         | 12.5         | 9.3          | 10.1         | 54.1                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>423.9</b> | <b>408.6</b> | <b>434.7</b> | <b>463.0</b> | <b>428.5</b> | <b>473.7</b> | <b>425.7</b> | <b>394.8</b> | <b>391.6</b> | <b>456.5</b> | <b>100.0</b>         |
| Oil                                                               | 423.9        | 408.6        | 434.7        | 463.0        | 428.5        | 473.7        | 425.7        | 394.8        | 391.6        | 456.5        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 1.7          | 4.5          | 7.6          | 9.7          | 8.7          | 15.2         | 4.6          | 5.1          | 6.4          | 9.5          | 2.1                  |
| Diesel                                                            | 5.3          | 12.3         | 20.3         | 29.1         | 30.6         | 41.8         | 30.9         | 25.7         | 34.5         | 33.9         | 7.4                  |
| Heating Oil                                                       | 9.6          | 5.3          | 4.8          | 3.6          | 4.5          | 10.4         | 4.3          | 2.1          | 3.6          | 6.6          | 1.4                  |
| Aviation Jet                                                      | 0.3          | 0.7          | 0.2          | 0.7          | 0.3          | 0.3          | 0.3          | 0.2          | 0.2          | 0.2          | 0.0                  |
| LPG                                                               | 12.8         | 11.1         | 12.5         | 15.3         | 15.0         | 17.0         | 15.3         | 12.2         | 14.7         | 19.0         | 4.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>500.0</b> | <b>538.0</b> | <b>561.5</b> | <b>559.4</b> | <b>553.3</b> | <b>529.0</b> | <b>531.1</b> | <b>516.6</b> | <b>529.5</b> | <b>584.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>350.0</b> | <b>363.3</b> | <b>364.2</b> | <b>356.9</b> | <b>355.6</b> | <b>331.6</b> | <b>331.9</b> | <b>336.7</b> | <b>334.3</b> | <b>339.3</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>74.0</b>  | <b>78.3</b>  | <b>78.9</b>  | <b>73.9</b>  | <b>71.6</b>  | <b>68.4</b>  | <b>67.6</b>  | <b>65.2</b>  | <b>64.2</b>  | <b>64.2</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>144.9</b> | <b>154.7</b> | <b>151.8</b> | <b>150.5</b> | <b>154.3</b> | <b>145.4</b> | <b>145.1</b> | <b>149.8</b> | <b>147.8</b> | <b>147.4</b> | <b>-</b>             |

\*Heat is included

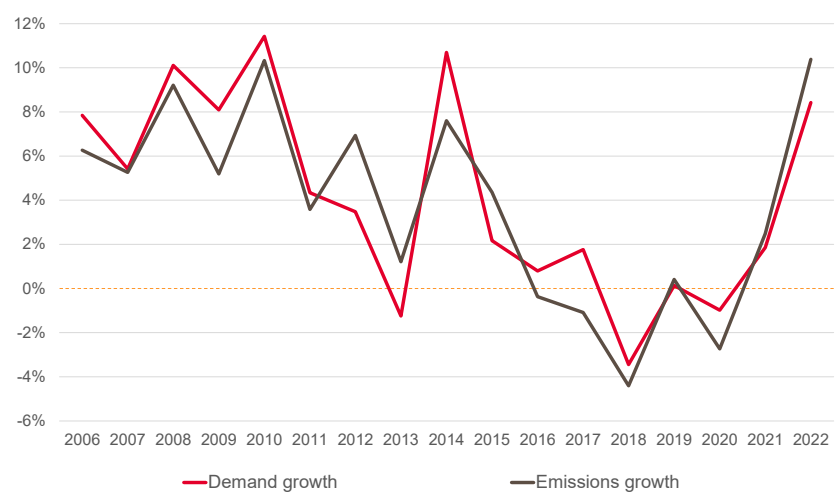
Primary energy demand mix



Electricity generation by source



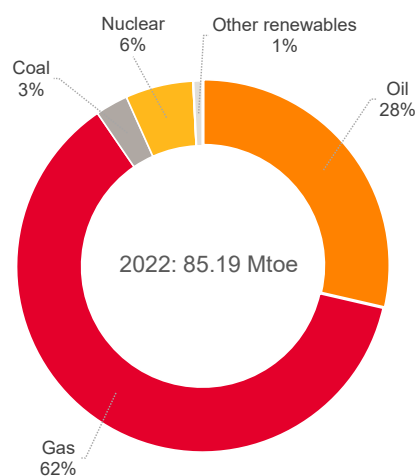
Primary energy demand and CO<sub>2</sub> emissions growth



| United Arab Emirates<br>(Million toe)                             | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>67.8</b>  | <b>77.0</b>  | <b>84.9</b>  | <b>90.3</b>  | <b>75.6</b>  | <b>77.6</b>  | <b>83.2</b>  | <b>82.7</b>  | <b>82.9</b>  | <b>85.2</b>  | <b>100.0</b>         |
| Oil                                                               | 11.0         | 20.4         | 22.8         | 27.3         | 17.8         | 26.7         | 26.0         | 23.6         | 22.5         | 24.4         | 28.6                 |
| Gas                                                               | 54.9         | 54.5         | 60.2         | 61.0         | 55.5         | 48.8         | 55.0         | 55.9         | 54.7         | 52.7         | 61.8                 |
| Coal                                                              | 1.8          | 2.0          | 1.7          | 1.8          | 2.1          | 1.9          | 1.8          | 2.1          | 2.4          | 2.4          | 2.8                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4          | 2.6          | 5.0          | 5.9                  |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Other renewables                                                  | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.4          | 0.5          | 0.6          | 0.6          | 0.8                  |
| Electricity balance of trade*                                     | -0.0         | -0.0         | -0.0         | 0.1          | -0.0         | -0.0         | -0.0         | -0.0         | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by source</b>                         | <b>55.6</b>  | <b>56.2</b>  | <b>58.9</b>  | <b>62.1</b>  | <b>57.3</b>  | <b>50.8</b>  | <b>57.0</b>  | <b>57.7</b>  | <b>59.2</b>  | <b>60.5</b>  | <b>100.0</b>         |
| Oil                                                               | 17.0         | 18.6         | 16.9         | 19.0         | 19.8         | 20.1         | 19.6         | 18.1         | 19.6         | 21.3         | 35.1                 |
| Gas                                                               | 28.1         | 26.4         | 30.5         | 31.1         | 25.0         | 18.3         | 24.7         | 26.6         | 25.4         | 24.4         | 40.3                 |
| Coal                                                              | 1.8          | 2.0          | 1.7          | 1.8          | 2.1          | 1.9          | 1.8          | 2.1          | 2.4          | 2.4          | 4.0                  |
| Electricity                                                       | 8.7          | 9.2          | 9.8          | 10.0         | 10.3         | 10.5         | 10.8         | 10.8         | 11.8         | 12.4         | 20.5                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| <b>Electricity generation, by source</b>                          | <b>9.5</b>   | <b>10.0</b>  | <b>11.0</b>  | <b>11.1</b>  | <b>11.6</b>  | <b>11.7</b>  | <b>11.9</b>  | <b>11.9</b>  | <b>13.0</b>  | <b>13.4</b>  | <b>100.0</b>         |
| Oil                                                               | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.6          | 0.7          | 0.8          | 5.7                  |
| Gas                                                               | 9.3          | 9.8          | 10.7         | 10.9         | 11.3         | 11.5         | 11.5         | 10.8         | 10.8         | 10.4         | 77.5                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.9          | 1.7          | 12.4                 |
| Hydro                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.3          | 0.5          | 0.6          | 0.6          | 4.5                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>55.6</b>  | <b>56.2</b>  | <b>58.9</b>  | <b>62.1</b>  | <b>57.3</b>  | <b>50.8</b>  | <b>57.0</b>  | <b>57.7</b>  | <b>59.2</b>  | <b>60.5</b>  | <b>100.0</b>         |
| Industry                                                          | 31.7         | 30.2         | 34.2         | 35.1         | 29.3         | 22.4         | 28.8         | 31.0         | 30.1         | 29.3         | 48.3                 |
| Transport                                                         | 11.7         | 12.0         | 10.4         | 11.7         | 12.7         | 12.8         | 12.1         | 10.4         | 11.1         | 12.1         | 20.1                 |
| Residential/Commercial                                            | 8.1          | 8.6          | 9.1          | 9.3          | 9.5          | 9.6          | 9.8          | 9.8          | 10.8         | 11.4         | 18.8                 |
| <b>Oil final consumption, by sector</b>                           | <b>17.0</b>  | <b>18.6</b>  | <b>16.9</b>  | <b>19.0</b>  | <b>19.8</b>  | <b>20.1</b>  | <b>19.6</b>  | <b>18.1</b>  | <b>19.6</b>  | <b>21.3</b>  | <b>100.0</b>         |
| Industry                                                          | 1.3          | 1.3          | 1.4          | 1.5          | 1.5          | 1.5          | 1.5          | 1.5          | 1.6          | 1.7          | 7.8                  |
| Transport                                                         | 11.7         | 12.0         | 10.4         | 11.7         | 12.7         | 12.8         | 12.1         | 10.4         | 11.1         | 12.1         | 57.1                 |
| Residential/Commercial                                            | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.3          | 0.2          | 0.2          | 0.2          | 0.2          | 1.1                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>28.1</b>  | <b>26.4</b>  | <b>30.5</b>  | <b>31.1</b>  | <b>25.0</b>  | <b>18.3</b>  | <b>24.7</b>  | <b>26.6</b>  | <b>25.4</b>  | <b>24.4</b>  | <b>100.0</b>         |
| Industry                                                          | 27.8         | 25.9         | 30.0         | 30.6         | 24.5         | 17.7         | 24.2         | 26.1         | 24.9         | 23.9         | 98.1                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Residential/Commercial                                            | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Refined products consumption</b>                               | <b>17.0</b>  | <b>18.6</b>  | <b>16.9</b>  | <b>19.0</b>  | <b>19.8</b>  | <b>20.1</b>  | <b>19.6</b>  | <b>18.1</b>  | <b>19.6</b>  | <b>21.3</b>  | <b>100.0</b>         |
| Gasoline                                                          | 7.3          | 7.7          | 7.2          | 8.0          | 8.9          | 9.3          | 8.7          | 7.2          | 7.9          | 8.7          | 41.0                 |
| Diesel                                                            | 4.1          | 4.0          | 2.9          | 3.4          | 3.5          | 3.0          | 3.0          | 2.8          | 2.8          | 3.0          | 14.3                 |
| Heating Oil                                                       | 1.2          | 1.2          | 1.3          | 1.4          | 1.4          | 1.4          | 1.4          | 1.3          | 1.4          | 1.5          | 7.0                  |
| Aviation Jet                                                      | 0.2          | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.3          | 0.4          | 0.4          | 1.9                  |
| LPG                                                               | 1.6          | 2.1          | 0.9          | 0.9          | 0.9          | 0.9          | 0.9          | 0.8          | 0.9          | 1.0          | 4.7                  |
| <b>Imports</b>                                                    | <b>37.2</b>  | <b>36.7</b>  | <b>37.4</b>  | <b>35.2</b>  | <b>33.6</b>  | <b>34.3</b>  | <b>41.5</b>  | <b>48.4</b>  | <b>51.1</b>  | <b>52.6</b>  | <b>100.0</b>         |
| Oil                                                               | 20.7         | 19.8         | 19.9         | 18.2         | 16.1         | 18.4         | 25.0         | 31.6         | 34.5         | 37.4         | 71.2                 |
| Gas                                                               | 16.5         | 16.9         | 17.5         | 17.0         | 17.4         | 15.9         | 16.5         | 16.8         | 16.6         | 15.2         | 28.8                 |
| Gasoline                                                          | 4.5          | 4.1          | 3.4          | 4.3          | 6.8          | 8.9          | 10.2         | 8.7          | 9.3          | 10.2         | 19.5                 |
| Diesel                                                            | 1.4          | 0.5          | 2.4          | 0.7          | 0.2          | 0.6          | 0.2          | 0.2          | 0.2          | 0.2          | 0.3                  |
| Heating Oil                                                       | 14.2         | 14.5         | 13.8         | 11.7         | 8.2          | 8.3          | 14.6         | 14.5         | 15.5         | 17.1         | 32.5                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.5          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| <b>Exports</b>                                                    | <b>174.1</b> | <b>158.4</b> | <b>165.7</b> | <b>167.2</b> | <b>167.3</b> | <b>164.6</b> | <b>174.4</b> | <b>172.1</b> | <b>175.1</b> | <b>195.8</b> | <b>100.0</b>         |
| Oil                                                               | 168.3        | 152.0        | 159.6        | 161.0        | 161.5        | 158.6        | 168.2        | 166.7        | 169.1        | 190.2        | 97.2                 |
| Gas                                                               | 5.8          | 6.4          | 6.1          | 6.1          | 5.8          | 6.0          | 6.2          | 5.4          | 6.0          | 5.6          | 2.8                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.9          | 2.8          | 3.1          | 3.3          | 5.3          | 5.3          | 5.8          | 6.3          | 3.2                  |
| Diesel                                                            | 1.0          | 0.7          | 5.6          | 5.7          | 7.3          | 8.7          | 10.1         | 7.8          | 8.3          | 9.0          | 4.6                  |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 4.5          | 2.6          | 3.1          | 4.6          | 5.5          | 6.1          | 4.6          | 4.1          | 5.2          | 5.6          | 2.9                  |
| LPG                                                               | 12.2         | 7.3          | 10.5         | 12.0         | 11.8         | 11.1         | 11.0         | 10.9         | 14.3         | 15.5         | 7.9                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>178.7</b> | <b>180.0</b> | <b>188.6</b> | <b>195.5</b> | <b>186.7</b> | <b>169.1</b> | <b>181.0</b> | <b>184.2</b> | <b>180.8</b> | <b>180.1</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>326.0</b> | <b>314.7</b> | <b>313.7</b> | <b>315.8</b> | <b>294.5</b> | <b>263.7</b> | <b>272.9</b> | <b>295.8</b> | <b>279.5</b> | <b>259.1</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>94.0</b>  | <b>88.7</b>  | <b>89.4</b>  | <b>90.7</b>  | <b>81.4</b>  | <b>69.8</b>  | <b>76.5</b>  | <b>82.2</b>  | <b>80.3</b>  | <b>76.1</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>123.6</b> | <b>134.6</b> | <b>141.2</b> | <b>145.8</b> | <b>119.3</b> | <b>121.0</b> | <b>125.4</b> | <b>132.8</b> | <b>128.1</b> | <b>122.6</b> | -                    |

\*Heat is included

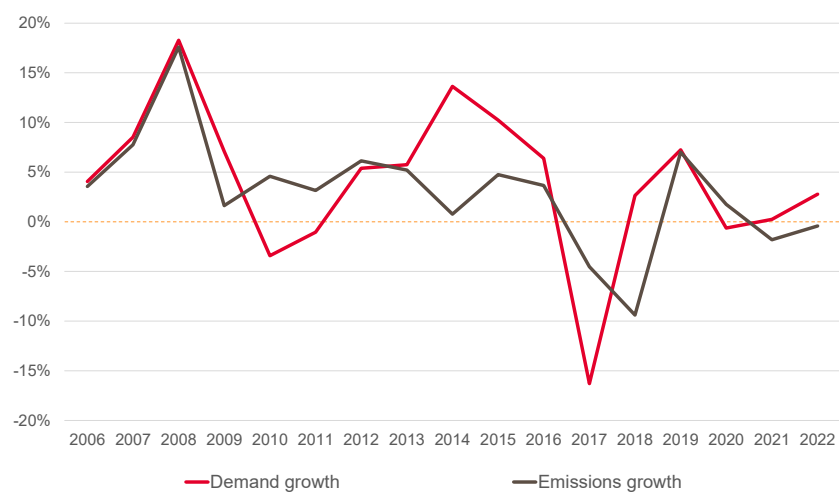
### Primary energy demand mix



### Electricity generation by source



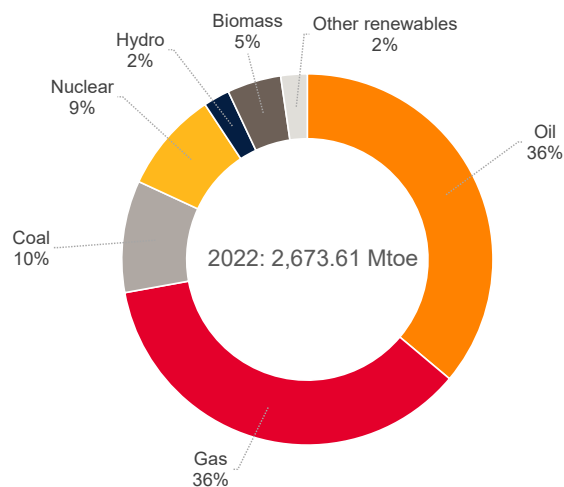
### Primary energy demand and CO<sub>2</sub> emissions growth



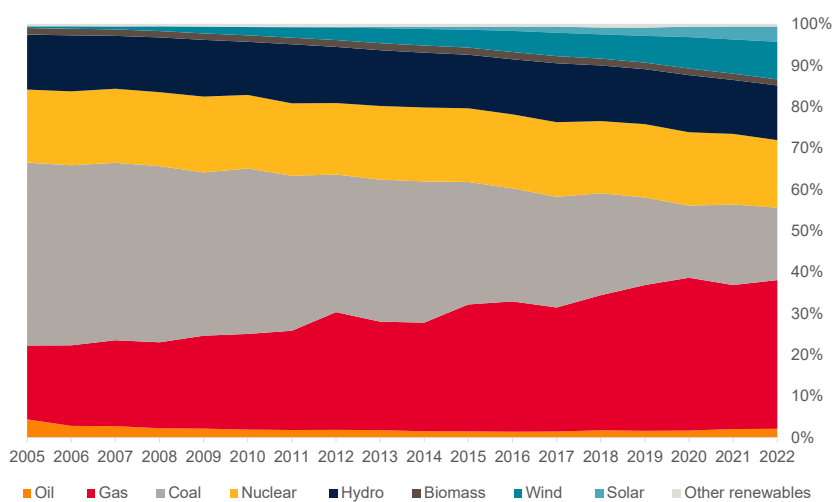
| North America<br>(Million toe)                                    | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>2,656.6</b> | <b>2,686.2</b> | <b>2,655.6</b> | <b>2,644.4</b> | <b>2,645.2</b> | <b>2,714.7</b> | <b>2,714.1</b> | <b>2,503.8</b> | <b>2,617.5</b> | <b>2,673.6</b> | <b>100.0</b>         |
| Oil                                                               | 972.1          | 973.1          | 988.8          | 976.1          | 982.7          | 990.2          | 990.3          | 869.2          | 939.9          | 959.1          | 35.9                 |
| Gas                                                               | 756.3          | 776.8          | 796.7          | 822.6          | 817.8          | 883.0          | 928.5          | 909.0          | 915.4          | 956.9          | 35.8                 |
| Coal                                                              | 464.7          | 464.7          | 403.4          | 370.9          | 361.0          | 346.7          | 298.2          | 239.2          | 271.9          | 259.3          | 9.7                  |
| Nuclear                                                           | 244.3          | 246.9          | 245.9          | 248.1          | 247.8          | 249.1          | 249.1          | 242.2          | 237.7          | 234.3          | 8.8                  |
| Hydro                                                             | 59.4           | 58.7           | 57.1           | 59.0           | 62.7           | 61.4           | 59.8           | 60.2           | 58.3           | 60.6           | 2.3                  |
| Biomass                                                           | 124.7          | 127.4          | 122.8          | 122.5          | 124.5          | 129.9          | 131.2          | 121.4          | 124.8          | 125.0          | 4.7                  |
| Other renewables                                                  | 18.2           | 21.2           | 23.6           | 28.6           | 32.9           | 36.2           | 39.9           | 46.2           | 52.8           | 61.1           | 2.3                  |
| Electricity balance of trade*                                     | 16.9           | 17.3           | 17.4           | 16.6           | 15.7           | 18.2           | 17.2           | 16.5           | 16.7           | 17.4           | 0.6                  |
| <b>Total final consumption, by source</b>                         | <b>1,795.1</b> | <b>1,817.8</b> | <b>1,811.8</b> | <b>1,820.6</b> | <b>1,830.5</b> | <b>1,885.4</b> | <b>1,889.7</b> | <b>1,725.2</b> | <b>1,811.6</b> | <b>1,859.3</b> | <b>100.0</b>         |
| Oil                                                               | 883.8          | 887.7          | 905.8          | 911.9          | 912.8          | 926.9          | 927.7          | 812.7          | 880.0          | 895.0          | 48.1                 |
| Gas                                                               | 380.1          | 395.7          | 378.6          | 381.0          | 391.1          | 412.3          | 421.1          | 390.7          | 396.2          | 415.3          | 22.3                 |
| Coal                                                              | 35.5           | 34.0           | 31.7           | 27.1           | 28.2           | 27.3           | 25.6           | 22.1           | 24.6           | 27.0           | 1.5                  |
| Electricity                                                       | 387.4          | 391.0          | 390.5          | 394.0          | 390.8          | 404.3          | 399.4          | 392.2          | 399.7          | 410.4          | 22.1                 |
| Heat                                                              | 9.1            | 9.2            | 8.9            | 9.9            | 9.0            | 10.8           | 10.0           | 9.9            | 9.8            | 9.7            | 0.5                  |
| Biomass                                                           | 99.3           | 100.2          | 96.3           | 96.7           | 98.6           | 103.8          | 106.0          | 97.6           | 101.4          | 101.8          | 5.5                  |
| <b>Electricity generation, by source</b>                          | <b>452.5</b>   | <b>455.9</b>   | <b>454.6</b>   | <b>456.5</b>   | <b>453.4</b>   | <b>470.5</b>   | <b>463.4</b>   | <b>449.5</b>   | <b>459.3</b>   | <b>473.1</b>   | <b>100.0</b>         |
| Oil                                                               | 8.0            | 6.9            | 6.7            | 6.6            | 6.6            | 8.3            | 7.4            | 7.6            | 9.4            | 10.0           | 2.1                  |
| Gas                                                               | 118.8          | 119.8          | 139.6          | 143.8          | 136.0          | 153.8          | 163.5          | 166.2          | 160.1          | 170.3          | 36.0                 |
| Coal                                                              | 155.6          | 155.9          | 134.7          | 124.8          | 121.5          | 116.1          | 98.3           | 78.4           | 89.5           | 83.0           | 17.5                 |
| Nuclear                                                           | 80.6           | 81.5           | 81.2           | 81.9           | 81.8           | 82.2           | 82.2           | 79.9           | 78.5           | 77.3           | 16.3                 |
| Hydro                                                             | 61.1           | 60.5           | 58.8           | 60.9           | 64.7           | 63.3           | 61.6           | 62.1           | 60.1           | 62.5           | 13.2                 |
| Biomass                                                           | 7.7            | 7.9            | 7.8            | 8.0            | 7.9            | 7.9            | 7.5            | 7.1            | 7.1            | 7.0            | 1.5                  |
| Wind                                                              | 16.5           | 18.3           | 19.7           | 23.3           | 25.7           | 27.7           | 29.9           | 34.2           | 37.9           | 43.0           | 9.1                  |
| Solar                                                             | 1.5            | 2.4            | 3.3            | 4.7            | 6.5            | 7.8            | 9.4            | 11.5           | 14.3           | 17.4           | 3.7                  |
| Other renewables                                                  | 2.7            | 2.7            | 2.6            | 2.6            | 2.6            | 3.6            | 3.6            | 2.5            | 2.5            | 2.6            | 0.5                  |
| <b>Total final consumption, by sector</b>                         | <b>1,795.1</b> | <b>1,817.8</b> | <b>1,811.8</b> | <b>1,820.6</b> | <b>1,830.5</b> | <b>1,885.4</b> | <b>1,889.7</b> | <b>1,725.2</b> | <b>1,811.6</b> | <b>1,859.3</b> | <b>100.0</b>         |
| Industry                                                          | 353.7          | 351.8          | 351.0          | 353.9          | 352.9          | 357.8          | 358.7          | 348.7          | 361.0          | 368.8          | 19.8                 |
| Transport                                                         | 691.2          | 690.9          | 711.6          | 720.6          | 726.1          | 736.2          | 731.4          | 619.0          | 680.6          | 700.8          | 37.7                 |
| Residential/Commercial                                            | 563.2          | 578.6          | 558.4          | 552.8          | 551.6          | 588.3          | 587.9          | 565.5          | 575.2          | 599.7          | 32.3                 |
| <b>Oil final consumption, by sector</b>                           | <b>883.8</b>   | <b>887.7</b>   | <b>905.8</b>   | <b>911.9</b>   | <b>912.8</b>   | <b>926.9</b>   | <b>927.7</b>   | <b>812.7</b>   | <b>880.0</b>   | <b>895.0</b>   | <b>100.0</b>         |
| Industry                                                          | 30.2           | 27.4           | 30.2           | 31.8           | 29.7           | 28.9           | 27.4           | 27.5           | 28.4           | 28.0           | 3.1                  |
| Transport                                                         | 652.5          | 651.7          | 671.8          | 677.9          | 682.0          | 692.8          | 687.7          | 579.9          | 638.9          | 659.2          | 73.7                 |
| Residential/Commercial                                            | 37.4           | 35.5           | 37.5           | 36.7           | 34.5           | 34.6           | 33.8           | 32.0           | 34.5           | 35.0           | 3.9                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>380.1</b>   | <b>395.7</b>   | <b>378.6</b>   | <b>381.0</b>   | <b>391.1</b>   | <b>412.3</b>   | <b>421.1</b>   | <b>390.7</b>   | <b>396.2</b>   | <b>415.3</b>   | <b>100.0</b>         |
| Industry                                                          | 144.3          | 148.4          | 148.5          | 154.9          | 154.4          | 157.3          | 160.6          | 161.8          | 165.6          | 170.2          | 41.0                 |
| Transport                                                         | 0.7            | 0.9            | 1.0            | 1.1            | 1.3            | 1.3            | 1.4            | 1.3            | 1.4            | 1.4            | 0.3                  |
| Residential/Commercial                                            | 215.2          | 226.3          | 207.8          | 200.4          | 205.3          | 224.7          | 230.1          | 212.8          | 216.1          | 230.1          | 55.4                 |
| <b>Refined products consumption</b>                               | <b>881.3</b>   | <b>885.2</b>   | <b>901.5</b>   | <b>908.9</b>   | <b>908.4</b>   | <b>921.2</b>   | <b>919.2</b>   | <b>803.6</b>   | <b>868.8</b>   | <b>883.9</b>   | <b>100.0</b>         |
| Gasoline                                                          | 434.8          | 436.2          | 448.3          | 456.2          | 452.7          | 454.1          | 450.4          | 386.4          | 425.7          | 430.3          | 48.7                 |
| Diesel                                                            | 223.1          | 230.3          | 225.5          | 221.5          | 225.1          | 231.6          | 226.4          | 204.9          | 218.8          | 225.2          | 25.5                 |
| Heating Oil                                                       | 3.4            | 2.5            | 4.9            | 4.0            | 3.7            | 3.3            | 2.3            | 2.2            | 2.5            | 2.6            | 0.3                  |
| Aviation Jet                                                      | 54.6           | 55.7           | 58.1           | 60.6           | 64.2           | 65.6           | 66.7           | 40.4           | 50.7           | 59.7           | 6.8                  |
| LPG                                                               | 52.1           | 48.4           | 49.8           | 48.5           | 46.2           | 49.5           | 52.5           | 48.6           | 48.4           | 50.2           | 5.7                  |
| <b>Imports</b>                                                    | <b>697.3</b>   | <b>663.3</b>   | <b>691.3</b>   | <b>744.2</b>   | <b>752.0</b>   | <b>750.1</b>   | <b>705.8</b>   | <b>628.7</b>   | <b>666.1</b>   | <b>669.1</b>   | <b>100.0</b>         |
| Oil                                                               | 586.3          | 559.1          | 581.7          | 620.3          | 624.6          | 619.6          | 579.4          | 499.9          | 525.6          | 525.9          | 78.6                 |
| Gas                                                               | 111.0          | 104.3          | 109.6          | 123.9          | 127.4          | 130.5          | 126.3          | 128.9          | 140.5          | 143.2          | 21.4                 |
| Gasoline                                                          | 50.3           | 48.8           | 55.0           | 60.7           | 58.3           | 63.4           | 71.4           | 53.6           | 65.7           | 57.4           | 8.6                  |
| Diesel                                                            | 15.5           | 18.8           | 20.5           | 19.9           | 22.8           | 26.4           | 24.7           | 22.9           | 25.8           | 23.3           | 3.5                  |
| Heating Oil                                                       | 16.4           | 12.9           | 13.2           | 13.8           | 14.3           | 15.0           | 12.4           | 12.4           | 12.1           | 13.7           | 2.0                  |
| Aviation Jet                                                      | 6.9            | 8.1            | 11.0           | 12.1           | 12.9           | 12.4           | 14.6           | 10.2           | 11.3           | 10.8           | 1.6                  |
| LPG                                                               | 7.3            | 7.2            | 8.3            | 10.4           | 12.1           | 11.8           | 13.5           | 14.0           | 15.4           | 13.6           | 2.0                  |
| <b>Exports</b>                                                    | <b>505.6</b>   | <b>543.9</b>   | <b>580.5</b>   | <b>629.4</b>   | <b>710.2</b>   | <b>790.2</b>   | <b>861.3</b>   | <b>856.9</b>   | <b>899.7</b>   | <b>956.1</b>   | <b>100.0</b>         |
| Oil                                                               | 400.4          | 443.4          | 474.1          | 505.7          | 564.0          | 638.2          | 687.3          | 673.1          | 673.6          | 718.9          | 75.2                 |
| Gas                                                               | 105.2          | 100.5          | 106.4          | 123.7          | 146.2          | 152.0          | 173.9          | 183.8          | 226.2          | 237.2          | 24.8                 |
| Gasoline                                                          | 29.8           | 31.8           | 35.9           | 43.1           | 46.8           | 50.5           | 49.6           | 43.2           | 49.3           | 49.4           | 5.2                  |
| Diesel                                                            | 64.8           | 61.5           | 65.8           | 66.3           | 76.8           | 70.9           | 74.1           | 68.6           | 63.1           | 73.9           | 7.7                  |
| Heating Oil                                                       | 29.0           | 30.6           | 27.3           | 25.4           | 25.3           | 28.1           | 18.0           | 14.6           | 15.0           | 16.2           | 1.7                  |
| Aviation Jet                                                      | 8.3            | 8.5            | 8.8            | 9.2            | 10.4           | 12.3           | 12.3           | 5.4            | 6.3            | 10.3           | 1.1                  |
| LPG                                                               | 0.7            | 17.6           | 24.8           | 31.4           | 35.9           | 39.8           | 47.2           | 55.7           | 59.4           | 60.3           | 6.3                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>6,178.9</b> | <b>6,207.2</b> | <b>6,068.5</b> | <b>5,978.8</b> | <b>5,923.7</b> | <b>6,016.3</b> | <b>5,897.5</b> | <b>5,259.1</b> | <b>5,620.7</b> | <b>5,744.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>294.7</b>   | <b>289.1</b>   | <b>275.5</b>   | <b>266.8</b>   | <b>258.4</b>   | <b>255.2</b>   | <b>245.2</b>   | <b>227.8</b>   | <b>230.8</b>   | <b>230.7</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>85.6</b>    | <b>84.7</b>    | <b>82.2</b>    | <b>81.2</b>    | <b>79.8</b>    | <b>80.0</b>    | <b>78.6</b>    | <b>74.7</b>    | <b>74.4</b>    | <b>74.7</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>126.7</b>   | <b>125.1</b>   | <b>120.5</b>   | <b>118.0</b>   | <b>115.4</b>   | <b>115.2</b>   | <b>112.9</b>   | <b>108.5</b>   | <b>107.5</b>   | <b>107.4</b>   | <b>-</b>             |

\*Heat is included

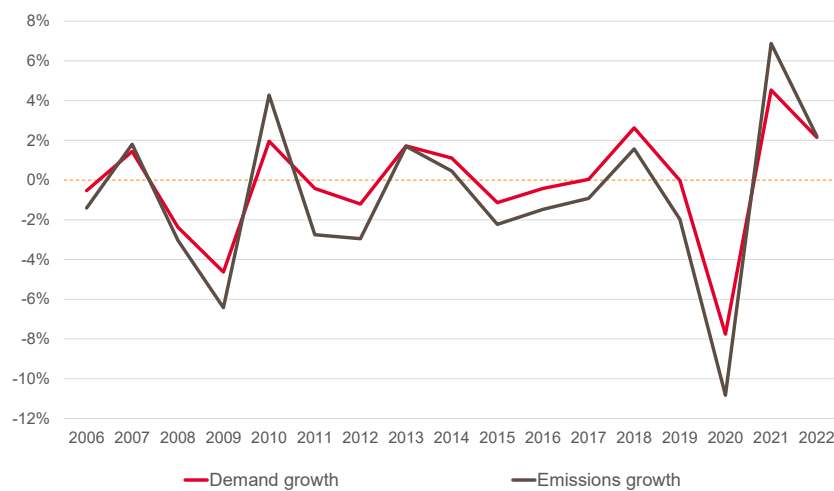
### Primary energy demand mix



### Electricity generation by source



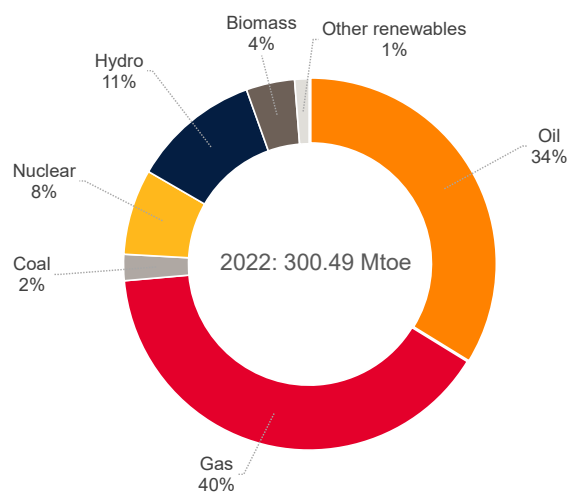
### Primary energy demand and CO<sub>2</sub> emissions growth



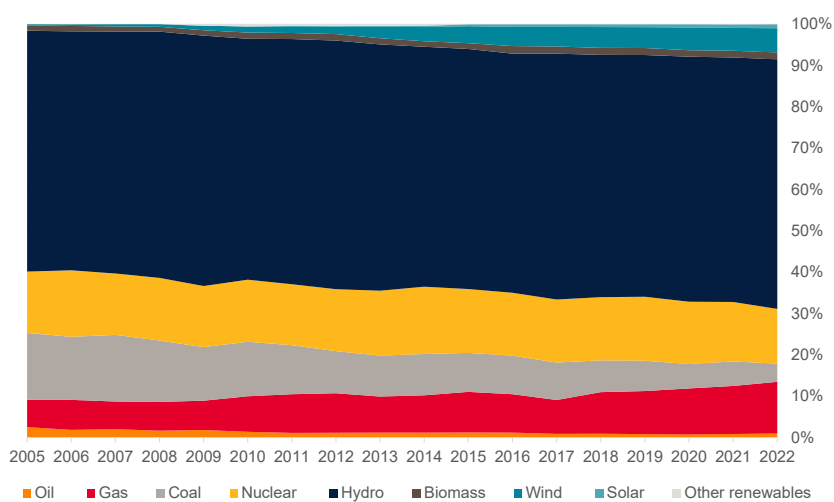
| Canada<br>(Million toe)                                           | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>273.7</b> | <b>280.6</b> | <b>278.4</b> | <b>290.7</b> | <b>302.8</b> | <b>307.4</b> | <b>308.8</b> | <b>284.4</b> | <b>289.4</b> | <b>300.5</b> | <b>100.0</b>         |
| Oil                                                               | 95.6         | 99.0         | 105.0        | 99.6         | 102.0        | 104.1        | 107.0        | 92.6         | 94.7         | 102.9        | 34.3                 |
| Gas                                                               | 87.6         | 88.7         | 85.4         | 103.6        | 111.3        | 116.8        | 117.6        | 112.6        | 116.3        | 121.4        | 40.4                 |
| Coal                                                              | 19.3         | 20.4         | 18.4         | 17.7         | 17.9         | 14.2         | 12.0         | 9.2          | 9.4          | 7.0          | 2.3                  |
| Nuclear                                                           | 27.0         | 28.0         | 26.5         | 26.4         | 26.4         | 26.3         | 26.4         | 25.6         | 24.1         | 22.7         | 7.6                  |
| Hydro                                                             | 33.7         | 32.9         | 32.9         | 33.1         | 33.9         | 33.2         | 32.8         | 33.2         | 32.8         | 34.1         | 11.3                 |
| Biomass                                                           | 13.0         | 13.2         | 12.6         | 12.8         | 13.5         | 13.7         | 13.8         | 12.6         | 12.7         | 12.9         | 4.3                  |
| Other renewables                                                  | 1.7          | 2.1          | 2.6          | 3.0          | 3.0          | 3.2          | 3.2          | 3.5          | 3.5          | 3.8          | 1.3                  |
| Electricity balance of trade*                                     | -4.2         | -3.7         | -5.1         | -5.4         | -5.3         | -4.1         | -4.0         | -4.9         | -4.0         | -4.4         | -1.5                 |
| <b>Total final consumption, by source</b>                         | <b>193.3</b> | <b>194.1</b> | <b>193.2</b> | <b>194.1</b> | <b>198.5</b> | <b>203.7</b> | <b>202.7</b> | <b>187.6</b> | <b>189.2</b> | <b>196.0</b> | <b>100.0</b>         |
| Oil                                                               | 91.3         | 89.7         | 91.1         | 92.3         | 92.2         | 94.2         | 93.8         | 82.1         | 82.7         | 86.1         | 43.9                 |
| Gas                                                               | 44.2         | 45.4         | 44.6         | 45.3         | 47.1         | 49.3         | 48.2         | 46.7         | 47.1         | 50.2         | 25.6                 |
| Coal                                                              | 3.8          | 3.7          | 3.3          | 3.3          | 3.5          | 3.4          | 3.2          | 3.3          | 3.6          | 2.9          | 1.5                  |
| Electricity                                                       | 42.7         | 43.4         | 43.2         | 42.7         | 44.4         | 45.3         | 45.9         | 45.0         | 45.3         | 46.1         | 23.5                 |
| Heat                                                              | 0.7          | 0.9          | 0.7          | 0.7          | 0.7          | 0.8          | 0.6          | 0.5          | 0.5          | 0.5          | 0.2                  |
| Biomass                                                           | 10.5         | 11.0         | 10.2         | 9.8          | 10.6         | 10.9         | 10.9         | 10.1         | 10.1         | 10.2         | 5.2                  |
| <b>Electricity generation, by source</b>                          | <b>56.6</b>  | <b>56.7</b>  | <b>56.6</b>  | <b>57.3</b>  | <b>57.0</b>  | <b>56.6</b>  | <b>56.1</b>  | <b>56.1</b>  | <b>55.4</b>  | <b>56.5</b>  | <b>100.0</b>         |
| Oil                                                               | 0.7          | 0.7          | 0.7          | 0.7          | 0.5          | 0.5          | 0.5          | 0.4          | 0.5          | 0.6          | 1.0                  |
| Gas                                                               | 4.9          | 5.1          | 5.6          | 5.3          | 4.7          | 5.7          | 5.9          | 6.2          | 6.4          | 7.1          | 12.5                 |
| Coal                                                              | 5.6          | 5.7          | 5.3          | 5.3          | 5.2          | 4.3          | 4.1          | 3.3          | 3.3          | 2.5          | 4.4                  |
| Nuclear                                                           | 8.9          | 9.2          | 8.8          | 8.7          | 8.7          | 8.7          | 8.7          | 8.4          | 8.0          | 7.5          | 13.3                 |
| Hydro                                                             | 33.7         | 32.9         | 32.9         | 33.2         | 33.9         | 33.2         | 32.8         | 33.2         | 32.8         | 34.1         | 60.4                 |
| Biomass                                                           | 0.9          | 0.8          | 0.8          | 1.0          | 1.0          | 1.0          | 1.0          | 0.9          | 0.9          | 0.9          | 1.7                  |
| Wind                                                              | 1.6          | 1.9          | 2.3          | 2.7          | 2.7          | 2.9          | 2.8          | 3.1          | 3.1          | 3.3          | 5.8                  |
| Solar                                                             | 0.1          | 0.2          | 0.2          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.9                  |
| Other renewables                                                  | 0.2          | 0.2          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>193.3</b> | <b>194.1</b> | <b>193.2</b> | <b>194.1</b> | <b>198.5</b> | <b>203.7</b> | <b>202.7</b> | <b>187.6</b> | <b>189.2</b> | <b>196.0</b> | <b>100.0</b>         |
| Industry                                                          | 45.0         | 45.4         | 44.7         | 44.9         | 45.8         | 46.4         | 46.6         | 44.1         | 44.7         | 45.0         | 23.0                 |
| Transport                                                         | 61.5         | 60.6         | 60.4         | 60.6         | 62.9         | 65.0         | 61.9         | 53.5         | 56.9         | 61.0         | 31.1                 |
| Residential/Commercial                                            | 57.6         | 59.8         | 58.4         | 58.0         | 61.4         | 64.3         | 63.9         | 62.1         | 62.2         | 65.1         | 33.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>91.3</b>  | <b>89.7</b>  | <b>91.1</b>  | <b>92.3</b>  | <b>92.2</b>  | <b>94.2</b>  | <b>93.8</b>  | <b>82.1</b>  | <b>82.7</b>  | <b>86.1</b>  | <b>100.0</b>         |
| Industry                                                          | 4.4          | 4.1          | 4.7          | 4.8          | 5.3          | 5.2          | 5.4          | 4.6          | 4.0          | 3.8          | 4.5                  |
| Transport                                                         | 59.5         | 58.5         | 58.3         | 58.5         | 60.6         | 62.6         | 59.6         | 51.4         | 54.7         | 58.5         | 68.0                 |
| Residential/Commercial                                            | 3.7          | 3.6          | 3.5          | 3.3          | 3.1          | 3.0          | 3.0          | 2.6          | 3.4          | 3.7          | 4.3                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>44.2</b>  | <b>45.4</b>  | <b>44.6</b>  | <b>45.3</b>  | <b>47.1</b>  | <b>49.3</b>  | <b>48.2</b>  | <b>46.7</b>  | <b>47.1</b>  | <b>50.2</b>  | <b>100.0</b>         |
| Industry                                                          | 14.9         | 14.9         | 14.5         | 16.3         | 15.8         | 16.0         | 16.0         | 15.3         | 16.3         | 17.2         | 34.3                 |
| Transport                                                         | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2                  |
| Residential/Commercial                                            | 25.3         | 27.0         | 25.8         | 24.9         | 27.0         | 29.4         | 28.6         | 27.8         | 27.0         | 29.1         | 57.9                 |
| <b>Refined products consumption</b>                               | <b>91.3</b>  | <b>89.7</b>  | <b>91.1</b>  | <b>92.3</b>  | <b>92.2</b>  | <b>94.2</b>  | <b>93.8</b>  | <b>82.1</b>  | <b>82.7</b>  | <b>86.1</b>  | <b>100.0</b>         |
| Gasoline                                                          | 34.8         | 34.2         | 34.9         | 36.2         | 36.2         | 37.4         | 34.6         | 31.2         | 32.5         | 33.4         | 38.8                 |
| Diesel                                                            | 27.3         | 27.1         | 27.0         | 25.4         | 27.5         | 28.1         | 27.4         | 25.4         | 26.6         | 27.2         | 31.6                 |
| Heating Oil                                                       | 1.8          | 1.7          | 1.5          | 1.4          | 1.2          | 1.2          | 1.2          | 0.9          | 0.7          | 0.8          | 1.0                  |
| Aviation Jet                                                      | 5.4          | 5.3          | 5.4          | 5.8          | 6.3          | 6.8          | 6.9          | 3.4          | 3.7          | 6.2          | 7.2                  |
| LPG                                                               | 3.1          | 2.8          | 2.7          | 2.8          | 3.0          | 2.9          | 5.3          | 4.7          | 4.2          | 4.9          | 5.7                  |
| <b>Imports</b>                                                    | <b>78.8</b>  | <b>74.5</b>  | <b>80.1</b>  | <b>84.1</b>  | <b>78.2</b>  | <b>76.7</b>  | <b>82.0</b>  | <b>69.9</b>  | <b>65.5</b>  | <b>67.4</b>  | <b>100.0</b>         |
| Oil                                                               | 56.5         | 56.2         | 63.5         | 65.3         | 56.9         | 57.1         | 60.1         | 50.1         | 45.1         | 47.4         | 70.3                 |
| Gas                                                               | 22.3         | 18.4         | 16.6         | 18.8         | 21.3         | 19.6         | 21.9         | 19.8         | 20.3         | 20.0         | 29.7                 |
| Gasoline                                                          | 2.6          | 2.6          | 3.1          | 4.0          | 3.7          | 4.3          | 7.3          | 4.5          | 5.1          | 4.3          | 6.4                  |
| Diesel                                                            | 1.2          | 1.5          | 1.9          | 2.1          | 1.1          | 2.2          | 1.2          | 0.8          | 1.1          | 0.9          | 1.4                  |
| Heating Oil                                                       | 1.1          | 1.0          | 0.6          | 0.7          | 0.8          | 0.6          | 0.7          | 0.5          | 0.4          | 0.4          | 0.5                  |
| Aviation Jet                                                      | 2.4          | 2.6          | 3.0          | 2.8          | 2.5          | 3.1          | 3.4          | 1.2          | 1.0          | 2.0          | 2.9                  |
| LPG                                                               | 0.1          | 0.2          | 0.1          | 0.3          | 0.3          | 0.2          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>234.1</b> | <b>240.4</b> | <b>250.8</b> | <b>263.6</b> | <b>274.7</b> | <b>286.0</b> | <b>295.7</b> | <b>278.9</b> | <b>293.3</b> | <b>301.5</b> | <b>100.0</b>         |
| Oil                                                               | 165.0        | 174.6        | 185.2        | 192.5        | 202.9        | 218.7        | 231.4        | 219.4        | 226.6        | 229.5        | 76.1                 |
| Gas                                                               | 69.1         | 65.8         | 65.7         | 71.0         | 71.8         | 67.2         | 64.3         | 59.5         | 66.7         | 72.0         | 23.9                 |
| Gasoline                                                          | 6.6          | 6.5          | 7.7          | 7.8          | 8.7          | 7.0          | 8.2          | 6.9          | 6.7          | 4.4          | 1.5                  |
| Diesel                                                            | 8.1          | 6.5          | 6.9          | 6.8          | 8.2          | 6.5          | 7.9          | 7.6          | 7.6          | 7.9          | 2.6                  |
| Heating Oil                                                       | 4.4          | 3.5          | 3.0          | 2.9          | 2.8          | 3.6          | 1.8          | 0.8          | 1.3          | 1.1          | 0.3                  |
| Aviation Jet                                                      | 0.5          | 0.4          | 0.5          | 0.5          | 1.2          | 1.2          | 1.1          | 0.4          | 0.4          | 0.4          | 0.1                  |
| LPG                                                               | 0.6          | 0.7          | 0.4          | 0.2          | 0.2          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>567.8</b> | <b>569.8</b> | <b>569.9</b> | <b>566.9</b> | <b>576.3</b> | <b>588.4</b> | <b>573.1</b> | <b>526.1</b> | <b>546.8</b> | <b>562.7</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>368.7</b> | <b>359.6</b> | <b>357.4</b> | <b>351.9</b> | <b>347.2</b> | <b>344.9</b> | <b>329.8</b> | <b>319.4</b> | <b>317.5</b> | <b>316.0</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>110.7</b> | <b>108.9</b> | <b>106.8</b> | <b>105.7</b> | <b>106.7</b> | <b>107.2</b> | <b>103.3</b> | <b>101.0</b> | <b>99.0</b>  | <b>100.0</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>177.7</b> | <b>177.1</b> | <b>174.5</b> | <b>180.5</b> | <b>182.4</b> | <b>180.2</b> | <b>177.7</b> | <b>172.7</b> | <b>168.1</b> | <b>168.8</b> | <b>-</b>             |

\*Heat is included

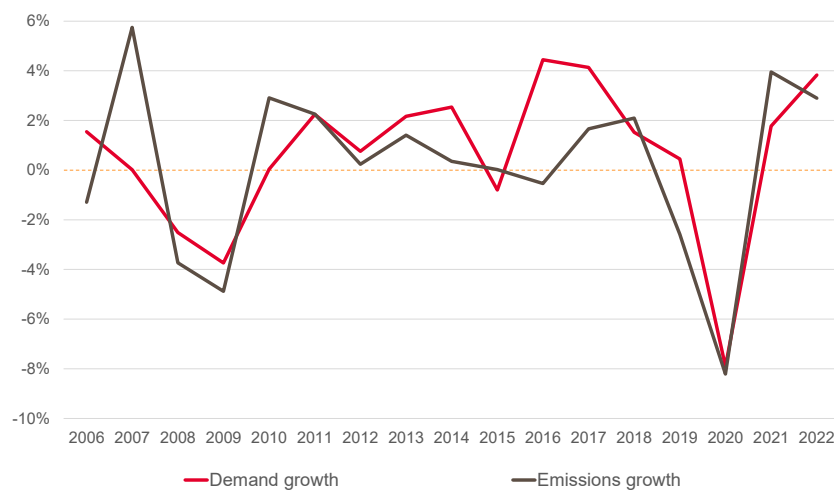
### Primary energy demand mix



### Electricity generation by source



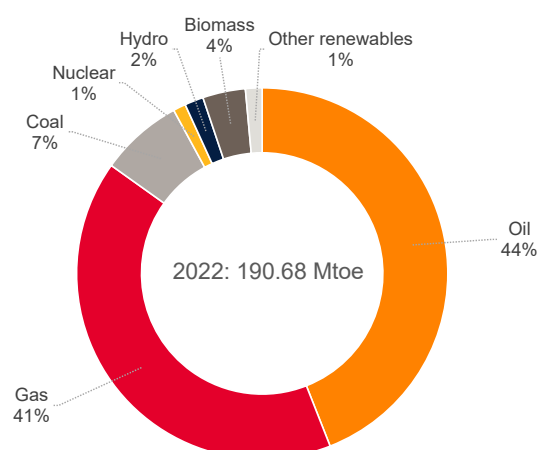
### Primary energy demand and CO<sub>2</sub> emissions growth



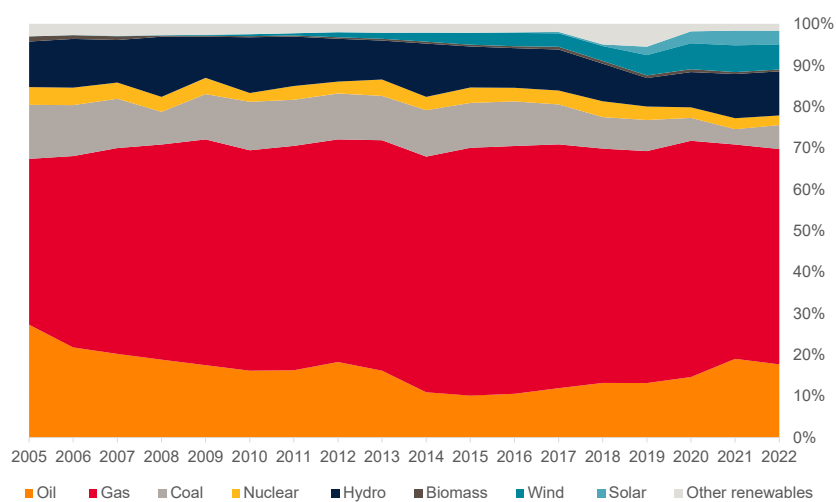
| <b>Mexico</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>192.1</b> | <b>188.4</b> | <b>185.0</b> | <b>184.9</b> | <b>180.7</b> | <b>185.0</b> | <b>183.5</b> | <b>174.3</b> | <b>183.3</b> | <b>190.7</b> | <b>100.0</b>         |
| Oil                                                               | 98.9         | 96.8         | 90.4         | 88.0         | 85.9         | 79.8         | 83.1         | 69.0         | 78.5         | 82.6         | 43.3                 |
| Gas                                                               | 62.2         | 60.5         | 64.7         | 66.2         | 62.6         | 72.5         | 68.7         | 77.4         | 78.2         | 76.6         | 40.2                 |
| Coal                                                              | 12.9         | 12.7         | 11.4         | 12.4         | 12.7         | 12.3         | 11.8         | 8.8          | 8.4          | 13.5         | 7.1                  |
| Nuclear                                                           | 3.1          | 2.5          | 3.0          | 2.8          | 2.8          | 3.6          | 2.9          | 2.1          | 2.3          | 2.1          | 1.1                  |
| Hydro                                                             | 2.4          | 3.3          | 2.7          | 2.6          | 2.8          | 2.8          | 2.0          | 2.3          | 3.0          | 3.1          | 1.6                  |
| Biomass                                                           | 9.0          | 8.7          | 8.6          | 8.7          | 9.7          | 8.6          | 8.7          | 8.8          | 7.1          | 7.0          | 3.7                  |
| Other renewables                                                  | 0.4          | 0.6          | 0.8          | 0.9          | 1.0          | 1.2          | 2.1          | 2.5          | 2.8          | 2.7          | 1.4                  |
| Electricity balance of trade*                                     | 3.3          | 3.2          | 3.4          | 3.4          | 3.3          | 4.2          | 4.2          | 3.4          | 3.1          | 3.1          | 1.6                  |
| <b>Total final consumption, by source</b>                         | <b>120.9</b> | <b>120.1</b> | <b>121.1</b> | <b>123.4</b> | <b>124.5</b> | <b>115.4</b> | <b>117.3</b> | <b>97.8</b>  | <b>107.6</b> | <b>122.4</b> | <b>100.0</b>         |
| Oil                                                               | 72.3         | 73.1         | 72.7         | 75.2         | 73.0         | 68.9         | 70.1         | 53.7         | 63.6         | 75.2         | 61.4                 |
| Gas                                                               | 15.5         | 14.8         | 14.5         | 15.1         | 16.0         | 13.0         | 13.0         | 11.7         | 10.2         | 10.3         | 8.4                  |
| Coal                                                              | 4.6          | 3.4          | 4.6          | 2.6          | 4.2          | 3.2          | 3.1          | 2.9          | 5.0          | 8.0          | 6.5                  |
| Electricity                                                       | 20.8         | 21.7         | 22.1         | 23.3         | 23.4         | 23.5         | 24.1         | 22.3         | 22.8         | 23.3         | 19.0                 |
| Heat                                                              | 0.2          | 0.2          | 0.2          | 0.2          | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.3                  |
| Biomass                                                           | 7.6          | 7.0          | 6.9          | 6.9          | 7.8          | 6.4          | 6.7          | 6.9          | 5.6          | 5.3          | 4.3                  |
| <b>Electricity generation, by source</b>                          | <b>25.6</b>  | <b>25.9</b>  | <b>26.7</b>  | <b>27.6</b>  | <b>27.7</b>  | <b>30.8</b>  | <b>29.6</b>  | <b>27.1</b>  | <b>28.0</b>  | <b>28.8</b>  | <b>100.0</b>         |
| Oil                                                               | 4.1          | 2.8          | 2.7          | 2.9          | 3.3          | 4.1          | 3.9          | 4.0          | 5.3          | 5.1          | 17.7                 |
| Gas                                                               | 14.3         | 14.8         | 16.0         | 16.5         | 16.3         | 17.4         | 16.6         | 15.5         | 14.5         | 15.0         | 52.1                 |
| Coal                                                              | 2.7          | 2.9          | 2.9          | 3.0          | 2.7          | 2.3          | 2.2          | 1.5          | 1.0          | 1.7          | 5.8                  |
| Nuclear                                                           | 1.0          | 0.8          | 1.0          | 0.9          | 0.9          | 1.2          | 1.0          | 0.7          | 0.7          | 0.7          | 2.4                  |
| Hydro                                                             | 2.4          | 3.3          | 2.7          | 2.6          | 2.8          | 2.8          | 2.0          | 2.3          | 3.0          | 3.1          | 10.6                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.5                  |
| Wind                                                              | 0.4          | 0.6          | 0.8          | 0.9          | 0.9          | 1.1          | 1.5          | 1.7          | 1.8          | 1.8          | 6.1                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.6          | 0.8          | 1.0          | 1.0          | 3.3                  |
| Other renewables                                                  | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 1.5          | 1.6          | 0.5          | 0.4          | 0.4          | 1.5                  |
| <b>Total final consumption, by sector</b>                         | <b>120.9</b> | <b>120.1</b> | <b>121.1</b> | <b>123.4</b> | <b>124.5</b> | <b>115.4</b> | <b>117.3</b> | <b>97.8</b>  | <b>107.6</b> | <b>122.4</b> | <b>100.0</b>         |
| Industry                                                          | 37.3         | 35.1         | 36.6         | 36.6         | 39.4         | 33.1         | 34.7         | 31.7         | 32.7         | 35.3         | 28.8                 |
| Transport                                                         | 51.1         | 51.3         | 51.1         | 52.9         | 51.4         | 50.1         | 51.0         | 36.2         | 48.8         | 60.9         | 49.7                 |
| Residential/Commercial                                            | 23.0         | 23.6         | 24.1         | 24.3         | 24.2         | 23.2         | 23.1         | 22.3         | 19.3         | 19.5         | 15.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>72.3</b>  | <b>73.1</b>  | <b>72.7</b>  | <b>75.2</b>  | <b>73.0</b>  | <b>68.9</b>  | <b>70.1</b>  | <b>53.7</b>  | <b>63.6</b>  | <b>75.2</b>  | <b>100.0</b>         |
| Industry                                                          | 5.8          | 5.7          | 6.2          | 7.0          | 6.4          | 4.3          | 5.3          | 4.8          | 4.1          | 3.3          | 4.5                  |
| Transport                                                         | 51.0         | 51.2         | 51.0         | 52.8         | 51.3         | 49.9         | 50.9         | 36.1         | 48.7         | 60.7         | 80.7                 |
| Residential/Commercial                                            | 7.7          | 7.7          | 7.6          | 7.4          | 7.3          | 7.1          | 6.9          | 6.6          | 5.4          | 5.7          | 7.6                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>15.5</b>  | <b>14.8</b>  | <b>14.5</b>  | <b>15.1</b>  | <b>16.0</b>  | <b>13.0</b>  | <b>13.0</b>  | <b>11.7</b>  | <b>10.2</b>  | <b>10.3</b>  | <b>100.0</b>         |
| Industry                                                          | 13.8         | 12.9         | 12.9         | 13.5         | 14.5         | 11.6         | 11.7         | 10.6         | 9.1          | 9.2          | 89.2                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| Residential/Commercial                                            | 1.0          | 1.1          | 1.1          | 1.0          | 1.0          | 1.0          | 0.9          | 0.8          | 0.9          | 0.9          | 8.7                  |
| <b>Refined products consumption</b>                               | <b>72.3</b>  | <b>73.1</b>  | <b>72.7</b>  | <b>75.2</b>  | <b>73.0</b>  | <b>68.9</b>  | <b>70.1</b>  | <b>53.7</b>  | <b>63.6</b>  | <b>75.2</b>  | <b>100.0</b>         |
| Gasoline                                                          | 35.2         | 34.7         | 35.4         | 36.8         | 35.6         | 34.9         | 35.8         | 26.5         | 34.0         | 39.7         | 52.7                 |
| Diesel                                                            | 19.0         | 19.5         | 19.0         | 19.6         | 18.6         | 18.0         | 17.6         | 11.4         | 16.4         | 24.1         | 32.1                 |
| Heating Oil                                                       | 0.6          | 0.5          | 0.5          | 0.8          | 0.7          | 0.2          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 10.1         | 10.1         | 9.9          | 9.9          | 9.9          | 9.7          | 9.0          | 8.7          | 7.1          | 7.4          | 9.9                  |
| <b>Imports</b>                                                    | <b>51.2</b>  | <b>54.1</b>  | <b>65.2</b>  | <b>78.6</b>  | <b>87.0</b>  | <b>98.5</b>  | <b>94.9</b>  | <b>94.5</b>  | <b>101.6</b> | <b>101.8</b> | <b>100.0</b>         |
| Oil                                                               | 29.2         | 30.5         | 35.1         | 43.1         | 51.3         | 54.3         | 53.9         | 44.5         | 48.7         | 51.2         | 50.3                 |
| Gas                                                               | 22.0         | 23.6         | 30.2         | 35.6         | 35.7         | 44.2         | 41.0         | 50.0         | 52.9         | 50.6         | 49.7                 |
| Gasoline                                                          | 15.5         | 16.1         | 18.6         | 22.0         | 23.2         | 25.7         | 25.7         | 20.6         | 22.0         | 22.5         | 22.1                 |
| Diesel                                                            | 5.4          | 6.7          | 7.4          | 9.5          | 12.9         | 14.0         | 12.4         | 9.5          | 9.8          | 12.7         | 12.5                 |
| Heating Oil                                                       | 1.7          | 0.7          | 0.9          | 1.4          | 2.2          | 1.8          | 2.3          | 0.5          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.2          | 0.6          | 1.1          | 1.6          | 2.1          | 2.7          | 2.8          | 1.3          | 2.2          | 2.7          | 2.6                  |
| LPG                                                               | 3.0          | 3.3          | 3.9          | 5.1          | 6.3          | 5.5          | 6.9          | 8.9          | 9.9          | 8.0          | 7.8                  |
| <b>Exports</b>                                                    | <b>76.3</b>  | <b>74.1</b>  | <b>72.0</b>  | <b>75.1</b>  | <b>73.0</b>  | <b>73.3</b>  | <b>67.6</b>  | <b>69.2</b>  | <b>65.3</b>  | <b>63.3</b>  | <b>100.0</b>         |
| Oil                                                               | 76.3         | 74.0         | 72.0         | 75.1         | 73.0         | 73.3         | 67.6         | 69.2         | 65.3         | 63.3         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.5          | 0.1          | 0.3          | 0.8          | 0.2          | 0.2          | 0.6          | 0.8          | 0.3          | 0.9          | 1.4                  |
| Heating Oil                                                       | 5.2          | 7.0          | 6.8          | 6.2          | 5.7          | 5.3          | 3.8          | 6.0          | 8.6          | 9.5          | 15.0                 |
| Aviation Jet                                                      | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.2          | 0.2          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>458.5</b> | <b>443.6</b> | <b>451.3</b> | <b>457.3</b> | <b>456.3</b> | <b>426.5</b> | <b>432.5</b> | <b>360.2</b> | <b>396.6</b> | <b>446.3</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>218.4</b> | <b>205.5</b> | <b>202.4</b> | <b>199.8</b> | <b>195.2</b> | <b>178.6</b> | <b>181.4</b> | <b>164.5</b> | <b>172.9</b> | <b>188.7</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>54.9</b>  | <b>52.7</b>  | <b>51.9</b>  | <b>51.5</b>  | <b>51.0</b>  | <b>46.4</b>  | <b>47.4</b>  | <b>42.6</b>  | <b>45.2</b>  | <b>50.5</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>91.5</b>  | <b>87.3</b>  | <b>82.9</b>  | <b>80.8</b>  | <b>77.3</b>  | <b>77.4</b>  | <b>77.0</b>  | <b>79.6</b>  | <b>79.9</b>  | <b>80.6</b>  | <b>-</b>             |

\*Heat is included

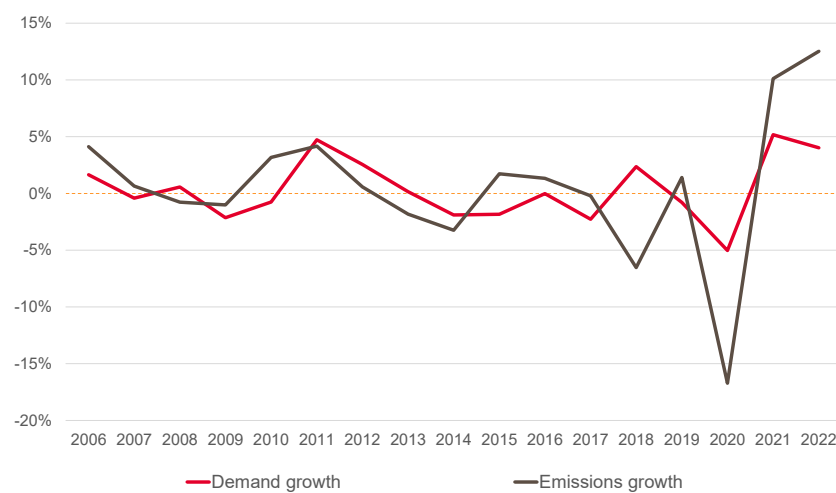
### Primary energy demand mix



### Electricity generation by source



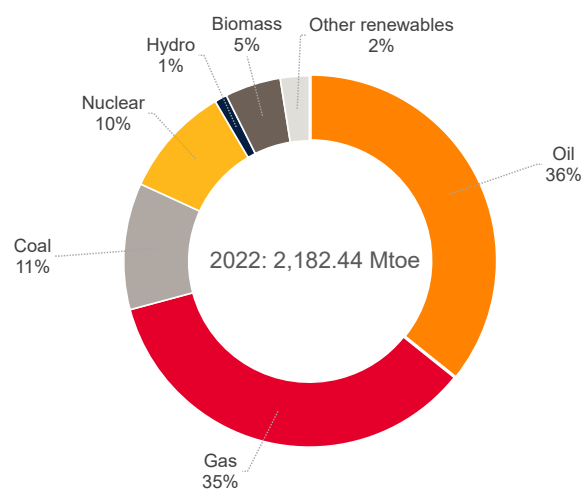
### Primary energy demand and CO<sub>2</sub> emissions growth



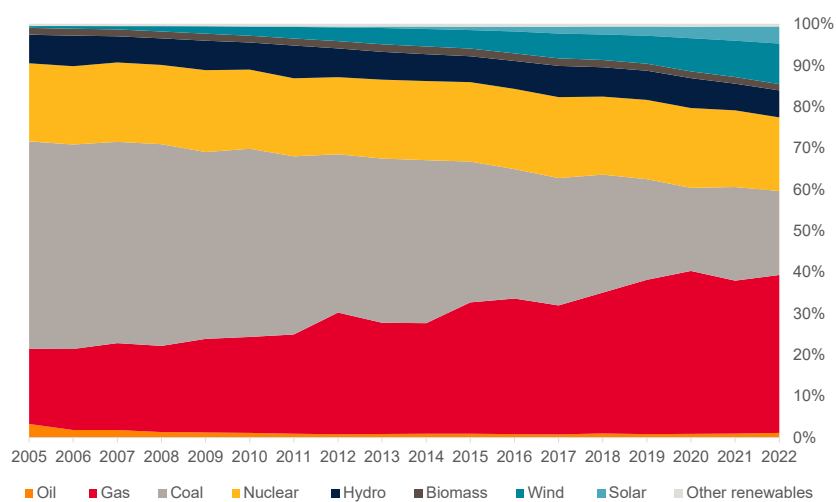
| United States<br>(Million toe)                                    | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>2,190.9</b> | <b>2,217.2</b> | <b>2,192.3</b> | <b>2,168.7</b> | <b>2,161.8</b> | <b>2,222.3</b> | <b>2,221.9</b> | <b>2,045.2</b> | <b>2,144.7</b> | <b>2,182.4</b> | <b>100.0</b>         |
| Oil                                                               | 777.7          | 777.3          | 793.4          | 788.5          | 794.9          | 806.3          | 800.2          | 707.5          | 766.8          | 773.5          | 35.4                 |
| Gas                                                               | 606.6          | 627.6          | 646.6          | 652.8          | 643.9          | 693.7          | 742.3          | 719.0          | 720.9          | 758.8          | 34.8                 |
| Coal                                                              | 432.4          | 431.7          | 373.5          | 340.8          | 330.4          | 320.2          | 274.5          | 221.2          | 254.1          | 238.8          | 10.9                 |
| Nuclear                                                           | 214.2          | 216.5          | 216.4          | 218.9          | 218.6          | 219.3          | 219.8          | 214.5          | 211.3          | 209.5          | 9.6                  |
| Hydro                                                             | 23.3           | 22.5           | 21.6           | 23.2           | 26.0           | 25.4           | 24.9           | 24.7           | 22.5           | 23.5           | 1.1                  |
| Biomass                                                           | 102.7          | 105.5          | 101.5          | 101.1          | 101.4          | 107.6          | 108.7          | 100.0          | 105.0          | 105.1          | 4.8                  |
| Other renewables                                                  | 16.1           | 18.5           | 20.3           | 24.7           | 28.8           | 31.7           | 34.6           | 40.2           | 46.5           | 54.6           | 2.5                  |
| Electricity balance of trade*                                     | 17.8           | 17.7           | 19.1           | 18.7           | 17.7           | 18.1           | 16.9           | 17.9           | 17.6           | 18.6           | 0.9                  |
| <b>Total final consumption, by source</b>                         | <b>1,480.9</b> | <b>1,503.5</b> | <b>1,497.5</b> | <b>1,503.1</b> | <b>1,507.5</b> | <b>1,566.2</b> | <b>1,569.7</b> | <b>1,439.8</b> | <b>1,514.7</b> | <b>1,540.8</b> | <b>100.0</b>         |
| Oil                                                               | 720.1          | 724.9          | 741.9          | 744.4          | 747.6          | 763.7          | 763.8          | 677.0          | 733.6          | 733.7          | 47.6                 |
| Gas                                                               | 320.4          | 335.5          | 319.6          | 320.6          | 328.0          | 350.1          | 359.8          | 332.3          | 338.9          | 354.7          | 23.0                 |
| Coal                                                              | 27.1           | 26.9           | 23.7           | 21.2           | 20.6           | 20.7           | 19.2           | 15.9           | 16.0           | 16.1           | 1.0                  |
| Electricity                                                       | 323.9          | 325.9          | 325.2          | 328.0          | 323.0          | 335.5          | 329.4          | 324.9          | 331.6          | 341.1          | 22.1                 |
| Heat                                                              | 8.3            | 8.1            | 8.0            | 8.9            | 8.0            | 9.8            | 9.1            | 9.0            | 8.9            | 8.8            | 0.6                  |
| Biomass                                                           | 81.2           | 82.3           | 79.1           | 79.9           | 80.2           | 86.5           | 88.4           | 80.7           | 85.7           | 86.3           | 5.6                  |
| <b>Electricity generation, by source</b>                          | <b>370.3</b>   | <b>373.3</b>   | <b>371.3</b>   | <b>371.7</b>   | <b>368.6</b>   | <b>383.2</b>   | <b>377.7</b>   | <b>366.4</b>   | <b>375.9</b>   | <b>387.8</b>   | <b>100.0</b>         |
| Oil                                                               | 3.2            | 3.4            | 3.3            | 3.0            | 2.8            | 3.7            | 3.1            | 3.2            | 3.6            | 4.3            | 1.1                  |
| Gas                                                               | 99.6           | 99.9           | 118.0          | 122.0          | 115.0          | 130.7          | 141.0          | 144.5          | 139.1          | 148.2          | 38.2                 |
| Coal                                                              | 147.3          | 147.3          | 126.5          | 116.4          | 113.6          | 109.4          | 92.0           | 73.6           | 85.2           | 78.8           | 20.3                 |
| Nuclear                                                           | 70.7           | 71.4           | 71.4           | 72.2           | 72.1           | 72.4           | 72.5           | 70.8           | 69.7           | 69.1           | 17.8                 |
| Hydro                                                             | 24.9           | 24.2           | 23.3           | 25.1           | 28.0           | 27.3           | 26.7           | 26.5           | 24.3           | 25.3           | 6.5                  |
| Biomass                                                           | 6.7            | 7.0            | 6.9            | 6.8            | 6.8            | 6.7            | 6.3            | 6.1            | 6.0            | 5.9            | 1.5                  |
| Wind                                                              | 14.6           | 15.8           | 16.6           | 19.7           | 22.1           | 23.7           | 25.6           | 29.4           | 33.0           | 38.0           | 9.8                  |
| Solar                                                             | 1.4            | 2.2            | 3.1            | 4.3            | 6.1            | 7.3            | 8.4            | 10.3           | 12.9           | 16.0           | 4.1                  |
| Other renewables                                                  | 2.0            | 2.0            | 2.1            | 2.1            | 2.1            | 2.1            | 2.0            | 2.0            | 2.1            | 2.1            | 0.5                  |
| <b>Total final consumption, by sector</b>                         | <b>1,480.9</b> | <b>1,503.5</b> | <b>1,497.5</b> | <b>1,503.1</b> | <b>1,507.5</b> | <b>1,566.2</b> | <b>1,569.7</b> | <b>1,439.8</b> | <b>1,514.7</b> | <b>1,540.8</b> | <b>100.0</b>         |
| Industry                                                          | 271.3          | 271.3          | 269.7          | 272.4          | 267.7          | 278.4          | 277.4          | 272.9          | 283.6          | 288.5          | 18.7                 |
| Transport                                                         | 578.6          | 579.0          | 600.1          | 607.0          | 611.7          | 621.2          | 618.4          | 529.3          | 574.8          | 579.0          | 37.6                 |
| Residential/Commercial                                            | 482.6          | 495.2          | 476.0          | 470.5          | 466.1          | 500.8          | 500.9          | 481.1          | 493.7          | 515.0          | 33.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>720.1</b>   | <b>724.9</b>   | <b>741.9</b>   | <b>744.4</b>   | <b>747.6</b>   | <b>763.7</b>   | <b>763.8</b>   | <b>677.0</b>   | <b>733.6</b>   | <b>733.7</b>   | <b>100.0</b>         |
| Industry                                                          | 20.1           | 17.5           | 19.2           | 19.9           | 18.1           | 19.4           | 16.7           | 18.0           | 20.4           | 20.8           | 2.8                  |
| Transport                                                         | 542.0          | 542.1          | 562.5          | 566.6          | 570.2          | 580.3          | 577.2          | 492.3          | 535.5          | 540.0          | 73.6                 |
| Residential/Commercial                                            | 26.0           | 24.2           | 26.4           | 26.0           | 24.1           | 24.5           | 23.9           | 22.7           | 25.7           | 25.7           | 3.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>320.4</b>   | <b>335.5</b>   | <b>319.6</b>   | <b>320.6</b>   | <b>328.0</b>   | <b>350.1</b>   | <b>359.8</b>   | <b>332.3</b>   | <b>338.9</b>   | <b>354.7</b>   | <b>100.0</b>         |
| Industry                                                          | 115.5          | 120.6          | 121.0          | 125.1          | 124.1          | 129.6          | 132.9          | 135.9          | 140.2          | 143.8          | 40.5                 |
| Transport                                                         | 0.7            | 0.8            | 0.9            | 1.0            | 1.1            | 1.2            | 1.2            | 1.2            | 1.3            | 1.2            | 0.4                  |
| Residential/Commercial                                            | 188.9          | 198.1          | 180.9          | 174.5          | 177.3          | 194.3          | 200.5          | 184.2          | 188.2          | 200.1          | 56.4                 |
| <b>Refined products consumption</b>                               | <b>717.6</b>   | <b>722.4</b>   | <b>737.6</b>   | <b>741.4</b>   | <b>743.2</b>   | <b>758.1</b>   | <b>755.3</b>   | <b>687.9</b>   | <b>722.4</b>   | <b>722.6</b>   | <b>100.0</b>         |
| Gasoline                                                          | 364.8          | 367.4          | 377.9          | 383.3          | 380.8          | 381.7          | 380.1          | 328.7          | 359.2          | 357.2          | 49.4                 |
| Diesel                                                            | 176.9          | 183.7          | 179.5          | 176.5          | 179.0          | 185.5          | 181.3          | 168.1          | 175.8          | 173.9          | 24.1                 |
| Heating Oil                                                       | 1.0            | 0.3            | 2.9            | 1.8            | 1.8            | 1.9            | 0.9            | 1.1            | 1.5            | 1.7            | 0.2                  |
| Aviation Jet                                                      | 49.2           | 50.4           | 52.8           | 54.8           | 57.9           | 58.8           | 59.8           | 37.0           | 47.0           | 53.6           | 7.4                  |
| LPG                                                               | 38.9           | 35.6           | 37.3           | 35.7           | 33.3           | 36.9           | 38.1           | 35.2           | 37.1           | 37.9           | 5.2                  |
| <b>Imports</b>                                                    | <b>567.4</b>   | <b>534.7</b>   | <b>546.0</b>   | <b>581.5</b>   | <b>586.8</b>   | <b>575.0</b>   | <b>528.8</b>   | <b>464.3</b>   | <b>499.1</b>   | <b>499.8</b>   | <b>100.0</b>         |
| Oil                                                               | 500.6          | 472.4          | 483.1          | 511.9          | 516.4          | 508.2          | 465.4          | 405.3          | 431.8          | 427.4          | 85.5                 |
| Gas                                                               | 66.7           | 62.3           | 62.9           | 69.5           | 70.4           | 66.8           | 63.4           | 59.0           | 67.3           | 72.5           | 14.5                 |
| Gasoline                                                          | 32.2           | 30.0           | 33.3           | 34.6           | 31.3           | 33.4           | 38.4           | 28.4           | 38.6           | 30.6           | 6.1                  |
| Diesel                                                            | 8.9            | 10.6           | 11.2           | 8.4            | 8.8            | 10.1           | 11.1           | 12.5           | 14.9           | 9.7            | 1.9                  |
| Heating Oil                                                       | 13.6           | 11.2           | 11.7           | 11.6           | 11.3           | 12.6           | 9.4            | 11.4           | 11.7           | 13.3           | 2.7                  |
| Aviation Jet                                                      | 4.4            | 4.9            | 6.9            | 7.6            | 8.3            | 6.7            | 8.4            | 7.7            | 8.2            | 6.1            | 1.2                  |
| LPG                                                               | 4.2            | 3.7            | 4.3            | 5.0            | 5.6            | 6.1            | 6.6            | 5.1            | 5.6            | 5.7            | 1.1                  |
| <b>Exports</b>                                                    | <b>195.2</b>   | <b>229.4</b>   | <b>257.7</b>   | <b>290.8</b>   | <b>362.5</b>   | <b>430.9</b>   | <b>497.9</b>   | <b>508.8</b>   | <b>541.1</b>   | <b>591.3</b>   | <b>100.0</b>         |
| Oil                                                               | 159.1          | 194.8          | 217.0          | 238.1          | 288.1          | 346.1          | 388.3          | 384.5          | 381.6          | 426.1          | 72.1                 |
| Gas                                                               | 36.1           | 34.7           | 40.7           | 52.7           | 74.4           | 84.8           | 109.6          | 124.3          | 159.5          | 165.2          | 27.9                 |
| Gasoline                                                          | 23.2           | 25.3           | 28.3           | 35.3           | 38.1           | 43.4           | 41.5           | 36.3           | 42.6           | 45.0           | 7.6                  |
| Diesel                                                            | 56.3           | 54.9           | 58.5           | 58.7           | 68.5           | 64.2           | 65.5           | 60.2           | 55.3           | 65.1           | 11.0                 |
| Heating Oil                                                       | 19.4           | 20.1           | 17.5           | 16.3           | 16.8           | 19.2           | 12.4           | 7.8            | 5.1            | 5.7            | 1.0                  |
| Aviation Jet                                                      | 7.8            | 8.1            | 8.3            | 8.7            | 9.2            | 11.1           | 11.2           | 5.0            | 5.9            | 9.9            | 1.7                  |
| LPG                                                               | 0.0            | 17.0           | 24.4           | 31.0           | 35.6           | 39.6           | 47.0           | 55.5           | 59.1           | 60.2           | 10.2                 |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>5,152.7</b> | <b>5,193.8</b> | <b>5,047.3</b> | <b>4,954.6</b> | <b>4,891.1</b> | <b>5,001.5</b> | <b>4,891.9</b> | <b>4,372.8</b> | <b>4,677.2</b> | <b>4,735.4</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>297.3</b>   | <b>293.0</b>   | <b>277.2</b>   | <b>267.7</b>   | <b>258.4</b>   | <b>256.8</b>   | <b>245.5</b>   | <b>227.2</b>   | <b>230.0</b>   | <b>228.1</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>77.9</b>    | <b>76.9</b>    | <b>74.9</b>    | <b>73.8</b>    | <b>72.0</b>    | <b>72.8</b>    | <b>70.9</b>    | <b>67.4</b>    | <b>67.2</b>    | <b>67.2</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>126.4</b>   | <b>125.1</b>   | <b>120.4</b>   | <b>117.2</b>   | <b>114.2</b>   | <b>114.1</b>   | <b>111.5</b>   | <b>106.3</b>   | <b>105.5</b>   | <b>105.1</b>   | <b>-</b>             |

\*Heat is included

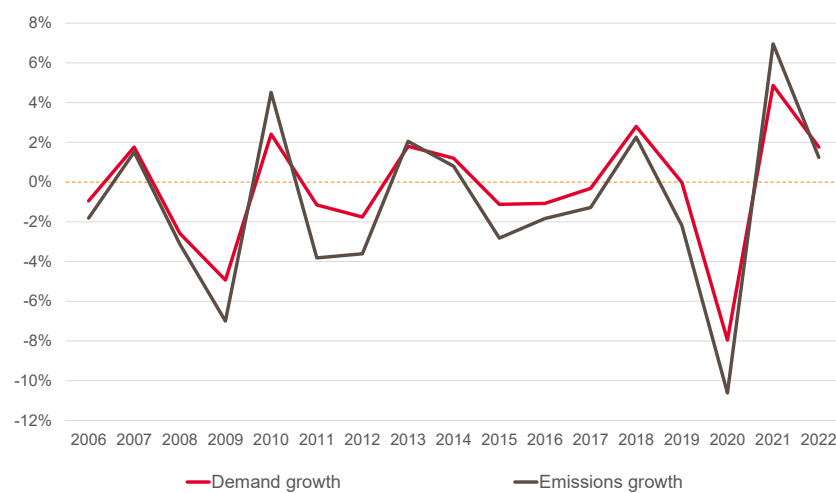
### Primary energy demand mix



### Electricity generation by source



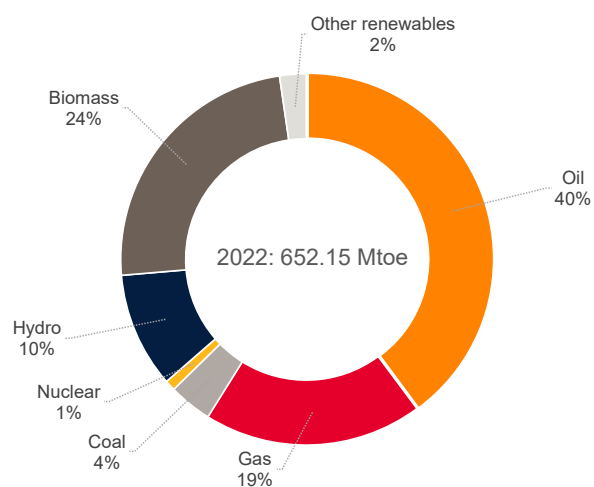
### Primary energy demand and CO<sub>2</sub> emissions growth



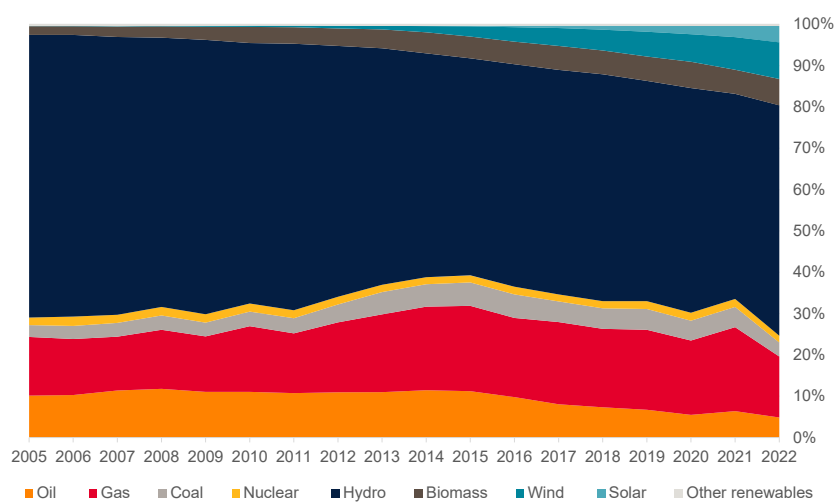
| South and Central America<br>(Million toe)                        | 2013           | 2014           | 2015           | 2016           | 2017           | 2018           | 2019           | 2020           | 2021           | 2022           | Share in<br>2022 (%) |
|-------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>666.9</b>   | <b>668.1</b>   | <b>665.7</b>   | <b>654.5</b>   | <b>654.8</b>   | <b>635.5</b>   | <b>641.4</b>   | <b>600.8</b>   | <b>633.8</b>   | <b>652.1</b>   | <b>100.0</b>         |
| Oil                                                               | 293.1          | 290.8          | 282.0          | 274.0          | 270.0          | 249.5          | 251.7          | 224.3          | 249.7          | 258.0          | 39.6                 |
| Gas                                                               | 140.6          | 145.6          | 145.6          | 140.1          | 141.3          | 137.3          | 135.9          | 122.6          | 132.6          | 123.4          | 18.9                 |
| Coal                                                              | 32.0           | 33.1           | 34.1           | 32.6           | 32.0           | 31.3           | 32.1           | 28.7           | 30.5           | 24.4           | 3.7                  |
| Nuclear                                                           | 5.6            | 5.4            | 5.7            | 6.3            | 5.7            | 5.9            | 6.4            | 6.5            | 6.7            | 5.9            | 0.9                  |
| Hydro                                                             | 60.8           | 57.3           | 57.4           | 58.9           | 59.8           | 61.3           | 59.6           | 59.5           | 57.1           | 65.1           | 10.0                 |
| Biomass                                                           | 129.8          | 130.1          | 133.9          | 134.0          | 136.0          | 138.9          | 142.4          | 144.3          | 139.5          | 155.7          | 23.9                 |
| Other renewables                                                  | 0.9            | 1.6            | 2.9            | 4.2            | 5.4            | 6.7            | 8.3            | 9.5            | 12.2           | 15.0           | 2.3                  |
| Electricity balance of trade*                                     | 4.1            | 4.1            | 4.2            | 4.4            | 4.5            | 4.7            | 5.0            | 5.5            | 5.6            | 4.6            | 0.7                  |
| <b>Total final consumption, by source</b>                         | <b>493.1</b>   | <b>492.8</b>   | <b>487.4</b>   | <b>483.5</b>   | <b>486.4</b>   | <b>483.1</b>   | <b>482.3</b>   | <b>454.4</b>   | <b>483.4</b>   | <b>513.8</b>   | <b>100.0</b>         |
| Oil                                                               | 232.7          | 233.0          | 224.0          | 223.7          | 224.9          | 218.1          | 219.8          | 198.2          | 221.4          | 237.5          | 46.2                 |
| Gas                                                               | 61.4           | 60.2           | 60.2           | 58.0           | 56.9           | 58.2           | 55.0           | 48.7           | 50.6           | 51.8           | 10.1                 |
| Coal                                                              | 16.8           | 17.0           | 16.6           | 14.7           | 16.2           | 16.6           | 14.9           | 14.5           | 16.3           | 14.7           | 2.9                  |
| Electricity                                                       | 85.9           | 86.3           | 87.8           | 87.8           | 88.3           | 89.5           | 89.8           | 88.1           | 92.1           | 93.9           | 18.3                 |
| Heat                                                              | 0.6            | 0.7            | 0.8            | 0.9            | 0.9            | 1.0            | 1.1            | 1.2            | 1.3            | 1.4            | 0.3                  |
| Biomass                                                           | 95.7           | 95.6           | 98.0           | 98.4           | 99.3           | 99.6           | 101.7          | 103.8          | 101.7          | 114.5          | 22.3                 |
| <b>Electricity generation, by source</b>                          | <b>106.3</b>   | <b>105.8</b>   | <b>109.3</b>   | <b>109.5</b>   | <b>110.1</b>   | <b>111.7</b>   | <b>111.9</b>   | <b>109.5</b>   | <b>115.1</b>   | <b>117.0</b>   | <b>100.0</b>         |
| Oil                                                               | 11.6           | 12.1           | 12.3           | 10.7           | 8.9            | 8.2            | 7.5            | 6.0            | 7.3            | 5.7            | 4.9                  |
| Gas                                                               | 20.0           | 21.4           | 22.6           | 21.0           | 21.9           | 21.2           | 21.7           | 19.7           | 23.4           | 17.2           | 14.7                 |
| Coal                                                              | 5.7            | 5.7            | 6.2            | 6.2            | 5.5            | 5.5            | 5.6            | 5.2            | 5.6            | 4.0            | 3.4                  |
| Nuclear                                                           | 1.9            | 1.8            | 1.9            | 2.1            | 1.9            | 1.9            | 2.1            | 2.1            | 2.2            | 1.9            | 1.7                  |
| Hydro                                                             | 60.8           | 57.3           | 57.4           | 58.9           | 59.8           | 61.3           | 59.6           | 59.6           | 57.1           | 65.2           | 55.8                 |
| Biomass                                                           | 4.9            | 5.4            | 5.8            | 6.0            | 6.4            | 6.4            | 6.6            | 7.0            | 6.7            | 7.5            | 6.4                  |
| Wind                                                              | 0.9            | 1.6            | 2.7            | 3.9            | 4.8            | 5.6            | 6.7            | 7.3            | 9.1            | 10.3           | 8.8                  |
| Solar                                                             | 0.0            | 0.1            | 0.2            | 0.4            | 0.6            | 1.1            | 1.6            | 2.2            | 3.1            | 4.6            | 4.0                  |
| Other renewables                                                  | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.5            | 0.4                  |
| <b>Total final consumption, by sector</b>                         | <b>493.1</b>   | <b>492.8</b>   | <b>487.4</b>   | <b>483.5</b>   | <b>486.4</b>   | <b>483.1</b>   | <b>482.3</b>   | <b>454.4</b>   | <b>483.4</b>   | <b>513.8</b>   | <b>100.0</b>         |
| Industry                                                          | 159.2          | 155.7          | 149.8          | 146.4          | 148.5          | 145.9          | 140.3          | 139.4          | 142.7          | 147.7          | 28.8                 |
| Transport                                                         | 168.0          | 171.3          | 171.5          | 170.2          | 171.9          | 172.1          | 176.2          | 154.4          | 173.5          | 188.3          | 36.6                 |
| Residential/Commercial                                            | 109.5          | 109.6          | 111.2          | 112.2          | 111.5          | 113.2          | 112.4          | 111.6          | 114.7          | 122.8          | 23.9                 |
| <b>Oil final consumption, by sector</b>                           | <b>232.7</b>   | <b>233.0</b>   | <b>224.0</b>   | <b>223.7</b>   | <b>224.9</b>   | <b>218.1</b>   | <b>219.8</b>   | <b>198.2</b>   | <b>221.4</b>   | <b>237.5</b>   | <b>100.0</b>         |
| Industry                                                          | 31.3           | 30.3           | 27.0           | 25.6           | 25.5           | 25.1           | 24.3           | 22.9           | 24.4           | 24.8           | 10.5                 |
| Transport                                                         | 145.2          | 146.7          | 143.7          | 144.1          | 145.6          | 142.8          | 144.3          | 127.0          | 145.2          | 159.4          | 67.1                 |
| Residential/Commercial                                            | 17.9           | 17.9           | 17.4           | 18.0           | 18.0           | 18.1           | 17.7           | 17.4           | 18.4           | 18.6           | 7.8                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>61.4</b>    | <b>60.2</b>    | <b>60.2</b>    | <b>58.0</b>    | <b>56.9</b>    | <b>58.2</b>    | <b>55.0</b>    | <b>48.7</b>    | <b>50.6</b>    | <b>51.8</b>    | <b>100.0</b>         |
| Industry                                                          | 29.0           | 28.2           | 27.3           | 25.4           | 25.5           | 25.8           | 23.4           | 20.8           | 21.2           | 21.5           | 41.5                 |
| Transport                                                         | 5.7            | 5.9            | 5.9            | 5.8            | 5.7            | 5.8            | 5.9            | 4.5            | 5.4            | 5.5            | 10.7                 |
| Residential/Commercial                                            | 14.9           | 14.7           | 14.8           | 15.0           | 14.3           | 14.5           | 13.7           | 13.5           | 13.2           | 13.8           | 26.6                 |
| <b>Refined products consumption</b>                               | <b>232.4</b>   | <b>232.7</b>   | <b>223.7</b>   | <b>223.4</b>   | <b>224.7</b>   | <b>217.9</b>   | <b>219.6</b>   | <b>198.0</b>   | <b>221.2</b>   | <b>237.5</b>   | <b>100.0</b>         |
| Gasoline                                                          | 64.6           | 65.9           | 64.6           | 65.7           | 67.2           | 63.5           | 63.6           | 53.9           | 63.1           | 71.2           | 30.0                 |
| Diesel                                                            | 95.5           | 95.9           | 93.5           | 92.5           | 92.8           | 93.8           | 94.2           | 88.9           | 98.5           | 104.5          | 44.0                 |
| Heating Oil                                                       | 12.9           | 10.8           | 8.6            | 8.3            | 7.8            | 7.0            | 6.6            | 6.2            | 6.9            | 5.6            | 2.4                  |
| Aviation Jet                                                      | 5.8            | 5.8            | 5.9            | 5.4            | 5.4            | 5.6            | 5.6            | 2.9            | 3.8            | 5.3            | 2.2                  |
| LPG                                                               | 21.8           | 22.0           | 21.1           | 21.9           | 21.4           | 20.3           | 20.3           | 20.0           | 21.1           | 21.4           | 9.0                  |
| <b>Imports</b>                                                    | <b>188.3</b>   | <b>188.0</b>   | <b>181.7</b>   | <b>175.2</b>   | <b>175.7</b>   | <b>171.4</b>   | <b>164.8</b>   | <b>141.5</b>   | <b>169.1</b>   | <b>175.6</b>   | <b>100.0</b>         |
| Oil                                                               | 158.1          | 156.0          | 151.5          | 151.1          | 151.9          | 149.0          | 144.2          | 120.7          | 140.4          | 155.5          | 88.5                 |
| Gas                                                               | 30.2           | 32.0           | 30.2           | 24.1           | 23.7           | 22.5           | 20.6           | 20.8           | 28.7           | 20.1           | 11.5                 |
| Gasoline                                                          | 13.5           | 14.0           | 15.6           | 17.8           | 20.5           | 18.8           | 21.1           | 19.9           | 23.2           | 29.1           | 16.6                 |
| Diesel                                                            | 41.2           | 40.7           | 37.5           | 41.7           | 43.1           | 42.2           | 42.2           | 38.8           | 46.2           | 53.7           | 30.5                 |
| Heating Oil                                                       | 13.4           | 13.1           | 12.9           | 13.3           | 13.2           | 12.7           | 14.0           | 11.7           | 13.3           | 12.7           | 7.3                  |
| Aviation Jet                                                      | 4.7            | 4.8            | 5.2            | 4.8            | 5.2            | 5.3            | 5.6            | 2.6            | 3.3            | 5.6            | 3.2                  |
| LPG                                                               | 7.2            | 7.6            | 6.9            | 7.5            | 7.9            | 8.6            | 8.8            | 9.0            | 9.6            | 8.6            | 4.9                  |
| <b>Exports</b>                                                    | <b>293.4</b>   | <b>299.9</b>   | <b>299.6</b>   | <b>285.5</b>   | <b>276.0</b>   | <b>259.9</b>   | <b>231.2</b>   | <b>220.4</b>   | <b>205.3</b>   | <b>215.7</b>   | <b>100.0</b>         |
| Oil                                                               | 254.8          | 262.7          | 265.0          | 253.4          | 244.4          | 228.1          | 200.9          | 192.7          | 182.9          | 189.7          | 87.9                 |
| Gas                                                               | 38.6           | 37.2           | 34.6           | 32.1           | 31.5           | 31.8           | 30.3           | 27.8           | 22.4           | 26.1           | 12.1                 |
| Gasoline                                                          | 7.4            | 6.3            | 8.1            | 7.7            | 5.9            | 6.0            | 4.6            | 4.8            | 4.4            | 1.3            | 0.6                  |
| Diesel                                                            | 5.0            | 5.2            | 4.3            | 5.0            | 3.9            | 4.4            | 2.9            | 3.5            | 3.2            | 3.5            | 1.6                  |
| Heating Oil                                                       | 28.4           | 27.6           | 26.0           | 24.8           | 24.1           | 24.1           | 16.8           | 18.9           | 17.8           | 22.5           | 10.4                 |
| Aviation Jet                                                      | 4.7            | 5.1            | 4.7            | 3.2            | 2.7            | 2.1            | 1.4            | 1.3            | 1.1            | 1.4            | 0.6                  |
| LPG                                                               | 2.7            | 2.4            | 2.3            | 2.2            | 2.1            | 2.5            | 2.5            | 2.3            | 2.1            | 2.3            | 1.1                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>1,224.0</b> | <b>1,245.4</b> | <b>1,229.3</b> | <b>1,191.5</b> | <b>1,172.2</b> | <b>1,144.2</b> | <b>1,125.6</b> | <b>1,009.4</b> | <b>1,108.1</b> | <b>1,111.5</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>168.9</b>   | <b>170.6</b>   | <b>169.3</b>   | <b>167.6</b>   | <b>163.6</b>   | <b>158.8</b>   | <b>156.5</b>   | <b>151.0</b>   | <b>154.9</b>   | <b>149.3</b>   | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>68.1</b>    | <b>67.5</b>    | <b>67.1</b>    | <b>68.0</b>    | <b>67.9</b>    | <b>67.0</b>    | <b>67.0</b>    | <b>68.0</b>    | <b>67.6</b>    | <b>69.0</b>    | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>92.0</b>    | <b>91.5</b>    | <b>91.7</b>    | <b>92.0</b>    | <b>91.4</b>    | <b>88.2</b>    | <b>89.2</b>    | <b>89.9</b>    | <b>88.6</b>    | <b>87.6</b>    | <b>-</b>             |

\*Heat is included

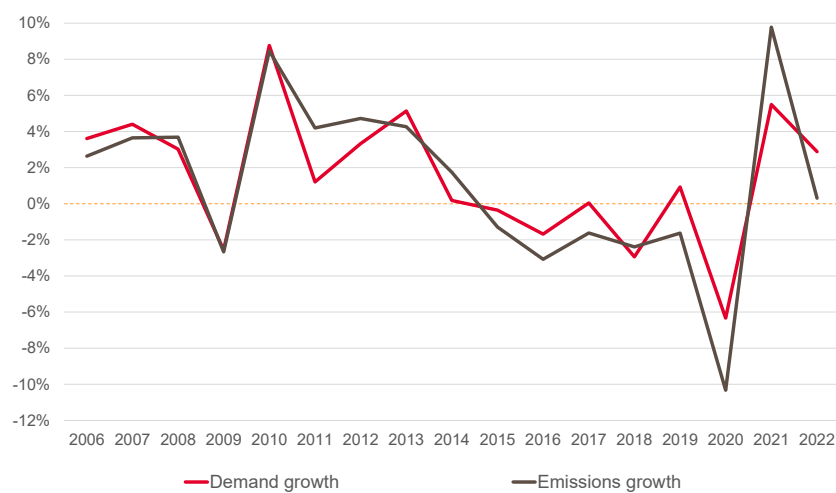
### Primary energy demand mix



### Electricity generation by source



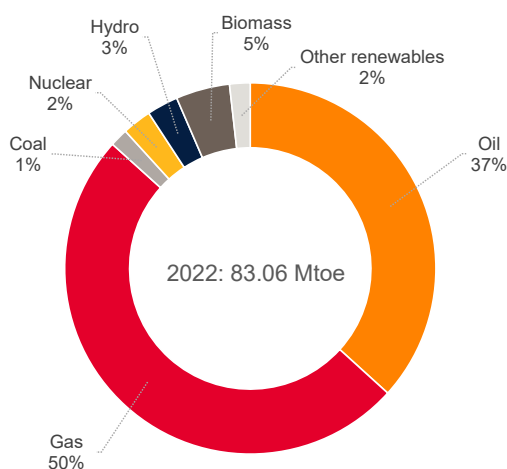
### Primary energy demand and CO<sub>2</sub> emissions growth



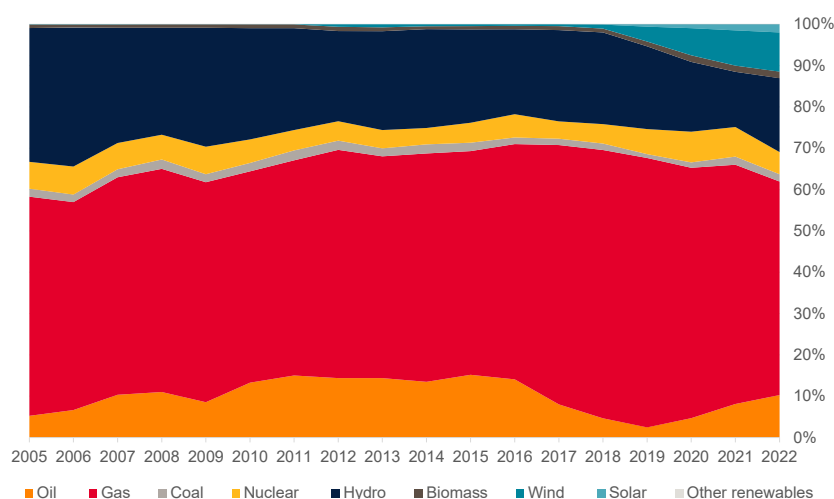
| <b>Argentina</b><br>(Million toe)                                 | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>81.4</b>  | <b>81.5</b>  | <b>82.8</b>  | <b>82.3</b>  | <b>82.3</b>  | <b>80.0</b>  | <b>79.3</b>  | <b>73.8</b>  | <b>79.5</b>  | <b>83.1</b>  | <b>100.0</b>         |
| Oil                                                               | 30.0         | 29.8         | 29.7         | 28.9         | 27.7         | 26.0         | 25.9         | 23.5         | 28.6         | 30.1         | 36.3                 |
| Gas                                                               | 41.9         | 42.0         | 42.9         | 43.4         | 44.3         | 43.5         | 42.7         | 40.0         | 40.2         | 41.0         | 49.3                 |
| Coal                                                              | 1.2          | 1.5          | 1.4          | 1.1          | 1.2          | 1.3          | 0.7          | 0.9          | 1.2          | 1.3          | 1.6                  |
| Nuclear                                                           | 1.6          | 1.4          | 1.8          | 2.2          | 1.6          | 1.8          | 2.2          | 2.8          | 2.8          | 2.1          | 2.5                  |
| Hydro                                                             | 2.8          | 2.8          | 2.8          | 2.6          | 2.7          | 2.8          | 2.4          | 2.0          | 1.7          | 2.2          | 2.7                  |
| Biomass                                                           | 3.0          | 3.1          | 3.3          | 3.4          | 3.8          | 3.7          | 3.9          | 3.3          | 3.4          | 3.9          | 4.6                  |
| Other renewables                                                  | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.1          | 0.5          | 0.9          | 1.3          | 1.5          | 1.8                  |
| Electricity balance of trade*                                     | 0.7          | 0.8          | 0.8          | 0.8          | 0.9          | 0.8          | 0.9          | 0.4          | 0.2          | 1.1          | 1.3                  |
| <b>Total final consumption, by source</b>                         | <b>57.0</b>  | <b>56.5</b>  | <b>57.5</b>  | <b>56.9</b>  | <b>56.6</b>  | <b>56.9</b>  | <b>56.1</b>  | <b>51.0</b>  | <b>53.9</b>  | <b>57.2</b>  | <b>100.0</b>         |
| Oil                                                               | 22.7         | 21.6         | 21.6         | 21.5         | 22.3         | 22.2         | 22.2         | 18.9         | 22.9         | 24.6         | 43.1                 |
| Gas                                                               | 20.7         | 20.6         | 21.1         | 20.7         | 19.4         | 19.6         | 19.5         | 18.7         | 16.8         | 17.5         | 30.7                 |
| Coal                                                              | 1.0          | 1.1          | 1.0          | 0.8          | 0.9          | 1.0          | 0.7          | 0.7          | 0.9          | 1.0          | 1.7                  |
| Electricity                                                       | 10.4         | 10.9         | 11.4         | 11.3         | 11.1         | 11.1         | 10.8         | 10.7         | 11.1         | 11.5         | 20.1                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 2.2          | 2.5          | 2.5          | 2.6          | 2.9          | 3.0          | 3.0          | 2.0          | 2.2          | 2.5          | 4.4                  |
| <b>Electricity generation, by source</b>                          | <b>12.0</b>  | <b>11.9</b>  | <b>12.5</b>  | <b>12.7</b>  | <b>12.5</b>  | <b>12.6</b>  | <b>12.0</b>  | <b>12.4</b>  | <b>13.0</b>  | <b>12.9</b>  | <b>100.0</b>         |
| Oil                                                               | 1.7          | 1.6          | 1.9          | 1.8          | 1.0          | 0.6          | 0.3          | 0.6          | 1.1          | 1.3          | 10.3                 |
| Gas                                                               | 6.4          | 6.6          | 6.8          | 7.2          | 7.9          | 8.2          | 7.8          | 7.5          | 7.5          | 6.6          | 51.7                 |
| Coal                                                              | 0.2          | 0.3          | 0.3          | 0.2          | 0.2          | 0.2          | 0.1          | 0.2          | 0.3          | 0.2          | 1.8                  |
| Nuclear                                                           | 0.5          | 0.5          | 0.6          | 0.7          | 0.5          | 0.6          | 0.7          | 0.9          | 0.9          | 0.7          | 5.3                  |
| Hydro                                                             | 2.9          | 2.9          | 2.8          | 2.6          | 2.8          | 2.8          | 2.4          | 2.1          | 1.7          | 2.3          | 17.9                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 1.6                  |
| Wind                                                              | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.1          | 0.4          | 0.8          | 1.1          | 1.2          | 9.5                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.2          | 0.3          | 2.0                  |
| Other renewables                                                  | 0.0          | -0.0         | -0.0         | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>57.0</b>  | <b>56.5</b>  | <b>57.5</b>  | <b>56.9</b>  | <b>56.6</b>  | <b>56.9</b>  | <b>56.1</b>  | <b>51.0</b>  | <b>53.9</b>  | <b>57.2</b>  | <b>100.0</b>         |
| Industry                                                          | 13.2         | 13.7         | 13.9         | 13.0         | 12.8         | 13.6         | 13.7         | 13.4         | 12.0         | 12.2         | 21.4                 |
| Transport                                                         | 16.6         | 15.7         | 16.5         | 16.4         | 16.9         | 17.3         | 17.2         | 13.2         | 16.5         | 18.1         | 31.7                 |
| Residential/Commercial                                            | 19.4         | 19.2         | 19.6         | 20.0         | 18.9         | 18.7         | 18.0         | 17.7         | 18.2         | 19.2         | 33.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>22.7</b>  | <b>21.6</b>  | <b>21.6</b>  | <b>21.5</b>  | <b>22.3</b>  | <b>22.2</b>  | <b>22.2</b>  | <b>18.9</b>  | <b>22.9</b>  | <b>24.6</b>  | <b>100.0</b>         |
| Industry                                                          | 0.8          | 0.7          | 0.6          | 0.6          | 0.6          | 0.6          | 0.7          | 0.8          | 0.9          | 0.9          | 3.8                  |
| Transport                                                         | 13.2         | 12.1         | 12.7         | 12.6         | 13.2         | 13.8         | 13.6         | 10.8         | 13.6         | 14.9         | 60.6                 |
| Residential/Commercial                                            | 1.9          | 1.8          | 1.8          | 1.7          | 1.6          | 1.5          | 1.6          | 1.5          | 1.8          | 1.8          | 7.5                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>20.7</b>  | <b>20.6</b>  | <b>21.1</b>  | <b>20.7</b>  | <b>19.4</b>  | <b>19.6</b>  | <b>19.5</b>  | <b>18.7</b>  | <b>16.8</b>  | <b>17.5</b>  | <b>100.0</b>         |
| Industry                                                          | 6.5          | 6.7          | 7.0          | 6.5          | 6.1          | 6.6          | 7.1          | 6.9          | 5.3          | 5.4          | 30.7                 |
| Transport                                                         | 2.3          | 2.4          | 2.5          | 2.3          | 2.1          | 2.0          | 2.0          | 1.6          | 1.9          | 2.0          | 11.2                 |
| Residential/Commercial                                            | 11.0         | 10.7         | 10.8         | 11.0         | 10.3         | 10.2         | 9.7          | 9.6          | 9.0          | 9.7          | 55.1                 |
| <b>Refined products consumption</b>                               | <b>22.7</b>  | <b>21.6</b>  | <b>21.6</b>  | <b>21.5</b>  | <b>22.3</b>  | <b>22.2</b>  | <b>22.2</b>  | <b>18.9</b>  | <b>22.9</b>  | <b>24.6</b>  | <b>100.0</b>         |
| Gasoline                                                          | 5.6          | 5.2          | 5.6          | 5.7          | 6.1          | 6.4          | 6.2          | 4.5          | 5.9          | 6.8          | 27.4                 |
| Diesel                                                            | 11.2         | 10.0         | 10.3         | 10.2         | 10.4         | 10.3         | 10.2         | 9.0          | 10.9         | 11.5         | 46.8                 |
| Heating Oil                                                       | 0.4          | 0.4          | 0.4          | 0.2          | 0.1          | 0.1          | 0.4          | 0.8          | 1.1          | 0.6          | 2.4                  |
| Aviation Jet                                                      | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 0.6          | 0.6          | 0.2          | 0.2          | 0.4          | 1.8                  |
| LPG                                                               | 2.2          | 2.0          | 1.9          | 1.9          | 1.8          | 1.7          | 1.7          | 1.5          | 1.9          | 2.0          | 7.9                  |
| <b>Imports</b>                                                    | <b>15.3</b>  | <b>15.3</b>  | <b>14.0</b>  | <b>14.1</b>  | <b>14.5</b>  | <b>12.7</b>  | <b>8.7</b>   | <b>7.8</b>   | <b>11.2</b>  | <b>10.8</b>  | <b>100.0</b>         |
| Oil                                                               | 5.9          | 4.9          | 4.5          | 5.0          | 4.9          | 4.6          | 3.0          | 1.7          | 4.3          | 5.7          | 52.9                 |
| Gas                                                               | 9.5          | 10.4         | 9.6          | 9.1          | 9.5          | 8.2          | 5.7          | 6.0          | 6.9          | 5.1          | 47.1                 |
| Gasoline                                                          | 0.3          | 0.3          | 0.0          | 0.2          | 0.3          | 0.5          | 0.4          | 0.1          | 0.4          | 0.9          | 8.1                  |
| Diesel                                                            | 4.3          | 3.2          | 3.3          | 3.6          | 3.1          | 2.7          | 2.0          | 1.4          | 3.4          | 4.0          | 37.0                 |
| Heating Oil                                                       | 0.6          | 0.5          | 0.0          | 0.0          | 0.0          | 0.2          | 0.0          | 0.0          | 0.3          | 0.7          | 6.0                  |
| Aviation Jet                                                      | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>4.6</b>   | <b>4.5</b>   | <b>4.1</b>   | <b>4.6</b>   | <b>4.0</b>   | <b>6.5</b>   | <b>7.2</b>   | <b>7.6</b>   | <b>6.7</b>   | <b>8.2</b>   | <b>100.0</b>         |
| Oil                                                               | 4.6          | 4.4          | 4.0          | 4.5          | 3.9          | 6.2          | 7.0          | 7.4          | 6.0          | 7.6          | 91.6                 |
| Gas                                                               | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.4          | 0.2          | 0.2          | 0.7          | 0.7          | 8.4                  |
| Gasoline                                                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.0          | 0.0                  |
| Diesel                                                            | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| Heating Oil                                                       | 0.2          | 0.2          | 0.0          | 0.0          | 0.4          | 0.6          | 0.8          | 0.7          | 0.1          | 0.2          | 1.9                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.9          | 1.0          | 0.9          | 1.0          | 1.0          | 1.2          | 1.3          | 1.1          | 1.0          | 1.1          | 13.2                 |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>177.7</b> | <b>174.1</b> | <b>180.2</b> | <b>179.1</b> | <b>174.8</b> | <b>171.4</b> | <b>163.7</b> | <b>149.9</b> | <b>165.7</b> | <b>174.3</b> | -                    |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>205.2</b> | <b>206.3</b> | <b>207.8</b> | <b>210.9</b> | <b>200.2</b> | <b>201.6</b> | <b>196.5</b> | <b>199.7</b> | <b>200.3</b> | <b>200.1</b> | -                    |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>61.6</b>  | <b>62.0</b>  | <b>62.2</b>  | <b>62.7</b>  | <b>60.2</b>  | <b>62.5</b>  | <b>63.0</b>  | <b>63.3</b>  | <b>61.1</b>  | <b>61.5</b>  | -                    |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>94.0</b>  | <b>96.6</b>  | <b>95.4</b>  | <b>96.9</b>  | <b>94.3</b>  | <b>94.1</b>  | <b>95.2</b>  | <b>98.4</b>  | <b>96.1</b>  | <b>95.4</b>  | -                    |

\*Heat is included

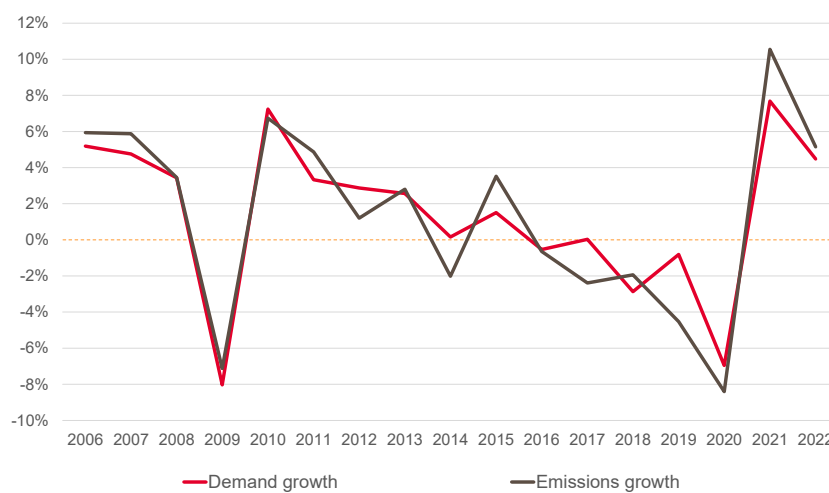
### Primary energy demand mix



### Electricity generation by source



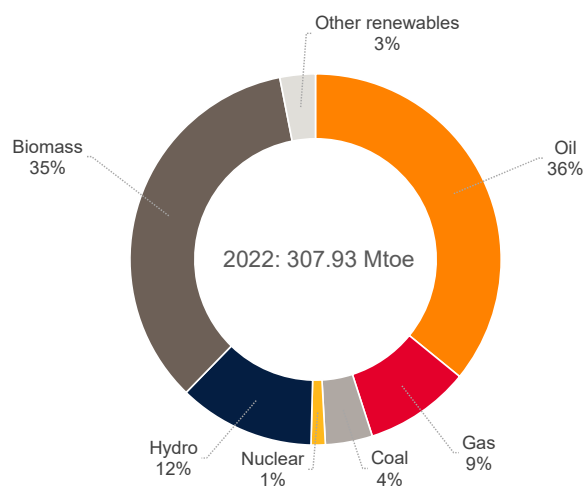
### Primary energy demand and CO<sub>2</sub> emissions growth



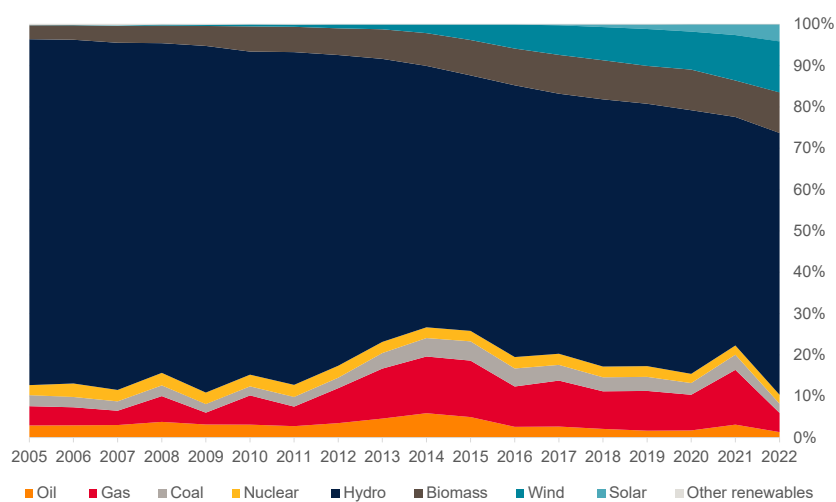
| <b>Brazil</b><br>(Million toe)                                    | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>295.3</b> | <b>304.6</b> | <b>298.6</b> | <b>287.8</b> | <b>293.4</b> | <b>289.2</b> | <b>294.1</b> | <b>287.7</b> | <b>300.6</b> | <b>307.9</b> | <b>100.0</b>         |
| Oil                                                               | 120.4        | 124.4        | 115.5        | 109.7        | 111.0        | 103.9        | 105.4        | 99.5         | 107.6        | 109.7        | 35.6                 |
| Gas                                                               | 33.9         | 37.4         | 37.2         | 31.5         | 33.4         | 31.5         | 31.8         | 30.1         | 36.7         | 28.1         | 9.1                  |
| Coal                                                              | 16.5         | 17.5         | 17.7         | 15.9         | 16.8         | 16.4         | 15.5         | 14.0         | 17.0         | 12.5         | 4.1                  |
| Nuclear                                                           | 4.0          | 4.0          | 3.8          | 4.1          | 4.1          | 4.1          | 4.2          | 3.7          | 3.8          | 3.8          | 1.2                  |
| Hydro                                                             | 33.6         | 32.1         | 30.9         | 32.8         | 31.9         | 33.5         | 34.2         | 34.1         | 31.2         | 36.4         | 11.8                 |
| Biomass                                                           | 82.2         | 84.5         | 87.9         | 86.5         | 88.3         | 91.4         | 94.4         | 97.3         | 93.4         | 105.9        | 34.4                 |
| Other renewables                                                  | 0.6          | 1.1          | 1.9          | 2.9          | 3.7          | 4.5          | 5.4          | 5.8          | 7.7          | 9.4          | 3.1                  |
| Electricity balance of trade*                                     | 4.1          | 3.6          | 3.7          | 4.4          | 4.1          | 4.0          | 3.2          | 3.2          | 3.2          | 2.0          | 0.7                  |
| <b>Total final consumption, by source</b>                         | <b>232.9</b> | <b>237.1</b> | <b>232.3</b> | <b>228.3</b> | <b>232.8</b> | <b>228.6</b> | <b>230.5</b> | <b>226.0</b> | <b>236.2</b> | <b>249.4</b> | <b>100.0</b>         |
| Oil                                                               | 107.7        | 109.7        | 102.8        | 101.5        | 102.4        | 96.4         | 97.9         | 92.5         | 99.4         | 104.4        | 41.9                 |
| Gas                                                               | 12.8         | 12.5         | 12.7         | 11.7         | 11.9         | 12.3         | 11.2         | 9.6          | 11.4         | 11.6         | 4.7                  |
| Coal                                                              | 11.5         | 11.7         | 11.7         | 10.3         | 11.6         | 11.9         | 10.9         | 10.3         | 11.8         | 10.0         | 4.0                  |
| Electricity                                                       | 41.8         | 43.0         | 42.2         | 42.3         | 42.9         | 43.6         | 44.1         | 43.7         | 45.7         | 46.3         | 18.6                 |
| Heat                                                              | 0.6          | 0.6          | 0.7          | 0.8          | 0.8          | 0.9          | 1.0          | 1.1          | 1.1          | 1.2          | 0.5                  |
| Biomass                                                           | 58.5         | 59.6         | 62.2         | 61.9         | 63.2         | 63.5         | 65.5         | 68.8         | 66.8         | 75.8         | 30.4                 |
| <b>Electricity generation, by source</b>                          | <b>49.1</b>  | <b>50.8</b>  | <b>50.0</b>  | <b>49.8</b>  | <b>50.7</b>  | <b>51.7</b>  | <b>53.9</b>  | <b>53.4</b>  | <b>56.4</b>  | <b>57.5</b>  | <b>100.0</b>         |
| Oil                                                               | 2.3          | 3.0          | 2.5          | 1.3          | 1.3          | 1.1          | 0.9          | 0.9          | 1.8          | 0.8          | 1.3                  |
| Gas                                                               | 5.9          | 7.0          | 6.8          | 4.9          | 5.6          | 4.7          | 5.2          | 4.6          | 7.5          | 2.7          | 4.6                  |
| Coal                                                              | 1.8          | 2.3          | 2.3          | 2.2          | 1.9          | 1.8          | 1.8          | 1.5          | 2.1          | 1.3          | 2.2                  |
| Nuclear                                                           | 1.3          | 1.3          | 1.3          | 1.4          | 1.4          | 1.3          | 1.4          | 1.2          | 1.3          | 1.3          | 2.2                  |
| Hydro                                                             | 33.6         | 32.1         | 30.9         | 32.8         | 31.9         | 33.5         | 34.2         | 34.1         | 31.2         | 36.4         | 63.3                 |
| Biomass                                                           | 3.5          | 4.0          | 4.3          | 4.4          | 4.8          | 4.9          | 4.9          | 5.2          | 5.0          | 5.6          | 9.8                  |
| Wind                                                              | 0.6          | 1.1          | 1.9          | 2.9          | 3.6          | 4.2          | 4.8          | 4.9          | 6.2          | 7.1          | 12.3                 |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.3          | 0.6          | 0.9          | 1.4          | 2.4          | 4.1                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Total final consumption, by sector</b>                         | <b>232.9</b> | <b>237.1</b> | <b>232.3</b> | <b>228.3</b> | <b>232.8</b> | <b>228.6</b> | <b>230.5</b> | <b>226.0</b> | <b>236.2</b> | <b>249.4</b> | <b>100.0</b>         |
| Industry                                                          | 86.8         | 85.7         | 83.1         | 82.1         | 83.7         | 79.6         | 77.5         | 80.5         | 83.3         | 86.8         | 34.8                 |
| Transport                                                         | 83.6         | 86.7         | 84.7         | 82.6         | 83.5         | 83.0         | 85.8         | 80.2         | 85.9         | 90.3         | 36.2                 |
| Residential/Commercial                                            | 36.3         | 38.1         | 38.3         | 38.1         | 38.8         | 40.1         | 40.8         | 40.5         | 41.3         | 44.9         | 18.0                 |
| <b>Oil final consumption, by sector</b>                           | <b>107.7</b> | <b>109.7</b> | <b>102.8</b> | <b>101.5</b> | <b>102.4</b> | <b>96.4</b>  | <b>97.9</b>  | <b>92.5</b>  | <b>99.4</b>  | <b>104.4</b> | <b>100.0</b>         |
| Industry                                                          | 12.6         | 12.7         | 11.5         | 11.0         | 10.8         | 9.4          | 9.9          | 9.3          | 9.8          | 10.1         | 9.7                  |
| Transport                                                         | 67.4         | 69.3         | 64.3         | 63.9         | 64.4         | 60.9         | 61.4         | 58.1         | 63.8         | 68.0         | 65.1                 |
| Residential/Commercial                                            | 7.2          | 7.3          | 7.2          | 7.3          | 7.3          | 7.2          | 7.2          | 7.4          | 7.3          | 7.2          | 6.9                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>12.8</b>  | <b>12.5</b>  | <b>12.7</b>  | <b>11.7</b>  | <b>11.9</b>  | <b>12.3</b>  | <b>11.2</b>  | <b>9.6</b>   | <b>11.4</b>  | <b>11.6</b>  | <b>100.0</b>         |
| Industry                                                          | 9.7          | 9.7          | 9.9          | 8.9          | 9.0          | 9.2          | 8.3          | 7.2          | 8.7          | 8.8          | 76.0                 |
| Transport                                                         | 1.6          | 1.6          | 1.6          | 1.6          | 1.7          | 1.9          | 2.0          | 1.7          | 1.9          | 2.0          | 17.1                 |
| Residential/Commercial                                            | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 5.1                  |
| <b>Refined products consumption</b>                               | <b>107.7</b> | <b>109.7</b> | <b>102.8</b> | <b>101.5</b> | <b>102.4</b> | <b>96.4</b>  | <b>97.9</b>  | <b>92.5</b>  | <b>99.4</b>  | <b>104.4</b> | <b>100.0</b>         |
| Gasoline                                                          | 24.4         | 25.7         | 23.3         | 24.2         | 24.8         | 21.6         | 21.5         | 20.1         | 22.1         | 24.2         | 23.2                 |
| Diesel                                                            | 45.1         | 45.7         | 43.6         | 42.2         | 42.4         | 41.9         | 42.7         | 42.5         | 45.8         | 47.3         | 45.3                 |
| Heating Oil                                                       | 3.7          | 3.8          | 3.0          | 3.3          | 2.9          | 2.3          | 2.3          | 2.2          | 2.3          | 2.2          | 2.1                  |
| Aviation Jet                                                      | 3.6          | 3.7          | 3.6          | 3.3          | 3.3          | 3.4          | 3.3          | 1.9          | 2.5          | 3.4          | 3.3                  |
| LPG                                                               | 8.2          | 8.4          | 8.1          | 8.3          | 8.3          | 8.2          | 8.1          | 8.4          | 8.3          | 8.2          | 7.9                  |
| <b>Imports</b>                                                    | <b>58.8</b>  | <b>59.9</b>  | <b>53.0</b>  | <b>40.9</b>  | <b>45.1</b>  | <b>44.2</b>  | <b>45.4</b>  | <b>39.9</b>  | <b>50.4</b>  | <b>48.0</b>  | <b>100.0</b>         |
| Oil                                                               | 43.8         | 42.9         | 36.8         | 30.5         | 35.7         | 34.9         | 36.8         | 31.4         | 35.6         | 40.1         | 83.6                 |
| Gas                                                               | 14.9         | 17.0         | 16.2         | 10.3         | 9.4          | 9.3          | 8.6          | 8.5          | 14.8         | 7.9          | 16.4                 |
| Gasoline                                                          | 1.7          | 1.6          | 2.3          | 2.9          | 3.5          | 2.5          | 3.7          | 3.8          | 2.1          | 3.8          | 7.9                  |
| Diesel                                                            | 8.5          | 9.6          | 5.9          | 7.2          | 11.0         | 9.9          | 11.0         | 10.2         | 12.2         | 13.5         | 28.2                 |
| Heating Oil                                                       | 0.1          | 0.4          | 0.3          | 0.1          | 0.1          | 0.3          | 0.1          | 0.0          | 0.6          | 0.2          | 0.4                  |
| Aviation Jet                                                      | 1.5          | 1.2          | 1.1          | 0.8          | 0.5          | 0.7          | 0.9          | 0.3          | 0.3          | 1.1          | 2.2                  |
| LPG                                                               | 2.1          | 2.3          | 2.0          | 2.1          | 2.0          | 2.1          | 2.2          | 2.2          | 2.5          | 2.1          | 4.5                  |
| <b>Exports</b>                                                    | <b>27.6</b>  | <b>33.5</b>  | <b>44.0</b>  | <b>49.4</b>  | <b>59.8</b>  | <b>64.2</b>  | <b>72.1</b>  | <b>84.8</b>  | <b>77.3</b>  | <b>80.1</b>  | <b>100.0</b>         |
| Oil                                                               | 27.6         | 33.5         | 44.0         | 49.4         | 59.8         | 64.2         | 72.1         | 84.8         | 77.3         | 80.1         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.3          | 0.3          | 0.5          | 0.6          | 0.4          | 1.1          | 1.6          | 1.8          | 1.4          | 0.4          | 0.5                  |
| Diesel                                                            | 0.3          | 0.3          | 0.1          | 0.4          | 0.4          | 0.8          | 0.0          | 0.3          | 0.0          | 0.1          | 0.1                  |
| Heating Oil                                                       | 5.7          | 5.1          | 4.4          | 3.6          | 3.8          | 5.3          | 6.0          | 10.7         | 9.7          | 12.2         | 15.2                 |
| Aviation Jet                                                      | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>465.3</b> | <b>491.1</b> | <b>466.7</b> | <b>432.9</b> | <b>441.4</b> | <b>416.1</b> | <b>417.8</b> | <b>395.8</b> | <b>447.5</b> | <b>419.7</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>149.6</b> | <b>157.1</b> | <b>154.8</b> | <b>148.5</b> | <b>149.4</b> | <b>138.4</b> | <b>137.3</b> | <b>135.3</b> | <b>146.2</b> | <b>133.3</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>69.8</b>  | <b>70.9</b>  | <b>72.2</b>  | <b>73.4</b>  | <b>73.9</b>  | <b>71.5</b>  | <b>71.2</b>  | <b>73.2</b>  | <b>73.1</b>  | <b>75.1</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>95.0</b>  | <b>97.4</b>  | <b>99.1</b>  | <b>98.7</b>  | <b>99.3</b>  | <b>96.2</b>  | <b>96.6</b>  | <b>98.3</b>  | <b>98.2</b>  | <b>97.8</b>  | <b>-</b>             |

\*Heat is included

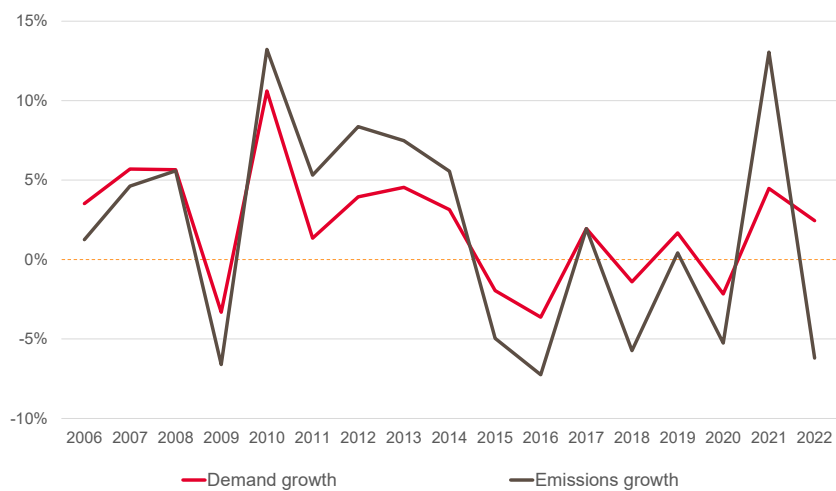
### Primary energy demand mix



### Electricity generation by source



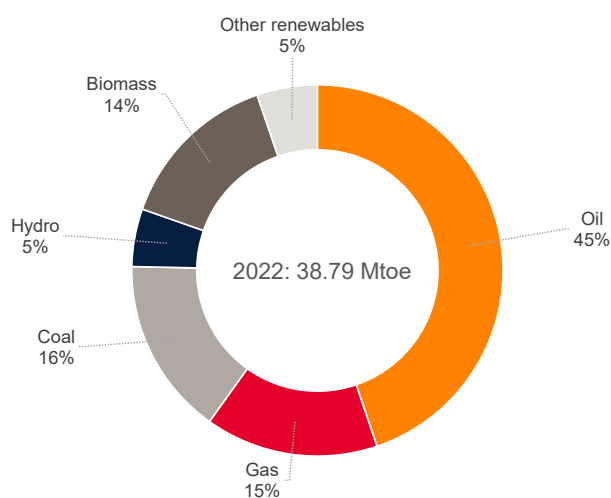
### Primary energy demand and CO<sub>2</sub> emissions growth



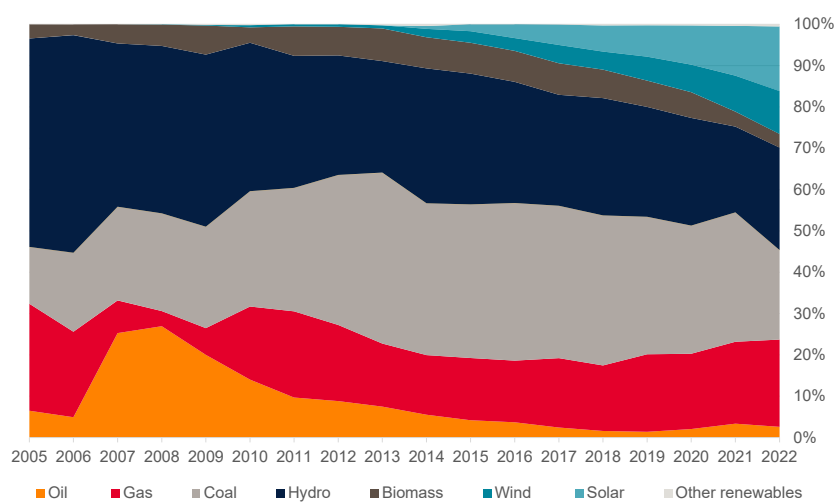
| Chile<br>(Million toe)                                            | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>38.5</b>  | <b>34.8</b>  | <b>35.5</b>  | <b>37.8</b>  | <b>38.4</b>  | <b>39.1</b>  | <b>41.4</b>  | <b>37.9</b>  | <b>38.3</b>  | <b>38.8</b>  | <b>100.0</b>         |
| Oil                                                               | 15.8         | 15.4         | 15.3         | 16.1         | 16.0         | 16.4         | 16.5         | 15.2         | 16.4         | 17.2         | 44.3                 |
| Gas                                                               | 4.1          | 3.6          | 4.0          | 4.3          | 4.3          | 4.4          | 5.3          | 4.8          | 5.3          | 5.8          | 14.9                 |
| Coal                                                              | 6.5          | 6.1          | 6.6          | 7.1          | 7.3          | 7.1          | 8.2          | 6.7          | 7.5          | 5.9          | 15.3                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.7          | 2.0          | 2.1          | 2.0          | 1.8          | 2.0          | 1.9          | 1.9          | 1.6          | 1.9          | 5.0                  |
| Biomass                                                           | 10.3         | 7.4          | 7.3          | 7.8          | 8.1          | 8.2          | 8.2          | 7.9          | 5.7          | 5.5          | 14.2                 |
| Other renewables                                                  | 0.0          | 0.2          | 0.3          | 0.4          | 0.6          | 0.8          | 1.0          | 1.2          | 1.6          | 2.0          | 5.2                  |
| Electricity balance of trade*                                     | 0.0          | 0.1          | 0.0          | 0.0          | 0.1          | 0.2          | 0.2          | 0.3          | 0.3          | 0.5          | 1.2                  |
| <b>Total final consumption, by source</b>                         | <b>26.7</b>  | <b>24.9</b>  | <b>25.0</b>  | <b>26.4</b>  | <b>26.7</b>  | <b>27.7</b>  | <b>28.2</b>  | <b>26.8</b>  | <b>27.5</b>  | <b>28.3</b>  | <b>100.0</b>         |
| Oil                                                               | 13.5         | 13.6         | 13.8         | 14.8         | 15.2         | 15.5         | 15.3         | 14.5         | 15.4         | 16.2         | 57.0                 |
| Gas                                                               | 1.4          | 1.3          | 1.5          | 1.7          | 1.7          | 2.0          | 2.4          | 2.1          | 2.2          | 2.3          | 8.0                  |
| Coal                                                              | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.3          | 0.4          | 0.3          | 0.3          | 0.3          | 1.0                  |
| Electricity                                                       | 5.6          | 5.8          | 5.8          | 6.0          | 6.0          | 6.3          | 6.4          | 6.4          | 6.6          | 6.7          | 23.7                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2                  |
| Biomass                                                           | 5.8          | 3.9          | 3.6          | 3.5          | 3.3          | 3.5          | 3.6          | 3.4          | 2.9          | 2.9          | 10.1                 |
| <b>Electricity generation, by source</b>                          | <b>6.3</b>   | <b>6.1</b>   | <b>6.5</b>   | <b>6.8</b>   | <b>6.8</b>   | <b>7.1</b>   | <b>7.3</b>   | <b>7.2</b>   | <b>7.5</b>   | <b>7.8</b>   | <b>100.0</b>         |
| Oil                                                               | 0.5          | 0.3          | 0.3          | 0.3          | 0.2          | 0.1          | 0.1          | 0.1          | 0.3          | 0.2          | 2.6                  |
| Gas                                                               | 1.0          | 0.9          | 1.0          | 1.0          | 1.1          | 1.1          | 1.4          | 1.3          | 1.5          | 1.6          | 21.1                 |
| Coal                                                              | 2.6          | 2.2          | 2.4          | 2.6          | 2.5          | 2.6          | 2.4          | 2.2          | 2.4          | 1.7          | 21.7                 |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 1.7          | 2.0          | 2.1          | 2.0          | 1.8          | 2.0          | 1.9          | 1.9          | 1.6          | 1.9          | 24.8                 |
| Biomass                                                           | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.3          | 0.3          | 3.3                  |
| Wind                                                              | 0.0          | 0.1          | 0.2          | 0.2          | 0.3          | 0.3          | 0.4          | 0.5          | 0.7          | 0.8          | 10.4                 |
| Solar                                                             | 0.0          | 0.0          | 0.1          | 0.2          | 0.3          | 0.4          | 0.6          | 0.7          | 0.9          | 1.2          | 15.6                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.5                  |
| <b>Total final consumption, by sector</b>                         | <b>26.7</b>  | <b>24.9</b>  | <b>25.0</b>  | <b>26.4</b>  | <b>26.7</b>  | <b>27.7</b>  | <b>28.2</b>  | <b>26.8</b>  | <b>27.5</b>  | <b>28.3</b>  | <b>100.0</b>         |
| Industry                                                          | 10.0         | 10.5         | 10.5         | 10.7         | 10.2         | 10.7         | 10.6         | 10.4         | 10.0         | 10.1         | 35.7                 |
| Transport                                                         | 8.2          | 8.1          | 8.5          | 8.9          | 9.2          | 9.5          | 9.7          | 8.6          | 9.5          | 10.1         | 35.6                 |
| Residential/Commercial                                            | 7.6          | 5.5          | 5.5          | 6.0          | 6.1          | 6.1          | 6.3          | 6.2          | 6.5          | 6.6          | 23.2                 |
| <b>Oil final consumption, by sector</b>                           | <b>13.5</b>  | <b>13.6</b>  | <b>13.8</b>  | <b>14.8</b>  | <b>15.2</b>  | <b>15.5</b>  | <b>15.3</b>  | <b>14.5</b>  | <b>15.4</b>  | <b>16.2</b>  | <b>100.0</b>         |
| Industry                                                          | 3.3          | 3.7          | 3.9          | 3.8          | 3.6          | 3.6          | 3.5          | 3.6          | 3.6          | 3.7          | 22.6                 |
| Transport                                                         | 8.2          | 8.0          | 8.4          | 8.8          | 9.1          | 9.4          | 9.5          | 8.5          | 9.3          | 9.9          | 61.6                 |
| Residential/Commercial                                            | 1.4          | 1.2          | 1.2          | 1.6          | 1.8          | 1.8          | 1.7          | 1.7          | 1.8          | 1.8          | 11.4                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>1.4</b>   | <b>1.3</b>   | <b>1.5</b>   | <b>1.7</b>   | <b>1.7</b>   | <b>2.0</b>   | <b>2.4</b>   | <b>2.1</b>   | <b>2.2</b>   | <b>2.3</b>   | <b>100.0</b>         |
| Industry                                                          | 0.7          | 0.6          | 0.8          | 0.8          | 0.8          | 0.9          | 0.9          | 0.9          | 1.0          | 1.0          | 43.2                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| Residential/Commercial                                            | 0.5          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.7          | 0.7          | 30.2                 |
| <b>Refined products consumption</b>                               | <b>13.5</b>  | <b>13.6</b>  | <b>13.8</b>  | <b>14.8</b>  | <b>15.2</b>  | <b>15.5</b>  | <b>15.3</b>  | <b>14.5</b>  | <b>15.4</b>  | <b>16.2</b>  | <b>100.0</b>         |
| Gasoline                                                          | 3.1          | 3.3          | 3.3          | 3.5          | 3.5          | 3.5          | 3.6          | 3.0          | 3.7          | 4.0          | 24.9                 |
| Diesel                                                            | 7.1          | 6.8          | 7.5          | 8.0          | 8.2          | 8.5          | 8.5          | 8.3          | 8.4          | 8.8          | 54.2                 |
| Heating Oil                                                       | 1.0          | 0.9          | 0.7          | 0.7          | 0.7          | 0.7          | 0.6          | 0.5          | 0.5          | 0.4          | 2.8                  |
| Aviation Jet                                                      | 0.3          | 0.4          | 0.6          | 0.5          | 0.5          | 0.6          | 0.7          | 0.4          | 0.4          | 0.6          | 3.4                  |
| LPG                                                               | 1.4          | 1.5          | 1.2          | 1.4          | 1.5          | 1.5          | 1.5          | 1.6          | 1.6          | 1.6          | 10.1                 |
| <b>Imports</b>                                                    | <b>20.6</b>  | <b>19.3</b>  | <b>19.4</b>  | <b>20.7</b>  | <b>20.6</b>  | <b>21.0</b>  | <b>21.7</b>  | <b>19.5</b>  | <b>21.9</b>  | <b>23.6</b>  | <b>100.0</b>         |
| Oil                                                               | 17.3         | 16.4         | 16.3         | 17.1         | 17.1         | 17.5         | 17.6         | 15.7         | 17.6         | 18.9         | 80.2                 |
| Gas                                                               | 3.3          | 2.9          | 3.1          | 3.7          | 3.5          | 3.5          | 4.0          | 3.8          | 4.3          | 4.7          | 19.8                 |
| Gasoline                                                          | 0.6          | 0.5          | 0.5          | 0.5          | 0.6          | 0.6          | 0.3          | 0.4          | 0.8          | 1.6          | 6.9                  |
| Diesel                                                            | 5.1          | 5.1          | 5.4          | 5.8          | 5.4          | 5.7          | 5.7          | 6.0          | 6.1          | 7.1          | 29.9                 |
| Heating Oil                                                       | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Aviation Jet                                                      | 0.5          | 0.4          | 0.5          | 0.6          | 0.7          | 0.6          | 0.5          | 0.2          | 0.5          | 0.7          | 3.0                  |
| LPG                                                               | 1.2          | 1.1          | 0.9          | 1.2          | 1.2          | 1.2          | 1.1          | 1.3          | 1.4          | 1.5          | 6.6                  |
| <b>Exports</b>                                                    | <b>0.9</b>   | <b>0.6</b>   | <b>0.5</b>   | <b>0.7</b>   | <b>0.7</b>   | <b>0.9</b>   | <b>0.5</b>   | <b>0.6</b>   | <b>0.9</b>   | <b>1.3</b>   | <b>100.0</b>         |
| Oil                                                               | 0.9          | 0.6          | 0.5          | 0.4          | 0.5          | 0.7          | 0.5          | 0.6          | 0.9          | 1.3          | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.3          | 0.2          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.2          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.8                  |
| Diesel                                                            | 0.4          | 0.4          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.2          | 0.5          | 37.6                 |
| Heating Oil                                                       | 0.2          | 0.1          | 0.3          | 0.3          | 0.3          | 0.4          | 0.2          | 0.2          | 0.3          | 0.5          | 34.6                 |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.3          | 0.2          | 0.3          | 21.5                 |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>82.6</b>  | <b>76.7</b>  | <b>81.5</b>  | <b>86.1</b>  | <b>87.0</b>  | <b>86.8</b>  | <b>92.5</b>  | <b>85.6</b>  | <b>90.9</b>  | <b>87.8</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>211.9</b> | <b>193.2</b> | <b>201.1</b> | <b>208.7</b> | <b>207.9</b> | <b>199.7</b> | <b>211.1</b> | <b>207.6</b> | <b>197.6</b> | <b>186.2</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>66.9</b>  | <b>61.0</b>  | <b>61.1</b>  | <b>62.6</b>  | <b>62.4</b>  | <b>62.1</b>  | <b>62.3</b>  | <b>62.6</b>  | <b>57.9</b>  | <b>58.1</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>98.7</b>  | <b>87.5</b>  | <b>87.6</b>  | <b>91.7</b>  | <b>91.8</b>  | <b>89.8</b>  | <b>94.4</b>  | <b>92.1</b>  | <b>83.3</b>  | <b>82.3</b>  | <b>-</b>             |

\*Heat is included

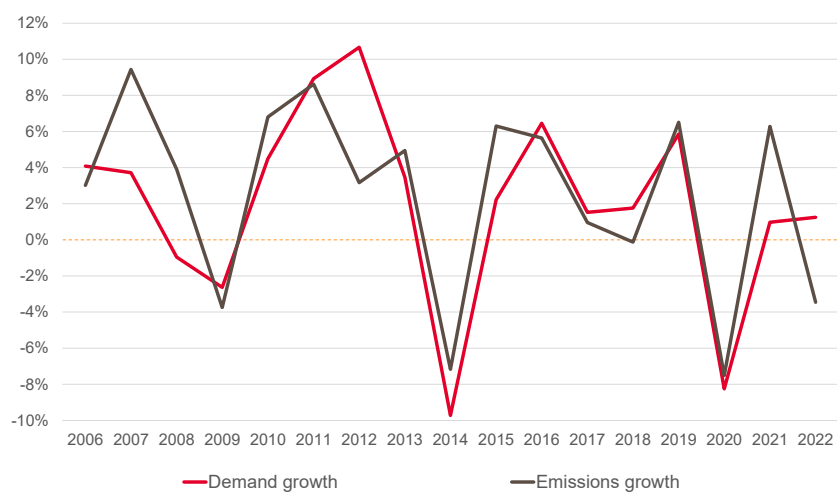
Primary energy demand mix



Electricity generation by source



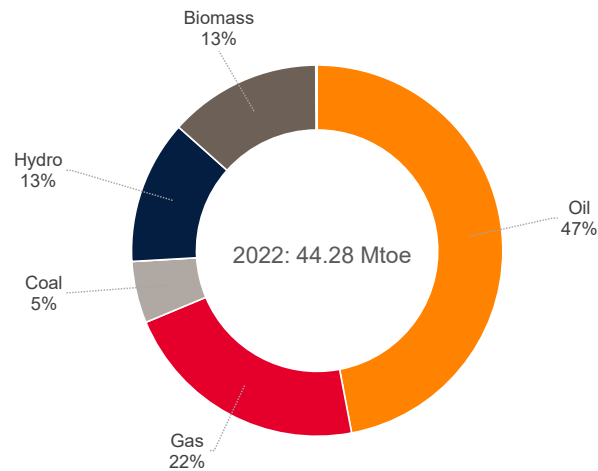
Primary energy demand and CO<sub>2</sub> emissions growth



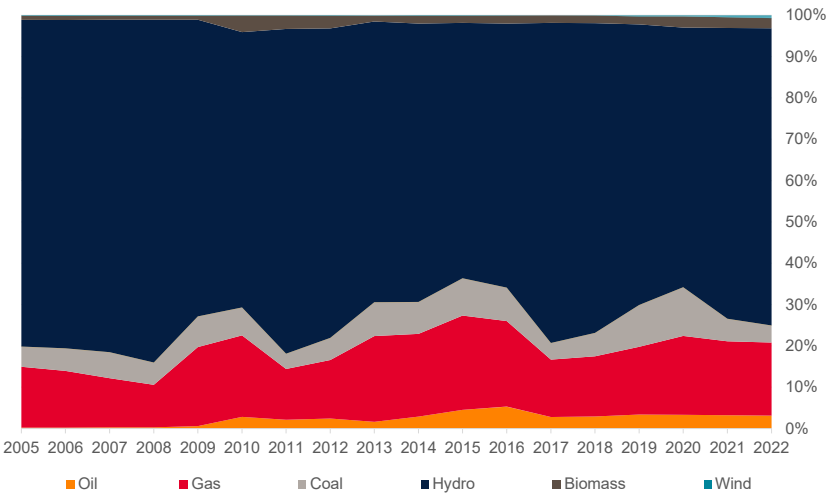
| <b>Colombia</b><br>(Million toe)                                  | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>39.9</b>  | <b>40.4</b>  | <b>40.9</b>  | <b>42.4</b>  | <b>40.6</b>  | <b>39.1</b>  | <b>42.8</b>  | <b>40.1</b>  | <b>43.1</b>  | <b>44.3</b>  | <b>100.0</b>         |
| Oil                                                               | 14.8         | 14.8         | 15.3         | 17.3         | 16.0         | 15.0         | 17.3         | 15.3         | 20.0         | 20.8         | 47.0                 |
| Gas                                                               | 9.8          | 10.3         | 10.1         | 9.6          | 9.8          | 10.2         | 10.6         | 10.5         | 9.7          | 9.6          | 21.7                 |
| Coal                                                              | 5.0          | 5.1          | 5.4          | 5.5          | 4.2          | 3.8          | 4.8          | 4.4          | 2.5          | 2.4          | 5.4                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 4.3          | 4.1          | 4.2          | 4.2          | 5.3          | 5.2          | 4.7          | 4.3          | 5.2          | 5.5          | 12.5                 |
| Biomass                                                           | 6.1          | 6.2          | 6.0          | 5.8          | 5.4          | 5.0          | 5.4          | 5.4          | 5.7          | 5.9          | 13.3                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1                  |
| Electricity balance of trade*                                     | -0.1         | -0.1         | -0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | -0.0         | -0.0                 |
| <b>Total final consumption, by source</b>                         | <b>28.8</b>  | <b>29.5</b>  | <b>29.1</b>  | <b>30.7</b>  | <b>29.7</b>  | <b>29.1</b>  | <b>30.5</b>  | <b>28.4</b>  | <b>33.1</b>  | <b>34.6</b>  | <b>100.0</b>         |
| Oil                                                               | 11.9         | 12.2         | 12.1         | 13.5         | 12.7         | 12.6         | 14.0         | 12.0         | 15.7         | 16.7         | 48.4                 |
| Gas                                                               | 3.5          | 3.5          | 3.8          | 4.0          | 4.0          | 4.1          | 3.4          | 3.2          | 3.4          | 3.3          | 9.4                  |
| Coal                                                              | 2.8          | 2.8          | 2.5          | 2.5          | 2.6          | 2.6          | 2.3          | 2.6          | 2.8          | 2.9          | 8.4                  |
| Electricity                                                       | 4.8          | 5.0          | 5.1          | 5.2          | 5.3          | 5.3          | 5.8          | 5.6          | 6.1          | 6.3          | 18.3                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 5.8          | 5.9          | 5.6          | 5.5          | 5.0          | 4.6          | 5.0          | 4.9          | 5.1          | 5.3          | 15.4                 |
| <b>Electricity generation, by source</b>                          | <b>6.4</b>   | <b>6.1</b>   | <b>6.8</b>   | <b>6.6</b>   | <b>6.8</b>   | <b>6.9</b>   | <b>6.9</b>   | <b>6.8</b>   | <b>7.4</b>   | <b>7.7</b>   | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.2          | 0.3          | 0.4          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 0.2          | 3.1                  |
| Gas                                                               | 1.3          | 1.2          | 1.5          | 1.4          | 0.9          | 1.0          | 1.1          | 1.3          | 1.3          | 1.4          | 17.7                 |
| Coal                                                              | 0.5          | 0.5          | 0.6          | 0.5          | 0.3          | 0.4          | 0.7          | 0.8          | 0.4          | 0.3          | 4.1                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 4.3          | 4.1          | 4.2          | 4.2          | 5.3          | 5.2          | 4.7          | 4.3          | 5.2          | 5.5          | 71.9                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 2.5                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.6                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>28.8</b>  | <b>29.5</b>  | <b>29.1</b>  | <b>30.7</b>  | <b>29.7</b>  | <b>29.1</b>  | <b>30.5</b>  | <b>28.4</b>  | <b>33.1</b>  | <b>34.6</b>  | <b>100.0</b>         |
| Industry                                                          | 7.7          | 7.7          | 7.2          | 7.5          | 7.9          | 7.6          | 7.7          | 7.3          | 8.1          | 8.3          | 24.0                 |
| Transport                                                         | 8.9          | 9.3          | 10.0         | 10.4         | 10.4         | 10.7         | 11.2         | 9.7          | 12.4         | 13.5         | 39.2                 |
| Residential/Commercial                                            | 8.3          | 8.5          | 8.2          | 8.2          | 8.0          | 8.1          | 8.2          | 8.7          | 9.0          | 9.2          | 26.6                 |
| <b>Oil final consumption, by sector</b>                           | <b>11.9</b>  | <b>12.2</b>  | <b>12.1</b>  | <b>13.5</b>  | <b>12.7</b>  | <b>12.6</b>  | <b>14.0</b>  | <b>12.0</b>  | <b>15.7</b>  | <b>16.7</b>  | <b>100.0</b>         |
| Industry                                                          | 0.5          | 0.5          | 0.5          | 0.5          | 0.6          | 0.7          | 0.7          | 0.6          | 0.7          | 0.8          | 4.6                  |
| Transport                                                         | 7.7          | 8.0          | 8.7          | 9.2          | 9.3          | 9.5          | 10.0         | 8.7          | 11.3         | 12.3         | 73.8                 |
| Residential/Commercial                                            | 0.5          | 0.5          | 0.5          | 0.5          | 0.4          | 0.5          | 0.5          | 0.5          | 0.6          | 0.6          | 3.6                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>3.5</b>   | <b>3.5</b>   | <b>3.8</b>   | <b>4.0</b>   | <b>4.0</b>   | <b>4.1</b>   | <b>3.4</b>   | <b>3.2</b>   | <b>3.4</b>   | <b>3.3</b>   | <b>100.0</b>         |
| Industry                                                          | 1.4          | 1.2          | 1.1          | 1.4          | 1.4          | 1.4          | 1.3          | 1.2          | 1.3          | 1.2          | 37.9                 |
| Transport                                                         | 0.6          | 0.6          | 0.6          | 0.5          | 0.4          | 0.4          | 0.4          | 0.3          | 0.4          | 0.4          | 11.9                 |
| Residential/Commercial                                            | 1.3          | 1.3          | 1.3          | 1.3          | 1.4          | 1.5          | 1.5          | 1.6          | 1.6          | 1.5          | 46.1                 |
| <b>Refined products consumption</b>                               | <b>11.8</b>  | <b>12.2</b>  | <b>12.1</b>  | <b>13.5</b>  | <b>12.7</b>  | <b>12.6</b>  | <b>14.0</b>  | <b>12.0</b>  | <b>15.7</b>  | <b>16.7</b>  | <b>100.0</b>         |
| Gasoline                                                          | 3.6          | 3.8          | 4.3          | 4.9          | 4.9          | 5.0          | 5.4          | 4.7          | 6.1          | 6.9          | 41.3                 |
| Diesel                                                            | 6.4          | 6.5          | 6.1          | 6.1          | 5.4          | 5.9          | 5.9          | 5.2          | 6.7          | 7.1          | 42.5                 |
| Heating Oil                                                       | 0.1          | 0.0          | 0.0          | 0.1          | 0.2          | 0.2          | 0.0          | 0.1          | 0.2          | 0.0          | 0.3                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.5          | 0.6          | 0.6          | 0.6          | 0.7          | 0.6          | 0.7          | 0.7          | 0.8          | 0.8          | 4.6                  |
| <b>Imports</b>                                                    | <b>7.8</b>   | <b>9.1</b>   | <b>6.6</b>   | <b>9.0</b>   | <b>6.6</b>   | <b>4.6</b>   | <b>5.6</b>   | <b>4.3</b>   | <b>5.9</b>   | <b>7.1</b>   | <b>100.0</b>         |
| Oil                                                               | 7.8          | 9.1          | 6.6          | 9.0          | 6.6          | 4.6          | 5.5          | 4.0          | 5.7          | 6.8          | 96.2                 |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.3          | 0.2          | 0.3          | 3.8                  |
| Gasoline                                                          | 1.2          | 1.5          | 1.5          | 2.3          | 2.2          | 1.1          | 1.1          | 1.4          | 2.5          | 3.0          | 42.2                 |
| Diesel                                                            | 4.2          | 4.5          | 2.7          | 3.5          | 1.5          | 0.6          | 1.3          | 1.3          | 1.2          | 1.4          | 20.1                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.3          | 0.3          | 4.2                  |
| Aviation Jet                                                      | 0.0          | 0.1          | 0.1          | 0.1          | 0.2          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 0.8                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.3                  |
| <b>Exports</b>                                                    | <b>46.1</b>  | <b>45.7</b>  | <b>43.9</b>  | <b>37.5</b>  | <b>37.8</b>  | <b>36.6</b>  | <b>35.2</b>  | <b>34.7</b>  | <b>29.7</b>  | <b>31.3</b>  | <b>100.0</b>         |
| Oil                                                               | 44.5         | 44.9         | 43.6         | 37.5         | 37.8         | 36.6         | 35.2         | 34.7         | 29.7         | 31.3         | 100.0                |
| Gas                                                               | 1.6          | 0.8          | 0.3          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.3          | 0.0          | 0.0          | 0.1          | 0.0          | 0.1          | 0.0          | 0.2          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.7          | 0.0          | 0.0          | 0.7          | 0.9          | 1.6          | 2.1          | 2.4          | 1.9          | 1.6          | 5.2                  |
| Heating Oil                                                       | 3.7          | 3.4          | 2.4          | 2.7          | 2.4          | 1.9          | 1.6          | 1.2          | 1.4          | 1.8          | 5.9                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.1          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>72.5</b>  | <b>74.3</b>  | <b>75.5</b>  | <b>79.5</b>  | <b>71.7</b>  | <b>75.3</b>  | <b>75.8</b>  | <b>75.4</b>  | <b>78.6</b>  | <b>80.9</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>123.8</b> | <b>121.4</b> | <b>119.8</b> | <b>123.6</b> | <b>110.0</b> | <b>112.6</b> | <b>109.8</b> | <b>117.5</b> | <b>110.8</b> | <b>106.1</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>47.1</b>  | <b>46.2</b>  | <b>44.6</b>  | <b>44.8</b>  | <b>43.2</b>  | <b>42.2</b>  | <b>41.1</b>  | <b>42.2</b>  | <b>43.8</b>  | <b>42.7</b>  | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>68.1</b>  | <b>66.0</b>  | <b>64.9</b>  | <b>65.9</b>  | <b>62.3</b>  | <b>58.5</b>  | <b>62.0</b>  | <b>62.5</b>  | <b>60.8</b>  | <b>58.1</b>  | <b>-</b>             |

\*Heat is included

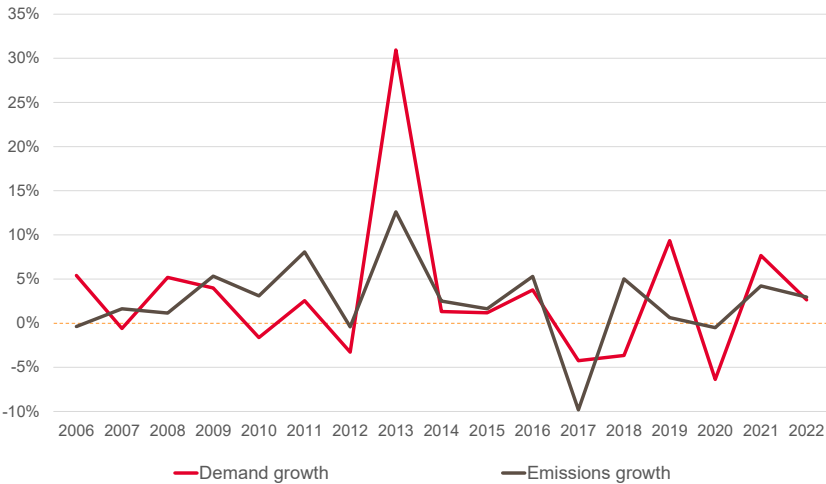
Primary energy demand mix



Electricity generation by source



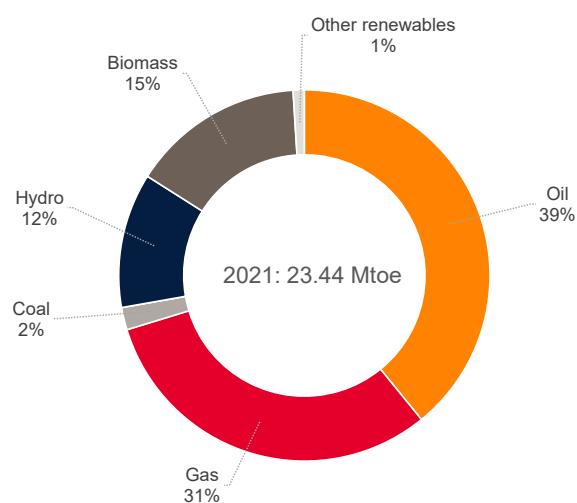
Primary energy demand and CO<sub>2</sub> emissions growth



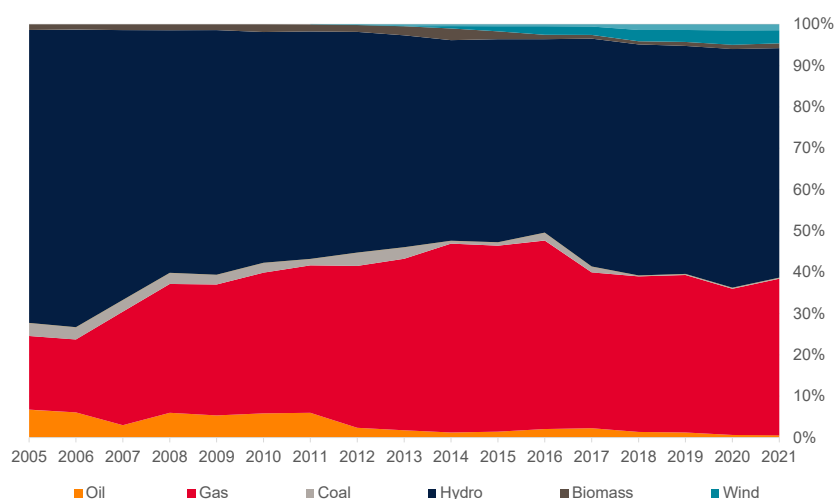
| Peru<br>(Million toe)                                             | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022        | Share in<br>2021 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>20.8</b>  | <b>21.9</b>  | <b>22.6</b>  | <b>23.6</b>  | <b>23.9</b>  | <b>25.0</b>  | <b>25.9</b>  | <b>21.9</b>  | <b>23.4</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 7.9          | 7.5          | 8.3          | 8.7          | 10.2         | 10.8         | 11.3         | 8.7          | 9.2          | n.d.        | 39.1                 |
| Gas                                                               | 6.4          | 8.0          | 7.9          | 8.3          | 7.0          | 7.3          | 7.6          | 6.4          | 7.3          | n.d.        | 31.1                 |
| Coal                                                              | 0.9          | 0.8          | 0.8          | 0.8          | 0.7          | 0.6          | 0.7          | 0.5          | 0.5          | n.d.        | 2.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Hydro                                                             | 1.9          | 1.9          | 2.0          | 2.1          | 2.5          | 2.6          | 2.7          | 2.6          | 2.7          | n.d.        | 11.7                 |
| Biomass                                                           | 3.7          | 3.7          | 3.5          | 3.5          | 3.3          | 3.4          | 3.4          | 3.4          | 3.5          | n.d.        | 15.0                 |
| Other renewables                                                  | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | 0.2          | 0.2          | n.d.        | 1.0                  |
| Electricity balance of trade*                                     | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.2                  |
| <b>Total final consumption, by source</b>                         | <b>17.8</b>  | <b>17.6</b>  | <b>18.6</b>  | <b>19.1</b>  | <b>19.2</b>  | <b>20.1</b>  | <b>20.7</b>  | <b>17.7</b>  | <b>18.9</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 8.8          | 8.6          | 9.2          | 9.6          | 9.8          | 10.1         | 10.5         | 8.6          | 9.3          | n.d.        | 49.1                 |
| Gas                                                               | 2.0          | 1.9          | 1.9          | 1.9          | 2.1          | 2.3          | 2.4          | 1.8          | 2.0          | n.d.        | 10.5                 |
| Coal                                                              | 0.6          | 0.6          | 0.7          | 0.6          | 0.5          | 0.5          | 0.5          | 0.3          | 0.3          | n.d.        | 1.6                  |
| Electricity                                                       | 3.3          | 3.4          | 3.6          | 3.9          | 4.0          | 4.2          | 4.3          | 3.9          | 4.3          | n.d.        | 22.5                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.2                  |
| Biomass                                                           | 3.2          | 3.1          | 3.1          | 3.2          | 2.8          | 3.0          | 2.9          | 3.0          | 3.0          | n.d.        | 16.1                 |
| <b>Electricity generation, by source</b>                          | <b>3.7</b>   | <b>3.9</b>   | <b>4.1</b>   | <b>4.4</b>   | <b>4.5</b>   | <b>4.7</b>   | <b>4.9</b>   | <b>4.5</b>   | <b>4.9</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 0.1          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | n.d.        | 0.5                  |
| Gas                                                               | 1.6          | 1.8          | 1.9          | 2.0          | 1.7          | 1.8          | 1.9          | 1.6          | 1.9          | n.d.        | 37.9                 |
| Coal                                                              | 0.1          | 0.0          | 0.0          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.3                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Hydro                                                             | 1.9          | 1.9          | 2.0          | 2.1          | 2.5          | 2.6          | 2.7          | 2.6          | 2.7          | n.d.        | 55.5                 |
| Biomass                                                           | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | n.d.        | 1.2                  |
| Wind                                                              | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.2          | 0.2          | n.d.        | 3.2                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | n.d.        | 1.4                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | 0.0          | -0.0         | n.d.        | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>17.8</b>  | <b>17.6</b>  | <b>18.6</b>  | <b>19.1</b>  | <b>19.2</b>  | <b>20.1</b>  | <b>20.7</b>  | <b>17.7</b>  | <b>18.9</b>  | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 5.1          | 5.1          | 5.3          | 5.2          | 5.4          | 5.7          | 5.9          | 4.9          | 5.3          | n.d.        | 28.0                 |
| Transport                                                         | 6.9          | 6.9          | 7.5          | 8.2          | 8.3          | 8.6          | 9.1          | 7.0          | 7.5          | n.d.        | 39.7                 |
| Residential/Commercial                                            | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.3          | 5.2          | 5.4          | 5.8          | n.d.        | 30.4                 |
| <b>Oil final consumption, by sector</b>                           | <b>8.8</b>   | <b>8.6</b>   | <b>9.2</b>   | <b>9.6</b>   | <b>9.8</b>   | <b>10.1</b>  | <b>10.5</b>  | <b>8.6</b>   | <b>9.3</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.3          | 1.3          | 1.2          | 1.0          | 0.9          | 1.1          | 1.0          | 1.0          | 1.1          | n.d.        | 11.3                 |
| Transport                                                         | 6.0          | 5.9          | 6.5          | 7.2          | 7.3          | 7.5          | 8.0          | 6.2          | 6.7          | n.d.        | 72.2                 |
| Residential/Commercial                                            | 1.0          | 1.0          | 1.1          | 1.1          | 1.2          | 1.2          | 1.2          | 1.2          | 1.3          | n.d.        | 14.2                 |
| <b>Natural gas final consumption, by sector</b>                   | <b>2.0</b>   | <b>1.9</b>   | <b>1.9</b>   | <b>1.9</b>   | <b>2.1</b>   | <b>2.3</b>   | <b>2.4</b>   | <b>1.8</b>   | <b>2.0</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Industry                                                          | 1.2          | 1.0          | 1.1          | 1.1          | 1.3          | 1.2          | 1.3          | 1.0          | 1.1          | n.d.        | 54.0                 |
| Transport                                                         | 0.6          | 0.6          | 0.6          | 0.6          | 0.7          | 0.7          | 0.7          | 0.5          | 0.5          | n.d.        | 27.1                 |
| Residential/Commercial                                            | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.3          | 0.4          | 0.3          | 0.4          | n.d.        | 18.7                 |
| <b>Refined products consumption</b>                               | <b>8.8</b>   | <b>8.6</b>   | <b>9.2</b>   | <b>9.6</b>   | <b>9.8</b>   | <b>10.1</b>  | <b>10.5</b>  | <b>8.6</b>   | <b>9.3</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Gasoline                                                          | 1.4          | 1.5          | 1.6          | 1.8          | 1.9          | 2.0          | 2.1          | 1.6          | 1.8          | n.d.        | 19.3                 |
| Diesel                                                            | 4.7          | 4.6          | 5.1          | 5.2          | 5.1          | 5.2          | 5.4          | 4.6          | 4.7          | n.d.        | 50.9                 |
| Heating Oil                                                       | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | n.d.        | 1.1                  |
| Aviation Jet                                                      | 0.3          | 0.2          | 0.2          | 0.3          | 0.3          | 0.4          | 0.4          | 0.1          | 0.3          | n.d.        | 2.9                  |
| LPG                                                               | 1.7          | 1.7          | 1.8          | 1.9          | 2.0          | 2.1          | 2.2          | 2.0          | 2.2          | n.d.        | 23.7                 |
| <b>Imports</b>                                                    | <b>7.4</b>   | <b>6.9</b>   | <b>7.6</b>   | <b>9.4</b>   | <b>11.8</b>  | <b>11.3</b>  | <b>10.5</b>  | <b>7.2</b>   | <b>8.9</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 7.4          | 6.9          | 7.6          | 9.4          | 11.8         | 11.3         | 10.5         | 7.2          | 8.9          | n.d.        | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| Gasoline                                                          | 0.4          | 0.1          | 0.2          | 0.0          | 0.9          | 1.0          | 0.8          | 1.1          | 1.5          | n.d.        | 16.8                 |
| Diesel                                                            | 2.4          | 2.4          | 2.7          | 3.6          | 3.6          | 3.5          | 3.4          | 3.4          | 3.5          | n.d.        | 39.7                 |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.3                  |
| Aviation Jet                                                      | 0.1          | 0.2          | 0.4          | 0.3          | 0.5          | 0.4          | 0.4          | 0.2          | 0.3          | n.d.        | 3.2                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.2          | 0.4          | 0.4          | 0.4          | 0.4          | n.d.        | 4.6                  |
| <b>Exports</b>                                                    | <b>10.8</b>  | <b>9.1</b>   | <b>8.2</b>   | <b>9.9</b>   | <b>11.7</b>  | <b>10.1</b>  | <b>9.4</b>   | <b>8.1</b>   | <b>7.6</b>   | <b>n.d.</b> | <b>100.0</b>         |
| Oil                                                               | 4.8          | 4.0          | 3.4          | 4.1          | 6.2          | 5.1          | 4.0          | 2.9          | 3.9          | n.d.        | 50.8                 |
| Gas                                                               | 6.0          | 5.1          | 4.8          | 5.8          | 5.5          | 5.0          | 5.4          | 5.2          | 3.8          | n.d.        | 49.2                 |
| Gasoline                                                          | 2.0          | 1.6          | 1.6          | 1.7          | 2.4          | 2.2          | 1.9          | 1.6          | 1.9          | n.d.        | 24.9                 |
| Diesel                                                            | 0.1          | 0.0          | 0.0          | 0.4          | 0.5          | 0.4          | 0.3          | 0.3          | 0.4          | n.d.        | 5.7                  |
| Heating Oil                                                       | 1.2          | 0.8          | 0.7          | 1.2          | 2.5          | 2.1          | 1.6          | 0.3          | 0.4          | n.d.        | 4.8                  |
| Aviation Jet                                                      | 0.6          | 0.8          | 0.6          | 0.7          | 0.7          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| LPG                                                               | 0.3          | 0.0          | 0.0          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.0          | n.d.        | 0.0                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>45.5</b>  | <b>48.3</b>  | <b>49.8</b>  | <b>52.3</b>  | <b>50.0</b>  | <b>50.3</b>  | <b>52.4</b>  | <b>42.5</b>  | <b>46.4</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>136.3</b> | <b>141.5</b> | <b>141.2</b> | <b>142.8</b> | <b>133.0</b> | <b>128.7</b> | <b>131.3</b> | <b>119.6</b> | <b>115.1</b> | <b>n.d.</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>52.3</b>  | <b>50.7</b>  | <b>51.9</b>  | <b>51.7</b>  | <b>50.3</b>  | <b>50.7</b>  | <b>51.2</b>  | <b>49.3</b>  | <b>46.7</b>  | <b>n.d.</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>62.4</b>  | <b>64.3</b>  | <b>64.2</b>  | <b>64.3</b>  | <b>63.5</b>  | <b>64.0</b>  | <b>64.9</b>  | <b>61.6</b>  | <b>58.1</b>  | <b>n.d.</b> | <b>-</b>             |

\*Heat is included

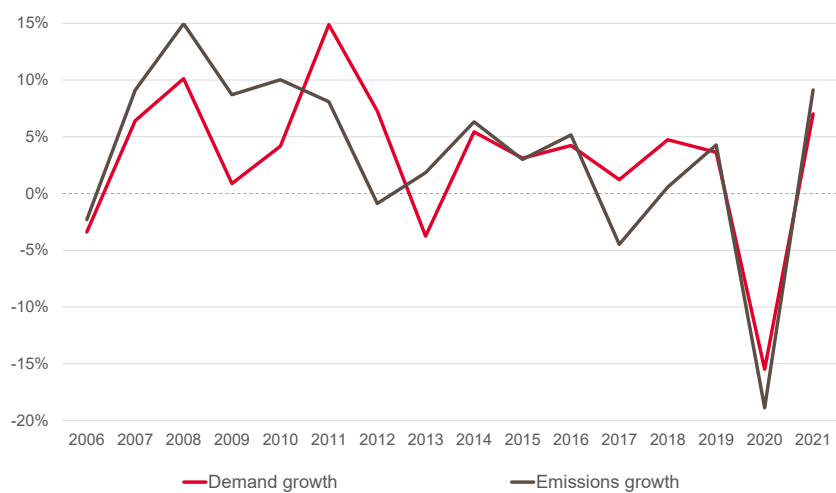
Primary energy demand mix



Electricity generation by source



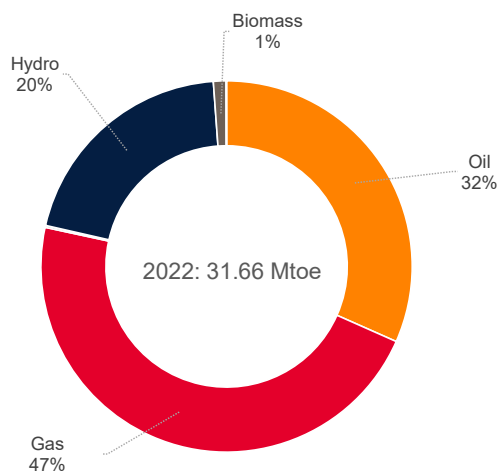
Primary energy demand and CO<sub>2</sub> emissions growth



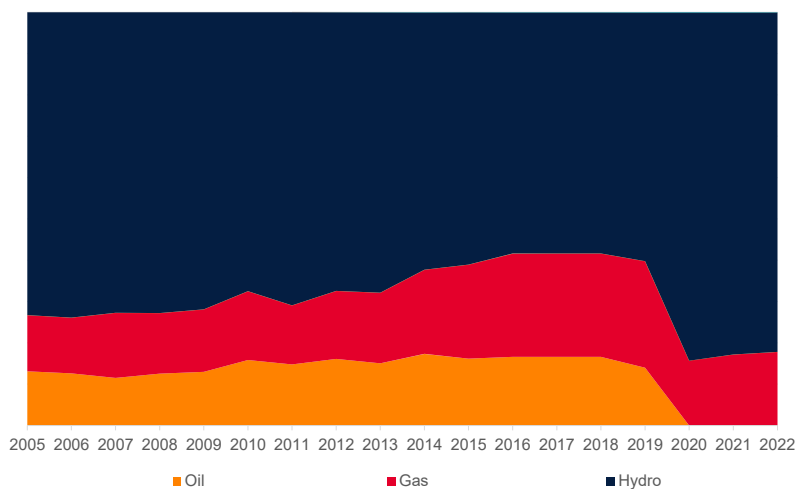
| Venezuela<br>(Million toe)                                        | 2013         | 2014         | 2015         | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | Share in<br>2022 (%) |
|-------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| <b>Total primary energy demand, by source</b>                     | <b>76.1</b>  | <b>66.0</b>  | <b>64.3</b>  | <b>58.8</b>  | <b>55.1</b>  | <b>40.5</b>  | <b>33.0</b>  | <b>24.5</b>  | <b>26.7</b>  | <b>31.7</b>  | <b>100.0</b>         |
| Oil                                                               | 46.6         | 39.2         | 36.8         | 31.4         | 28.4         | 16.8         | 13.4         | 7.6          | 8.5          | 13.0         | 41.2                 |
| Gas                                                               | 21.2         | 20.4         | 20.3         | 21.3         | 20.9         | 18.2         | 15.1         | 11.2         | 12.5         | 12.9         | 40.8                 |
| Coal                                                              | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 7.2          | 5.5          | 6.4          | 5.4          | 5.2          | 5.0          | 4.3          | 5.4          | 5.4          | 5.4          | 17.1                 |
| Biomass                                                           | 0.8          | 0.8          | 0.8          | 0.7          | 0.6          | 0.5          | 0.3          | 0.2          | 0.3          | 0.3          | 0.9                  |
| Other renewables                                                  | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Electricity balance of trade*                                     | 0.1          | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.1         | -0.2                 |
| <b>Total final consumption, by source</b>                         | <b>45.5</b>  | <b>41.6</b>  | <b>36.1</b>  | <b>32.1</b>  | <b>30.2</b>  | <b>26.7</b>  | <b>20.8</b>  | <b>16.9</b>  | <b>18.5</b>  | <b>21.0</b>  | <b>100.0</b>         |
| Oil                                                               | 27.9         | 26.7         | 21.6         | 19.3         | 17.5         | 14.8         | 12.3         | 9.9          | 11.1         | 13.4         | 63.8                 |
| Gas                                                               | 8.2          | 7.6          | 6.5          | 5.9          | 6.1          | 5.7          | 3.3          | 2.4          | 2.7          | 2.8          | 13.1                 |
| Coal                                                              | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.0          | 0.1          | 0.0          | 0.0          | 0.0          | 0.2                  |
| Electricity                                                       | 8.4          | 6.2          | 7.1          | 6.2          | 5.9          | 5.6          | 4.7          | 4.3          | 4.4          | 4.5          | 21.5                 |
| Heat                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Biomass                                                           | 0.8          | 0.8          | 0.8          | 0.6          | 0.6          | 0.5          | 0.3          | 0.2          | 0.3          | 0.3          | 1.4                  |
| <b>Electricity generation, by source</b>                          | <b>10.6</b>  | <b>8.9</b>   | <b>10.6</b>  | <b>9.3</b>   | <b>8.9</b>   | <b>8.6</b>   | <b>7.1</b>   | <b>6.4</b>   | <b>6.6</b>   | <b>6.6</b>   | <b>100.0</b>         |
| Oil                                                               | 1.6          | 1.5          | 1.7          | 1.5          | 1.5          | 1.4          | 1.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gas                                                               | 1.8          | 1.8          | 2.4          | 2.3          | 2.2          | 2.1          | 1.8          | 1.0          | 1.1          | 1.2          | 17.8                 |
| Coal                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Nuclear                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Hydro                                                             | 7.2          | 5.5          | 6.4          | 5.4          | 5.2          | 5.0          | 4.3          | 5.4          | 5.4          | 5.4          | 82.1                 |
| Biomass                                                           | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Wind                                                              | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Solar                                                             | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Other renewables                                                  | 0.0          | 0.0          | -0.0         | -0.0         | 0.0          | 0.0          | -0.0         | 0.0          | -0.0         | -0.0         | -0.0                 |
| <b>Total final consumption, by sector</b>                         | <b>45.5</b>  | <b>41.6</b>  | <b>36.1</b>  | <b>32.1</b>  | <b>30.2</b>  | <b>26.7</b>  | <b>20.8</b>  | <b>16.9</b>  | <b>18.5</b>  | <b>21.0</b>  | <b>100.0</b>         |
| Industry                                                          | 16.8         | 13.7         | 10.0         | 8.9          | 9.1          | 8.7          | 5.5          | 4.7          | 5.0          | 5.3          | 25.3                 |
| Transport                                                         | 18.6         | 18.2         | 15.9         | 13.9         | 12.7         | 11.2         | 10.2         | 8.0          | 9.0          | 10.8         | 51.4                 |
| Residential/Commercial                                            | 7.0          | 7.0          | 7.4          | 6.6          | 6.3          | 6.1          | 4.5          | 3.9          | 4.2          | 4.4          | 20.7                 |
| <b>Oil final consumption, by sector</b>                           | <b>27.9</b>  | <b>26.7</b>  | <b>21.6</b>  | <b>19.3</b>  | <b>17.5</b>  | <b>14.8</b>  | <b>12.3</b>  | <b>9.9</b>   | <b>11.1</b>  | <b>13.4</b>  | <b>100.0</b>         |
| Industry                                                          | 4.7          | 4.2          | 1.8          | 1.6          | 1.8          | 1.9          | 1.0          | 1.1          | 1.3          | 1.5          | 11.1                 |
| Transport                                                         | 18.5         | 18.2         | 15.8         | 13.8         | 12.7         | 11.2         | 10.2         | 8.0          | 9.0          | 10.8         | 80.5                 |
| Residential/Commercial                                            | 1.7          | 1.7          | 1.2          | 1.1          | 1.1          | 1.1          | 0.6          | 0.5          | 0.5          | 0.6          | 4.6                  |
| <b>Natural gas final consumption, by sector</b>                   | <b>8.2</b>   | <b>7.6</b>   | <b>6.5</b>   | <b>5.9</b>   | <b>6.1</b>   | <b>5.7</b>   | <b>3.3</b>   | <b>2.4</b>   | <b>2.7</b>   | <b>2.8</b>   | <b>100.0</b>         |
| Industry                                                          | 7.2          | 6.6          | 5.3          | 4.8          | 5.1          | 4.7          | 2.7          | 2.0          | 2.1          | 2.1          | 77.9                 |
| Transport                                                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.4                  |
| Residential/Commercial                                            | 1.0          | 1.0          | 1.2          | 1.0          | 1.0          | 0.9          | 0.6          | 0.5          | 0.6          | 0.6          | 21.7                 |
| <b>Refined products consumption</b>                               | <b>27.9</b>  | <b>26.7</b>  | <b>21.6</b>  | <b>19.3</b>  | <b>17.5</b>  | <b>14.8</b>  | <b>12.3</b>  | <b>9.9</b>   | <b>11.1</b>  | <b>13.4</b>  | <b>100.0</b>         |
| Gasoline                                                          | 14.4         | 13.6         | 12.5         | 10.9         | 10.5         | 9.1          | 8.4          | 6.4          | 7.2          | 8.8          | 66.0                 |
| Diesel                                                            | 4.6          | 5.7          | 3.6          | 3.3          | 2.8          | 2.9          | 2.2          | 2.2          | 2.6          | 2.9          | 21.3                 |
| Heating Oil                                                       | 3.6          | 2.6          | 1.0          | 0.9          | 0.9          | 0.9          | 0.5          | 0.4          | 0.4          | 0.5          | 3.6                  |
| Aviation Jet                                                      | 0.5          | 0.4          | 0.4          | 0.2          | 0.2          | 0.2          | 0.1          | 0.1          | 0.1          | 0.1          | 0.6                  |
| LPG                                                               | 3.4          | 3.4          | 2.9          | 3.0          | 2.3          | 1.0          | 0.6          | 0.5          | 0.5          | 0.6          | 4.5                  |
| <b>Imports</b>                                                    | <b>9.4</b>   | <b>7.5</b>   | <b>8.7</b>   | <b>7.6</b>   | <b>8.4</b>   | <b>10.2</b>  | <b>5.9</b>   | <b>5.3</b>   | <b>5.6</b>   | <b>6.0</b>   | <b>100.0</b>         |
| Oil                                                               | 7.8          | 6.8          | 8.4          | 7.6          | 8.4          | 10.2         | 5.9          | 5.3          | 5.6          | 6.0          | 100.0                |
| Gas                                                               | 1.6          | 0.7          | 0.3          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.5          | 0.4          | 0.7          | 1.1          | 1.5          | 1.6          | 1.3          | 2.6          | 2.8          | 3.3          | 54.9                 |
| Diesel                                                            | 1.9          | 0.0          | 1.1          | 1.4          | 1.1          | 2.6          | 0.2          | 0.0          | 0.0          | 0.0          | 0.1                  |
| Heating Oil                                                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Aviation Jet                                                      | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| <b>Exports</b>                                                    | <b>130.3</b> | <b>132.3</b> | <b>127.3</b> | <b>116.9</b> | <b>101.4</b> | <b>83.2</b>  | <b>53.0</b>  | <b>31.4</b>  | <b>33.3</b>  | <b>33.3</b>  | <b>100.0</b>         |
| Oil                                                               | 130.3        | 132.3        | 127.3        | 116.9        | 101.4        | 83.2         | 53.0         | 31.4         | 33.3         | 33.3         | 100.0                |
| Gas                                                               | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Gasoline                                                          | 0.4          | 0.5          | 1.6          | 0.7          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Diesel                                                            | 0.5          | 1.3          | 0.8          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0                  |
| Heating Oil                                                       | 9.5          | 11.1         | 11.7         | 9.6          | 8.4          | 8.3          | 3.6          | 2.6          | 2.7          | 3.4          | 10.3                 |
| Aviation Jet                                                      | 2.3          | 2.5          | 2.3          | 1.4          | 1.0          | 0.9          | 0.9          | 0.7          | 0.8          | 1.0          | 2.9                  |
| LPG                                                               | 0.0          | 0.0          | 0.0          | 0.1          | 0.1          | 0.1          | 0.1          | 0.0          | 0.0          | 0.1          | 0.2                  |
| <b>CO<sub>2</sub> Emissions (Million tons CO<sub>2</sub>)</b>     | <b>159.3</b> | <b>156.9</b> | <b>142.0</b> | <b>130.2</b> | <b>124.1</b> | <b>112.7</b> | <b>87.6</b>  | <b>54.4</b>  | <b>59.9</b>  | <b>69.7</b>  | <b>-</b>             |
| <b>CO<sub>2</sub> Intensity (tCO<sub>2</sub>/million \$15ppp)</b> | <b>249.0</b> | <b>255.2</b> | <b>246.3</b> | <b>272.3</b> | <b>307.7</b> | <b>347.7</b> | <b>373.9</b> | <b>331.8</b> | <b>363.4</b> | <b>391.7</b> | <b>-</b>             |
| <b>Final energy intensity (toe/million \$15ppp)</b>               | <b>66.4</b>  | <b>63.3</b>  | <b>57.7</b>  | <b>61.6</b>  | <b>70.0</b>  | <b>80.4</b>  | <b>86.3</b>  | <b>101.0</b> | <b>110.5</b> | <b>115.2</b> | <b>-</b>             |
| <b>Total energy intensity (toe/million \$15ppp)</b>               | <b>119.0</b> | <b>107.4</b> | <b>111.5</b> | <b>123.0</b> | <b>136.6</b> | <b>124.8</b> | <b>141.0</b> | <b>149.2</b> | <b>161.8</b> | <b>177.9</b> | <b>-</b>             |

\*Heat is included

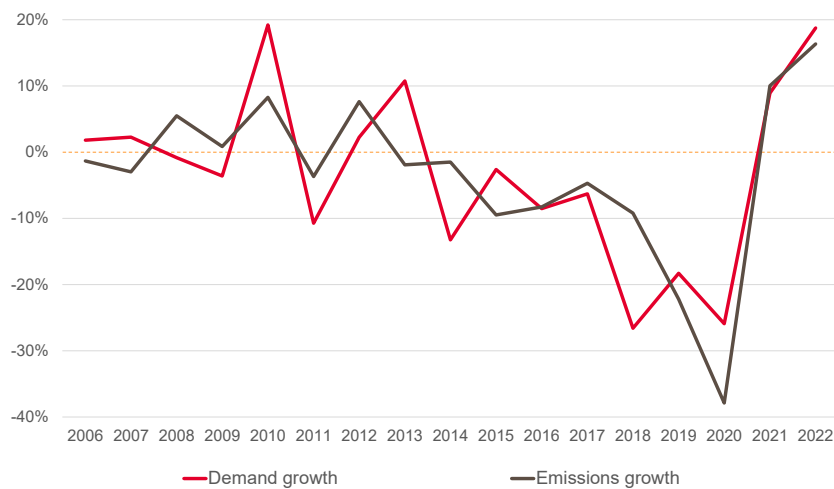
Primary energy demand mix



Electricity generation by source



Primary energy demand and CO<sub>2</sub> emissions growth



# Conversion factors

## Crude oil

| To convert to:         | tonnes | 10 <sup>3</sup> litres | barrels | U.S. gallons | tonnes/year |
|------------------------|--------|------------------------|---------|--------------|-------------|
| <b>Multiply by:</b>    |        |                        |         |              |             |
| tonnes                 | 1.00   | 1.17                   | 7.33    | 307.86       | –           |
| 10 <sup>3</sup> litres | 0.86   | 1.00                   | 6.29    | 264.17       | –           |
| barrels                | 0.14   | 0.16                   | 1.00    | 42.00        | –           |
| U.S. gallons           | 0.00   | 0.00                   | 0.02    | 1.00         | –           |
| barrels per day        | –      | –                      | –       | –            | 49.80       |

Note: based on worldwide average gravity.

## Products

| To convert to:                | barrels<br>to tonnes | tonnes<br>to barrels | 10 <sup>3</sup> litres<br>to tonnes | tonnes<br>to 10 <sup>3</sup> litres |
|-------------------------------|----------------------|----------------------|-------------------------------------|-------------------------------------|
| <b>Multiply by:</b>           |                      |                      |                                     |                                     |
| Liquefied petroleum gas (LPG) | 0.1                  | 11.5                 | 0.5                                 | 1.8                                 |
| Gasoline                      | 0.1                  | 8.3                  | 0.8                                 | 1.3                                 |
| Kerosene                      | 0.1                  | 7.8                  | 0.8                                 | 1.2                                 |
| Gas oil/Diesel                | 0.1                  | 7.6                  | 0.8                                 | 1.2                                 |
| Fuel oil                      | 0.2                  | 6.6                  | 1.0                                 | 1.0                                 |
| Product basket                | 0.1                  | 8.7                  | 0.7                                 | 1.4                                 |

Note: Approximate conversion factors.

## Natural Gas and Liquefied Natural Gas (LNG)

| To convert to:      | Bcm NG | Bcf NG | Million toe | Million ton. LNG | Million boe |
|---------------------|--------|--------|-------------|------------------|-------------|
| <b>Multiply by:</b> |        |        |             |                  |             |
| Bcm NG              | 1.0    | 35.3   | 0.9         | 0.7              | 6.6         |
| Bcf NG              | 0.0    | 1.0    | 0.0         | 0.0              | 0.2         |
| Million toe         | 1.1    | 39.2   | 1.0         | 0.8              | 7.3         |
| Million ton. LNG    | 1.4    | 48.0   | 1.2         | 1.0              | 9.0         |
| Million boe         | 0.2    | 5.4    | 0.1         | 0.1              | 1.0         |

Note:

Bcm = billion cubic meter

Bcf = billion cubic feet

toe = tonnes oil equivalent

boe = barrels oil equivalent

# Glossary

## Definitions

### Primary Energy Demand

Quantity of natural energy resources consumed in original state, at the site of production or elsewhere, or for later transformation into other forms.

### Final Energy Consumption

Difference between domestic demand and the consumption in energy transformations, and the losses involved. Final consumption measures the needs of the final consumers of the country. For oil, marine and aviation bunkers are excluded for countries.

### Industry

Includes the mining sector, manufacturing sector, construction and public works sector. It excludes the fuel consumption of all modes of transport, even those used by industry, and also excludes energy products employed for non energy uses (e.g. raw materials, lubricants). It also excludes the fuel input for autoproduction and includes the autoproduced electricity.

### Transport

Includes all modes of transportation (ISIC Divisions 49 to 51), regardless of to whom they belong, and to what purpose the transport serves. Aviation and marine bunkers (international aviation and sea transport) are excluded, except at the world level.

### Residential/Commercial

Final consumption of energy products used for energy uses, excluding industry, transport, and agriculture sectors. ISIC Divisions 33, 36-39, 45-47, 53, 55, 56, 58-66, 68-75, 77-82, 84 [excluding class 8422], 85-88, 90-96 and 99 [for tertiary], and 97 and 98 [for residential].

### CO<sub>2</sub> Emissions

Emissions from combustion of mainly fossil fuels, estimated using the IPCC Reference Approach.

### CO<sub>2</sub> Intensity

Amount of CO<sub>2</sub> emitted to produce one unit of Gross Domestic Product (GDP). In this publication it is measured in terms of purchasing power parity (ppp).

### Primary Energy Intensity

Primary energy consumption necessary to produce one unit of Gross Domestic Product (GDP). Non energy uses are excluded. In this publication it is measured in terms of purchasing power parities (ppp).

### Final Energy Intensity

Final energy consumption necessary to produce one unit of Gross Domestic Product (GDP). Non energy uses are excluded. In this publication it is measured in terms of purchasing power parities (ppp) it is measured in terms of purchasing power parity (ppp).

## Geographical grouping

### European Union (EU27)

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

### OECD

Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, South Korea, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.

### OPEC

Algeria, Angola, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, the Republic of the Congo, Saudi Arabia, United Arab Emirates, Venezuela.

## MORE INFORMATION

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