

# STRATEGY

## MARKET OVERVIEW



### MACROECONOMICS AND GLOBAL TRENDS

#### GLOBAL TRENDS AND THEIR IMPACT ON STRATEGY IMPLEMENTATION

#### CHALLENGE FOR THE INDUSTRY

- ◆ The COVID-19 pandemic and its long-term impact on the decline in global oil demand
- ◆ Volatility of crude oil prices
- ◆ Changes in energy consumption patterns in the longer term
- ◆ Long-term increase in global demand for gas, including demand in China as the main driver
- ◆ Long-term growth in demand for petrochemicals

#### GLOBAL TRENDS



#### CHANGES IN THE GLOBAL ENERGY BALANCE

#### STRATEGIC RESPONSES TO TRENDS

- ◆ Crisis response strategy for 2020–2021
- ◆ Expanding and diversifying oil and gas shipments
- ◆ Expanding the value chain within the existing business and developing the petrochemical segment



- ◆ Growth and use of digital technologies
- ◆ Business process digitisation and automation

- ◆ The growing importance of sustainability and ESG across the investment community

- ◆ The trend towards carbon neutrality in the oil and gas sector



**DIGITALISATION**



**SUSTAINABILITY AND ESG FACTORS**



**ALTERNATIVE ENERGY AND CARBON NEUTRALITY**

- ◆ Digitalisation focusing on specific issues in business processes, with an emphasis on Exploration and Production and on Refining, as well as developing targeted solutions across KMG Group.

- ◆ Integrating sustainability principles into key business processes

- ◆ Expanding and diversifying the value chain by promoting renewables and decarbonisation

## 1. The COVID-19 pandemic and its long-term impact on the decline in global oil demand

In 2020, the balance between liquid fuels supply and demand experienced two different phases primarily driven by the global COVID-19 pandemic, its impact on the economy and coordinated action by OPEC+.

From January to May 2020, demand for oil was declining faster than oil production. Oil prices fell due to a significant build-up of inventories, but rebounded in the second half of 2020 driven by a recovery in oil consumption, production cuts under the OPEC+ agreement and lower crude oil production in the US.

According to the preliminary estimates by the US Energy Information Administration (EIA) dated 12 January 2021, in 2020 global consumption of crude oil and liquid fuels was down by 9 million bbl per day from 2019 – the largest annual decline since 1980, according to EIA.

## 2. Volatility of crude oil prices

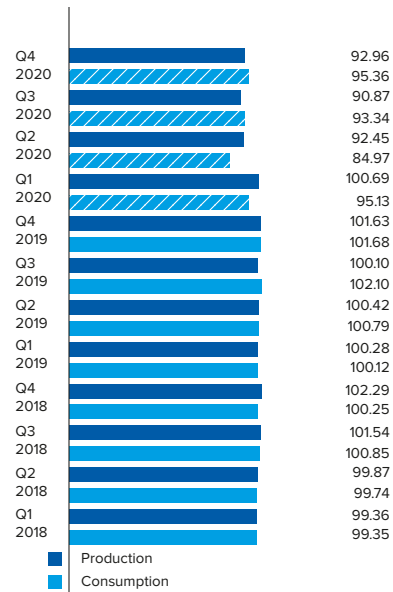
On average in 2020, Dated Brent oil prices traded at USD 41.84 per bbl, down 34.8% year-on-year, reflecting the impact of the pandemic on the global economy and oil demand due to lockdown restrictions. Measures to reduce production under the OPEC+ agreement and the market’s focus on vaccination campaigns across countries have supported oil prices in late 2020 and early 2021.

### Brent prices in 2020–2021, USD per bbl

The pandemic slows down the economic growth and demand for oil. Governments around the globe speed up the imposition of lockdown measures. An estimated global glut of crude oil due to the pandemic.



### Production and consumption of liquid fuels 2018–2020, million bbl per day



Source: US Energy Information Administration

## STRATEGIC DIRECTION

In order to respond swiftly to these changes, KMG developed and approved its crisis response strategy for 2020–2021, which provides not only for adapting the Company to low oil prices while retaining the maximum of its production and HR capacities, but also for building up resources, technology and competencies for KMG to recover after the crisis.

For more details see the Impact of COVID-19 and anti-crisis response section.



### 3. Changes in energy consumption patterns in the longer term

Global energy demand will continue to grow in the long term due to improved living standards in developing economies. However, the market expects a significant change in the structure of energy demand due to the weakening role of hydrocarbons as they are phased out by renewables. Nevertheless, oil and gas will continue to play an important role for decades to come, accounting for 20–50% in energy demand by 2050, depending on the scenario according to the estimates by British Petroleum (BP) in its Energy Outlook (2020 Edition).

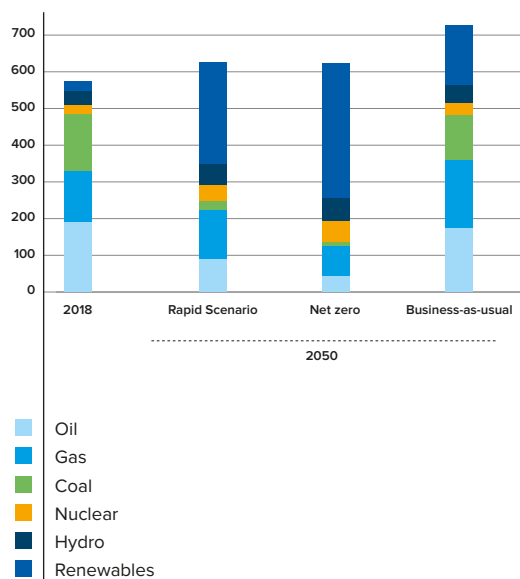
- ◆ Carbon emissions from energy use in the Rapid Scenario fall by around 70% by 2050. This fall in emissions is in line with scenarios which are consistent with limiting the rise in global temperatures by 2100 to well below 2 °C above preindustrial levels.
- ◆ The Net Zero Scenario (Net Zero) assumes significant shifts in societal behaviour and preferences, which further accelerate the reduction in carbon emissions. Global carbon emissions fall by over 95% by 2050, broadly in line with a range of scenarios which are consistent with limiting temperature rises to 1.5 °C.
- ◆ The Business-as-usual Scenario (BAU) assumes that carbon emissions peak in the mid-2020s, with emissions in 2050 less than 10% below the 2018 level.

The growth in global energy demand in all three scenarios is entirely driven by developing economies, reflecting their increasing prosperity and improved energy access while energy consumption is expected to fall in the developed world. According to BP’s Energy Outlook, emerging economies are expected to account for around 70% of energy demand by 2050 in all three scenarios, up from 58% in 2018.

#### STRATEGIC DIRECTION

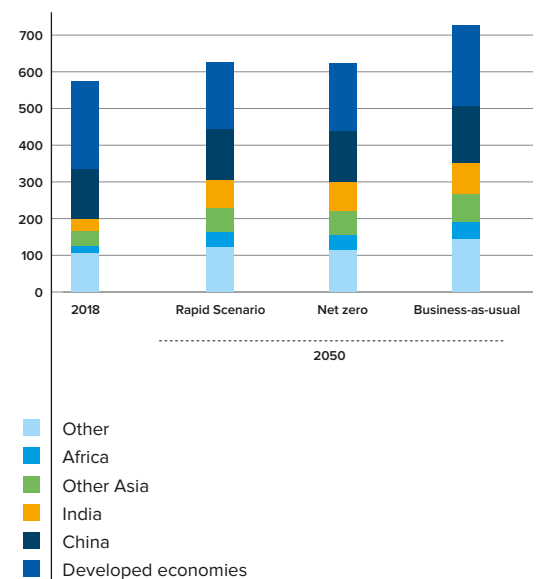
The 2020 crisis has accelerated the energy transition of oil and gas companies, which have revised their strategies to reduce their carbon footprint by developing renewables and decarbonisation. With the European Union’s Carbon Border Adjustment Mechanism being developed under the Green Deal and providing for the introduction of a carbon tax on EU imports with a large carbon footprint, KMG is looking into the prospects of tapping into the low-carbon opportunities through decarbonisation and alternative energy projects, as well as trading in GHG quotas.

Energy consumption by source, EJ (2018–2050F)



Source: BP’s Energy Outlook

Energy consumption by region, EJ (2018–2050F)



Source: BP’s Energy Outlook

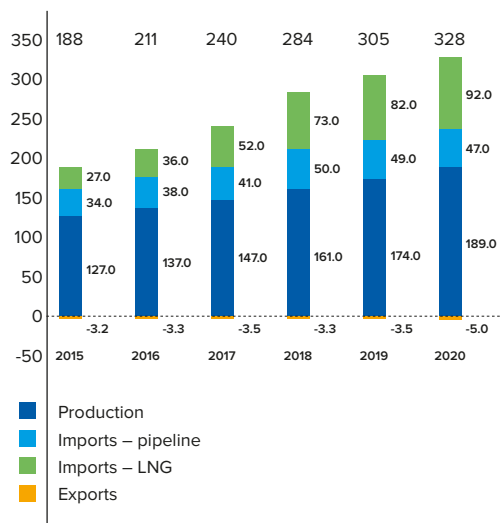
#### 4. Long-term increase in global demand for gas, including demand in China as the main driver

Demand for gas is supported by the developing economies of Asia (China, India, other Asian countries). Gas is positioned as a fuel to be used during the transition to renewables. At a virtual meeting of the UN General Assembly in September 2020, China announced its plans to achieve carbon neutrality before 2060 while lowering carbon emissions within a fixed timeline, which is expected to catalyse the country’s transition from coal to natural gas. According to Bloomberg, coal use accounted for 57.7% of China’s total energy consumption from 71.6% in 2009 while the proportion of natural gas increased from 3.5% to 8.1%.

##### STRATEGIC DIRECTION

KMG aims to implement a number of initiatives to ensure sufficient reserves of commercial gas and adequate pipeline capacities. These measures will boost gas exports to China while meeting the growing domestic demand.

Production, imports and exports of gas in China in 2015–2020, bln m<sup>3</sup>



Source: China’s National Bureau of Statistics (NBS), China’s General Administration of Customs, Bloomberg

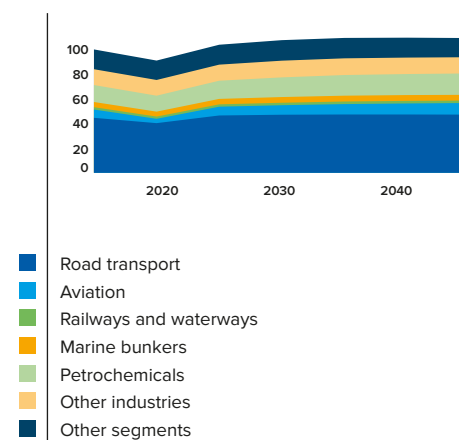
#### 5. Long-term growth in demand for petrochemicals

According to OPEC’s World Oil Outlook 2045, petrochemicals will be the largest source of incremental demand for oil in the forecast period. Demand is expected to grow by 3.7 million bbl per day from 13.7 million bbl per day in 2019 to 17.3 million bbl per day forecast for 2045, according to OPEC’s estimates. Most of this incremental demand is expected to come from Asia and OPEC countries. Petrochemicals will be primarily supported by consumer demand for plastics and textile reflecting the rising income in developing economies.

##### STRATEGIC DIRECTION

KMG already produces benzene and paraxylene and is also involved in petrochemical projects (KPI, KLPE) that produce polyethylene and polypropylene. KMG tentatively explores the production of other petrochemicals as promising opportunities.

Oil demand by sector for 2019–2045, million bbl per day



Source: World Oil Outlook 2045, OPEC

## 6. Growth and use of digital technologies. Business process digitisation and automation

The COVID-19 pandemic of 2020 has hastened the use of sensors, the Internet of Things and cloud computing to support remote monitoring of oil wells and refineries. According to Bloomberg, many companies have found an answer in digital twins.

These interactive 3D simulations of oil platforms and plants allow engineers to gain virtual access to equipment from home. Computing technology, big data, clouds and machine learning streamline asset performance and remote operations.

### STRATEGIC DIRECTION

In line with the shareholder's expectations and taking into account KMG's priorities, we have decided to focus digitalisation on specific issues in business processes, with an emphasis on Exploration and Production and on Refining, as well as to develop a pool of targeted solutions across KMG Group.

In line with this vision, we have developed the concept for the Smart Field programme, which will determine the unified approaches for the selection, design and implementation of processes and technologies at KMG. We have also assessed the digital maturity of the Company's businesses to identify, based on a bottom-up approach, specific business problems for each subsidiary that can be addressed through digital technology.

Overall, transition to digital technologies will be implemented under a phased approach considering existing maturity and digital literacy levels of employees as well as the availability of automation systems at facilities.

For more details see the Transformation and digitalisation section

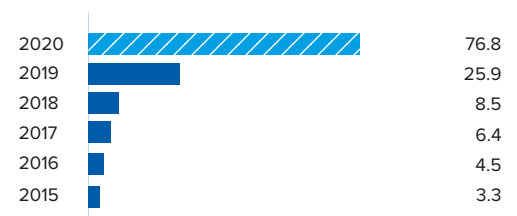


## 7. The growing importance of sustainability and ESG across the investment community. The trend towards carbon neutrality in the oil and gas sector

In September 2015, the leaders of 193 countries approved an ambitious comprehensive programme, Transforming Our World: the 2030 Agenda for Sustainable Development, which included the United Nations Sustainable Development Goals. According to Bloomberg, some 26 countries have announced net-zero goals for early 2021.

Climate action affects investment strategies. According to Bloomberg, net inflows to ESG ETFs totalled USD 76.8 bln in 2020 compared to USD 3.3 bln in 2015. Embracing ESG, oil majors have already announced ambitious plans to cut emissions and invest in alternative energy.

Net inflows to ESG ETFs in 2015–2020, USD bln



Source: Bloomberg

### STRATEGIC DIRECTION

In making decisions, KMG factors in the national and global trends for a transition to a greener economy and recognises that long-term success in the industry requires strong ESG performance. As a signatory to the UN Global Compact, KMG reiterates its commitment to the principles of sustainable development and embraces Sustainable Development Goals while particularly focusing on climate change, prevention of adverse environmental impact and corporate social responsibility. For a fourth year running, KMG has been the leader of the environmental transparency rating of Kazakhstan oil and gas companies.

We intend to continue our consistent sustainability effort to improve KMG's ESG score while managing and reducing our ESG Risk Rating (currently scoring 34.5). Analysts of Sustainalytics assessed KMG's ESG risk management as "strong".

KMG assets use elements of renewables to generate electricity for their own needs as well as to reduce their CO2 emissions. The Company explores opportunities for investing in renewables and low-carbon technologies.

For more details see the Ensuring sustainable development section.

