

# 1.5. MACROECONOMIC SITUATION IN 2017

THE COMPANY'S OPERATING PERFORMANCE IN 2017 WAS SIGNIFICANTLY IMPACTED BY THE FOLLOWING KEY MACROECONOMIC FACTORS:

Global and national economic growth rates

Global oil prices

RUB exchange rate and inflation rates in Russia

## Global and National Economic Growth Rates

According to January 2018 estimates from the International Monetary Fund (IMF), global economic growth in 2017 (PPP<sup>1</sup> GDP in constant 2010 prices) accelerated to 3.7% year-on-year<sup>2</sup> (3.2% year-on-year in 2016). GDP growth rates in developed economies increased from 1.7% in 2016 to 2.3% in 2017 while growing in emerging markets from 4.4% in 2016 to 4.7% in 2017.

Among developed economies, the most notable economic growth occurred in the USA, Canada, Japan, and the Eurozone. In 2017, GDP growth rate in the

USA was 2.3% (1.5% in 2016), 3.0% in Canada (1.4% in 2016), and 1.6% in Japan (0.9% in 2016).

In 2017, GDP growth rate in the Eurozone was 2.4% (up 1.8% in 2016). Germany and France remain leaders in economic growth within the Eurozone, their GDP growth rates reaching 2.2% and 1.8% in 2017 from 1.9% and 1.2% in 2016, respectively.

GDP growth rates slowed down in both the UK (from 1.9% in 2016 to 1.8%<sup>3</sup> in 2017) and Mexico (from 2.9% in 2016 to 2.2% in 2017).

In 2017, GDP growth rate in China increased by 0.1 percentage points to 6.8% (6.7% in 2016), while a significant slowdown in GDP growth rates was observed in India (from 7.1% in 2016 to 6.7% in 2017), as well as in the Middle East and in North Africa (from 4.9% in 2016 to 2.5% in 2017).

According to IMF estimates, the growth in international trade in goods and services accelerated from 2.5% in 2016 to 4.7% in 2017. Global trade in goods and services grew mainly due to increasing prices in metals (up 24.2% year-on-year) and energy (up 23.6% year-on-year), and the declining real effective exchange rate of USD to the currencies of main trade partners (down 0.5% year-on-year).

After two years of crisis, the Russian economy returned to growth in Q4 2016. In 2017, the GDP growth in Russia was largely supported by the improved macroeconomic environment of growing energy prices and increased price competitiveness of domestic producers due to RUB depreciation during 2014–2015.

According to an initial assessment from Rosstat, in 2017, the Russian GDP accelerated by 1.5% (down 0.2% in 2016). With a combined 58.3%, the following three sectors were the largest contributors to the GDP growth: retail and wholesale trade, vehicle and motorcycle repairs (contributed approximately 28%; 3.1%

growth year-on-year), transportation and storage (contributed approximately 16%; 3.7% growth year-on-year), and real estate transactions (contributed approximately 14%; 2.2% growth year-on-year). In fourth place was the mining sector with a contribution of 8.4% to the GDP growth (1.4% growth year-on-year). In 2017, the most significant change in the GDP structure was the growing share of the mining sector, which grew by 0.8 percentage points to 10.3%.

Economy growth rates in developed economies are projected at 2.3% in 2018 and 2.2% in 2019, while the GDP growth rates in emerging markets are expected to be higher, 4.9% and 5.0%, respectively.

Global trade growth is expected to slow down to 4.6% year-on-year in 2018 and to 4.4% year-on-year in 2019.

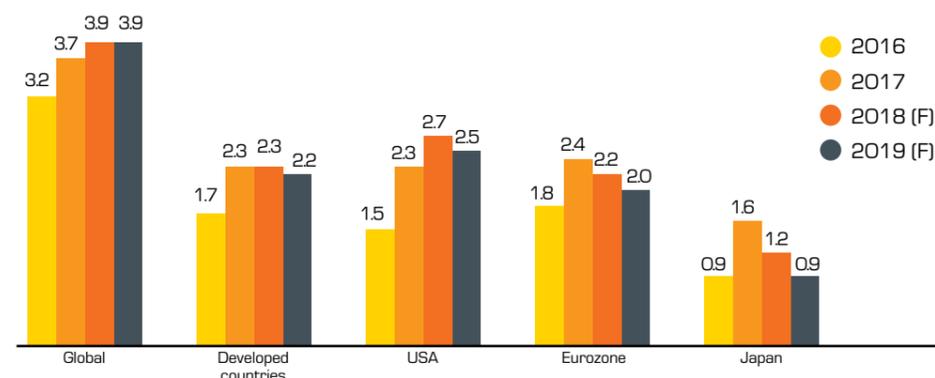
The IMF forecasts the Russian economy to grow at 1.7% in 2018 and 1.5% in 2019. The Bank of Russia forecasts the Russian GDP growth rate at 1.5%–2.0% in 2018, with a slight deceleration to 1%–1.5% in 2019. The Ministry of Economic Development of the Russian Federation forecasts (as at 27 October 2017, baseline scenario) the Russian GDP growth rate at 2.1% in 2018, while in 2019 and 2020, there will be a slight acceleration of the Russian GDP growth to 2.2% and 2.3%, respectively.



The IMF forecasts the global GDP growth rate to accelerate to 3.9% in 2018 and 2019 (World Economic Outlook as at 22 January 2018).

### GDP Growth Rates (PPP GDP in constant 2010 prices) in Developed Economies

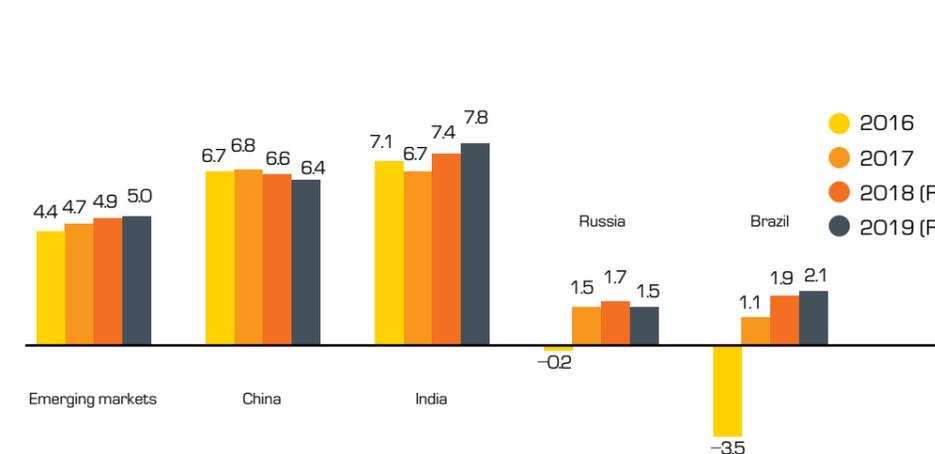
Sources: International Monetary Fund, national statistical services, Russia's Federal State Statistics Service (Rosstat).



<sup>1</sup> Purchasing power parity.  
<sup>2</sup> Year-on-year.  
<sup>3</sup> According to the British Office for National Statistics.

### GDP Growth Rates (PPP GDP in constant 2010 prices) in Emerging Markets

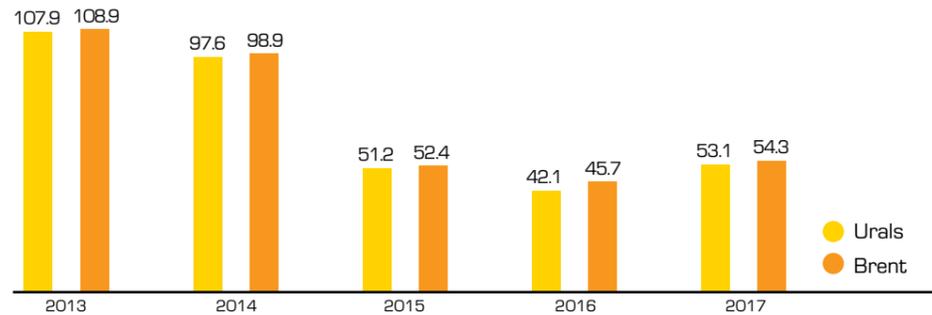
Sources: International Monetary Fund, national statistical services, Russia's Federal State Statistics Service (Rosstat).



# Energy Prices, Foreign Exchange Rates, and Inflation in Russia

Annual Average Brent and Urals Prices, USD per barrel

Source: Platts.



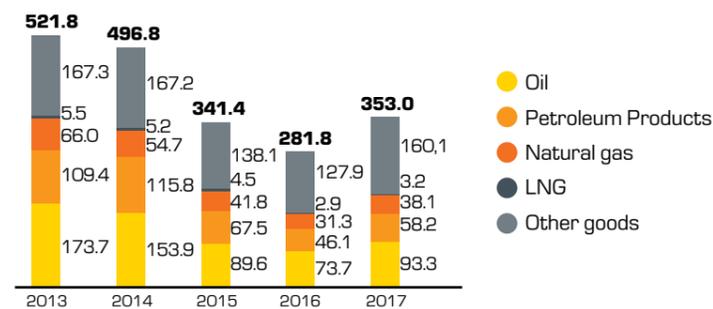
The observed oil surplus in 2014–2016 gave way to shortages in 2017 caused by the growing demand for oil and the deal to curb oil output, reached by OPEC and 11 non-members. According to the International Energy Agency (IEA), shortage in the oil market totaled 0.4 mmb per day in 2017. Since June 2017, oil prices have been showing a slight upward trend.

As a result of the oil shortage, the annual average Brent price in 2017, as according to Platts, was up 24.3% to USD 54.3 per barrel, compared with USD 43.7 per barrel in 2016. In 2017, the annual average Urals price increased by USD 11 per barrel compared with the 2016 price of USD 53.1 per barrel, a 26.1% rise year-on-year.

An improving global commodity market environment and growing Russian exports drove an increase in Russia's export income. According to the Bank of Russia's data, Russian exports (according to the Balance of Payments methodology) grew by 25.2% year-on-year in 2017, from USD 281.8 bln to USD 353.0 bln. Crude oil exports were up 26.6% to USD 93.3 bln; petroleum product exports were up 26.3% to USD 58.2 bln; natural gas exports up 22.0% to USD 38.0 bln; and LNG exports up 9.5% to USD 3.2 bln.

Russian Exports, USD bln

Source: Central Bank of the Russian Federation.



Crude hydrocarbons and petroleum products accounted for 54.6% of total exports in 2017.

An increase in export income had a positive effect on the ruble exchange rate despite ongoing financial sanctions. According to the Bank of Russia, the annual average nominal USD/RUB rate was down from RUB 67.03 per USD in 2016 to RUB 58.35 per USD in 2017, thus the ruble appreciated against the US dollar by an average of 14.7% year-on-year.

The nominal USD/RUB rate was down from RUB 60.66 per USD as at year-end 2016 to RUB 57.60 per USD as at year-end 2017. The ruble appreciated by 5.3% year-on-year.

Inflation in 2017 (year-on-year as at December 2017) was 2.5% (5.4% in 2016), 1.5 percentage points below the 2017 target of 4.0% set in the Monetary Policy Guidelines for 2017–2019 published by the Central Bank of the Russian Federation. In 2017, the annual average consumer price index was 3.7% (7.1% in 2016). The inflation slowdown in 2017 was supported by the policy of the Central Bank of the Russian Federation, as well as by the growing nominal exchange rate of the Russian ruble to the currencies of Russia's key trade partners, and an increase in agricultural production. According to the Bank of Russia's forecast as at 22 November 2017, inflation in 2018–2020 will be at 4.0%.

In 2017, producer prices were up 8.4% (year-on-year as at December 2017) (7.5% in 2016). In 2017, the annual average producer price index was 7.6% (4.3% in 2016). According to the Ministry of Economic Development forecast as at 27 October 2017, the producer price index will be 2.5% in 2018 (year-on-year as at December 2018).

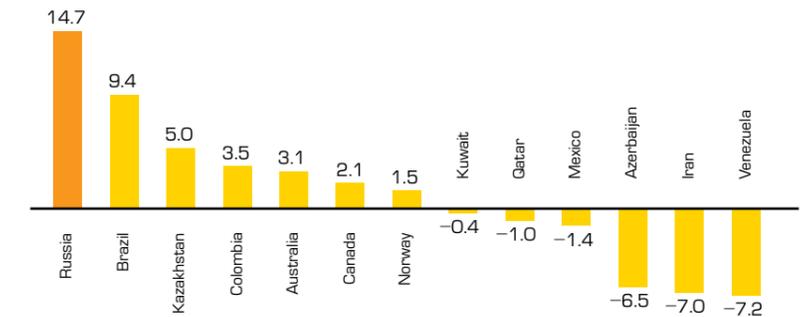
In 2017, oil companies' transportation costs in Russia grew following an increase in tariffs. As of 1 January 2017, PJSC Transneft's rates for oil transportation via trunk pipelines increased by 3.5%, and 4.0% indexation was applied to export tariffs for the Eastern Siberia – Pacific Ocean pipeline to China and the Kozmino oil loading port.

As of 1 February 2017, transit tariffs for oil transportation via the Republic of Belarus increased by 7.7%.

As of 1 January 2017, railroad transportation tariffs increased by 4%, and an additional 2% indexation was applied in January 2017 to the December 2016 tariff.

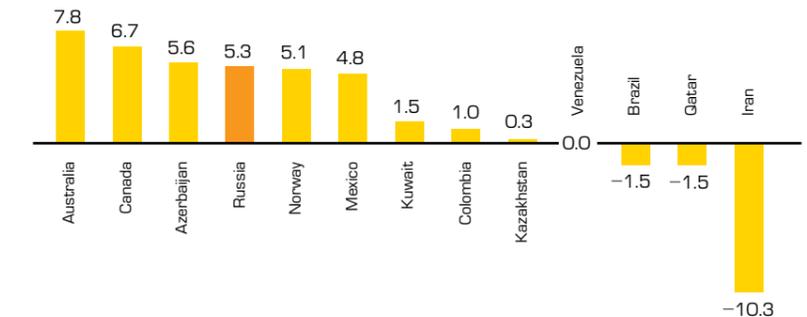
Changes in Annual Average Nominal Exchange Rates of Oil-Exporting Countries' National Currencies to USD in 2017, % y-o-y<sup>1</sup>

Sources: International Monetary Fund, World Bank, the Central Bank of the Russian Federation.



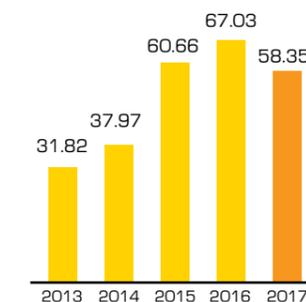
Changes in Nominal Exchange Rates of Oil Exporting Countries' National Currencies to USD in 2017, % y-o-y at year-end<sup>1</sup>

Sources: International Monetary Fund, World Bank, the Central Bank of the Russian Federation.



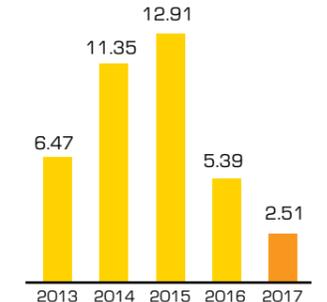
Average Nominal USD/RUB Rate, RUB per USD

Source: Central Bank of the Russian Federation.



Inflation in Russia, % y-o-y as at December

Source: Rosstat.



<sup>1</sup> "+" indicates appreciation of a national currency against USD; "-" indicates depreciation of a national currency against USD.

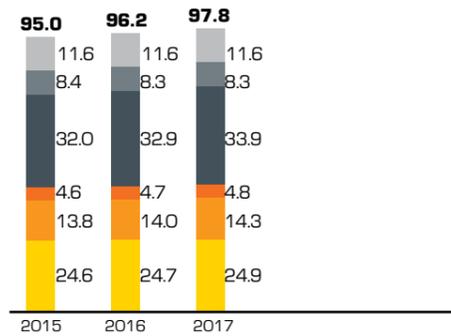
# 1.6. GLOBAL OIL AND GAS MARKET

## Global Oil Market

According to preliminary data from IEA, global demand for liquid hydrocarbons (LH)<sup>1</sup> slightly accelerated in 2017 to 1.6% (1.3% in 2016) at 97.8 mmb per day, up 1.6 mmb per day year-on-year. About 35% of the demand originated from Asia, accounting for 66% of growth in global LH demand in 2017.

LH Demand by Region, mmb per day

Source: IEA.

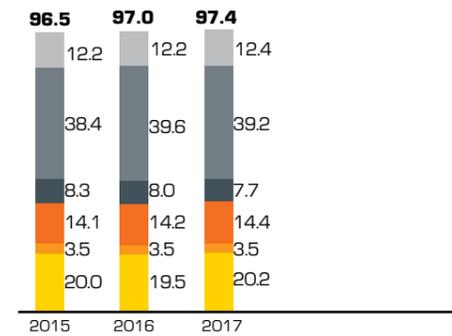


- OECD Americas
- OECD Europe
- FSU countries<sup>2</sup>
- Asia
- Middle East
- Others

According to preliminary data from IEA, global LH<sup>4</sup> output in 2017 grew by 0.4 mmb per day to 97.4 mmb per day. Production growth slowed down from 0.5% year-on-year in 2016 to 0.4% year-on-year in 2017. The slowed production results from measures taken under the joint agreement between OPEC members and 11<sup>5</sup> non-OPEC countries to reduce oil production. The total oil output in 2017 by the 14 OPEC member countries reduced 1.4% year-on-year to 32.3 mmb per day, although the production of gas condensate liquids was up 1.3% year-on-year to 6.9 mmb per day. Production trends varied across OPEC's 14 countries. In 2017, crude output mainly dropped in Saudi Arabia (down

LH Output by Region, mmb per day

Source: IEA.



- OECD Americas
- OECD Europe
- FSU countries<sup>2</sup>
- Asia
- OPEC<sup>3</sup>
- Others

4.4% year-on-year to 10.0 mmb per day) and in Venezuela (down 12.2% year-on-year to 2.0 mmb per day), while an increase in crude output was primarily posted by Libya (up 2.1 times year-on-year to 0.8 mmb per day) and in Iran (up 7.0% year-on-year to 3.8 mmb per day).

The drop in LH output (down 2.5% year-on-year) observed in OECD's North American member countries in 2017 reversed to a 3.9% year-on-year growth to 20.2 mmb per day. The regional production growth was mainly driven by the US, where 2017 LH output was up 5.3% year-on-year to 13.2 mmb per day, including crude production up 5.4% year-

<sup>1</sup> In this document, LH demand indicates the consumption of petroleum products from oil and gas condensate; consumption of oil as fuel; and consumption of hydrocarbon components from unconventional sources (biofuel, GTL, CTL, etc.). GTL (Gas to Liquids) and CTL (Coal to Liquids) are technologies for producing synthetic liquid fuel from gas and coal, respectively.

<sup>2</sup> Excluding Estonia and Latvia.

<sup>3</sup> 14 member countries as at 1 January 2018.

<sup>4</sup> In this document, LH output indicates the production of crude oil, gas condensate, gas condensate liquids, and production of hydrocarbon components from unconventional sources (biofuel, GTL, CTL, etc.).

<sup>5</sup> Equatorial Guinea joined OPEC in May 2017.

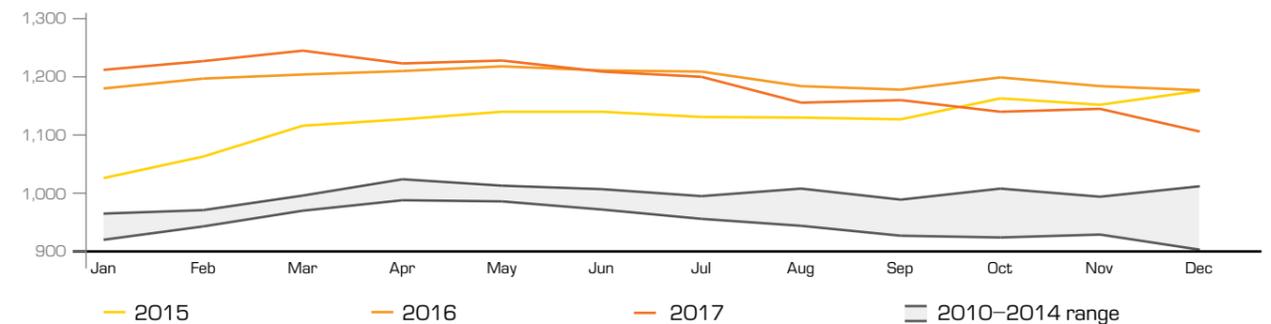
on-year to 9.3 mmb per day. LH output also grew significantly in Canada, by 7.4% year-on-year to 4.8 mmb per day, while Mexico, also having signed the OPEC production cut agreement, reduced its LH output in 2017 by 9.5% year-on-year to 2.2 mmb per day.

In 2017, LH output in Asian countries dropped to 7.7 mmb per day. Regional

output growth slowed down from 3.9% year-on-year in 2016 to 3.3% year-on-year in 2017. The trend was attributable to the deceleration of LH production rates in China from 6.8% year-on-year in 2016 to 2.8% year-on-year in 2017. In 2017, Chinese LH production stood at 3.9 mmb per day, accounting for half of the Asian LH output.

Commercial Crude Inventories in OECD Countries, bln barrels

Source: IEA.

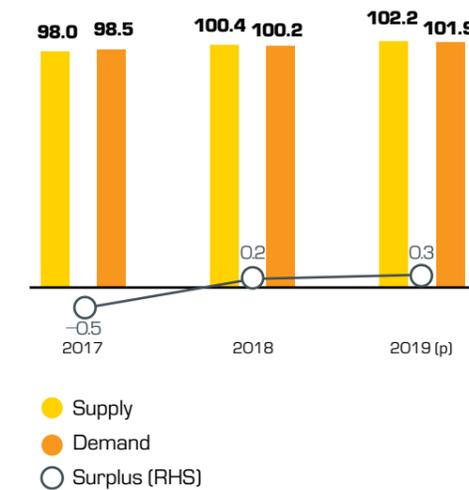


As a result of slowed production rates, IEA estimates that in 2017 the oil market showed a slight production deficit of 0.4 mmb per day. In November 2017, commercial crude inventories in OECD<sup>7</sup> countries dropped 6.0% year-on-year to approximately 1.11 bln barrels.

IEA forecasts<sup>8</sup> that global LH demand in 2018 will grow 1.4% year-on-year to 99.2 mmb per day. The US Energy Information Administration (EIA)<sup>9</sup> forecasts that accelerated LH production growth will drive a surplus of 0.2 mmb per day in 2018 and 0.3 mmb per day in 2019. According to EIA projections, global LH<sup>10</sup> demand in 2018 will grow 1.7% year-on-year to 100.2 mmb per day, with global LH output up 2.5% year-on-year to 100.4 mmb per day.

EIA's Forecast<sup>6</sup> of Global LH Demand and Output, mmb per day

Source: Forecast by US Energy Information Administration as at February 2018.



<sup>6</sup> U.S. Energy Information Administration.

<sup>7</sup> Official national estimates of crude inventories, IEA data. The discrepancies in crude stock estimates for 2010-2016 as compared to the previous annual report of the Company are due to IEA's updates and revisions made during the year.

<sup>8</sup> Forecast of January 2018.

<sup>9</sup> Forecast of February 2018.

<sup>10</sup> Forecasts of global LH demand and supply for 2017-2018 were based on EIA data, since IEA's Oil Market Report only contains global demand outlooks for 2018. The discrepancy between EIA's LH demand and supply data for 2017-2018 and IEA's data are due to different calculation methodologies.

# Overview of the Global Gas Industry

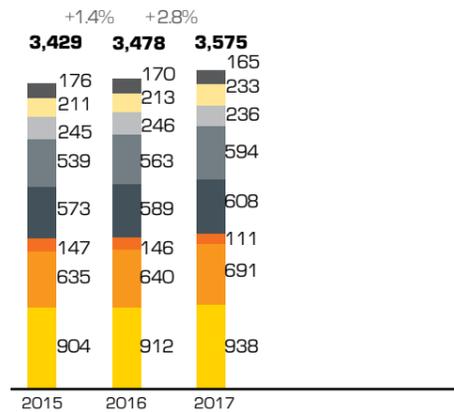
The global demand for gas grew 2.4% to 3.6 tcm<sup>1</sup> in 2017. A considerable part of the demand growth (up 34 bcm – 42% of total growth for 2017) is attributable to Asia-Pacific, primarily China. The market is supported by the increasing accessibility of supplies and relatively competitive prices, particularly prices for oil and petroleum products.

The demand growth was accompanied by an increase in global gas output<sup>2</sup> to 3.6 tcm, with 26% of global gas output attributable to North America, approximately 19% to Russia, and 17% to Asia-Pacific.

In 2017, gas producing countries exported about 1.1 tcm of gas.<sup>3</sup> Approximately 68% of global gas exports are transported by pipelines, and 32% as LNG.<sup>4</sup>

## Gas Production by Region, bcm

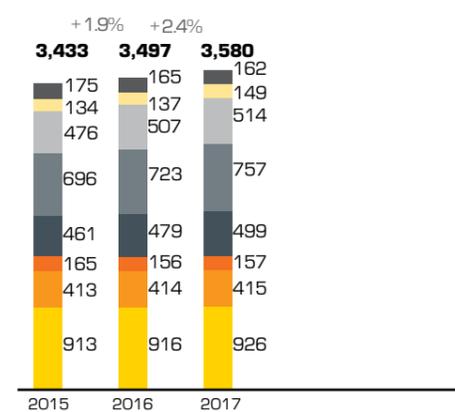
Source: IHS.



- North America
- Russia
- Rest of CIS
- Middle East
- Asia-Pacific
- Europe
- Africa
- Latin America

## Gas Consumption by Region, bcm

Source: IHS.



- North America
- Russia
- Rest of CIS
- Middle East
- Asia-Pacific
- Europe
- Africa
- Latin America

# LNG Market

In 2017, the LNG market grew by 29.9 mmt or 11% year-on-year (the highest growth rate since 2011) to reach a record high of 296.7 mmt, and largely driven by the improved demand in Asia-Pacific (up 12% year-on-year to 216 mmt) and Europe (up 22% year-on-year to 46.9 mmt). LNG demand in Japan, a major global LNG importer, was up 0.9% year-on-year to 84.5 mmt.

The growth was largely attributable to new LNG trains commissioned in 2017 at existing plants and new LNG projects coming on line in:

- Australia, increasing exports by 11.6 mmt to 55.8 mmt to provide 39% of the global export growth

- the US, increasing exports by 4.7 times to 12.5 mmt.

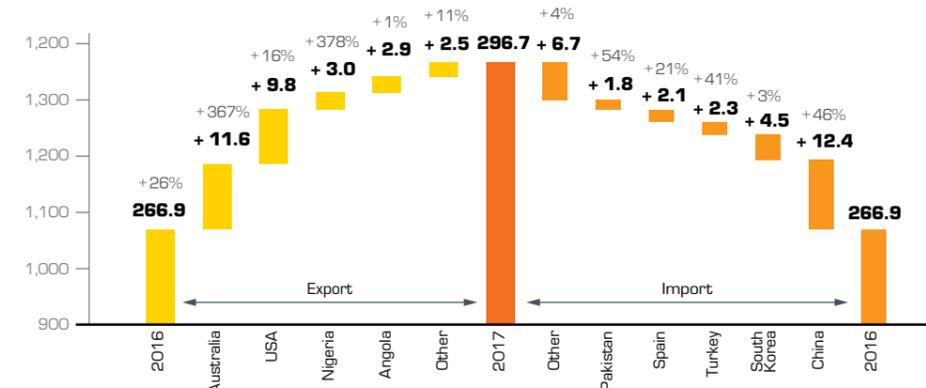
In addition, in December 2017, the first liquefaction train with a nameplate capacity of 5.5 mtpa was launched at the Yamal LNG project in Russia, with LNG supplies from the train totaling 73 thousand tonnes in 2017. In 2017, Qatar, the world's largest LNG exporter, cut its supplies by 1.1% year-on-year to 81.0 mmt. In July 2017, state-owned Qatar Petroleum announced its ambitious plans to expand LNG production capacity to 100 mtpa. Construction of new LNG trains will allow Qatar to retain its position as the leading LNG producer.



After many years of multiple new LNG projects announced across the industry, the market came to a lull. In 2017, the final investment decision<sup>5</sup> was only made for one LNG project, Coral South FLNG (Mozambique, 3.4 mtpa).

## Absolute and Relative Increase in LNG Exports and Imports by Country, 2017 y-o-y, mmt

Source: IHS.



# Long-Term Forecast for Hydrocarbon Demand

Top global energy agencies expect that the weight of hydrocarbons in the global energy mix will remain largely unchanged until 2040. While oil will continue dominating other resources in global energy consumption, its share, as with coal's, will decline in favor of gas, nuclear energy, and renewables. Under IEA's baseline forecast, global oil demand<sup>6</sup> will reach 104.9 mmb

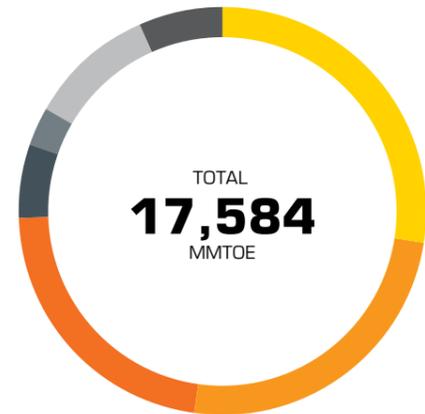
per day by 2040. The bulk of this growth will be attributable to Asia-Pacific<sup>7</sup>, which will account for approximately 37% of global oil demand (39.2 mmb per day). In North America, oil demand will decline to 18.0 mmb per day in 2040, and in Europe, to 8.7 mmb per day, and these regions will provide 17% and 8% of global oil demand in 2040, respectively.

<sup>1</sup> IHS Markit preliminary estimates.  
<sup>2</sup> IHS Markit preliminary estimates.  
<sup>3</sup> Rosneft's estimates based on IHS and IEA data.  
<sup>4</sup> Based on BP data for 2016. 2017 data will be published in June 2018.

<sup>5</sup> Final investment decision (FID) is the decision to proceed with a project. As a rule, FID is taken after the design stage is completed, necessary permits obtained, an EPC (Engineering, Procurement, and Construction) contract signed, and financing sources and target markets for the project products identified.  
<sup>6</sup> Oil demand indicates the consumption of petroleum products from oil and gas condensate; consumption of oil as fuel; and consumption of hydrocarbon components from unconventional sources (GTL, CTL, etc.), excluding biofuel.  
<sup>7</sup> Regional demand does not include demand from international aviation and bunkering.

**Global Energy Consumption by Fuel Type in 2040, IEA's baseline scenario, %**

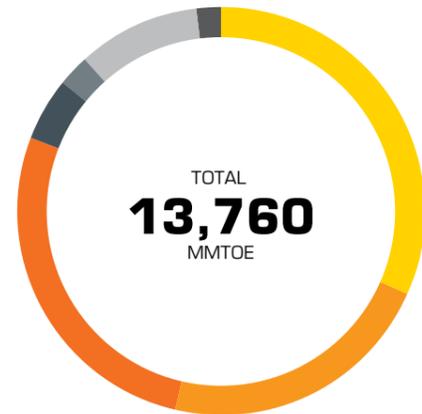
Source: IEA's forecast of November 2017.



- 27.5% Oil
- 24.8% Gas
- 22.3% Coal
- 5.7% Nuclear
- 3.0% Hydro
- 10.2% Biomass (biofuel)
- 6.5% Other renewables

**Global Energy Consumption by Fuel Type in 2016, %**

Source: IEA's forecast of November 2016.



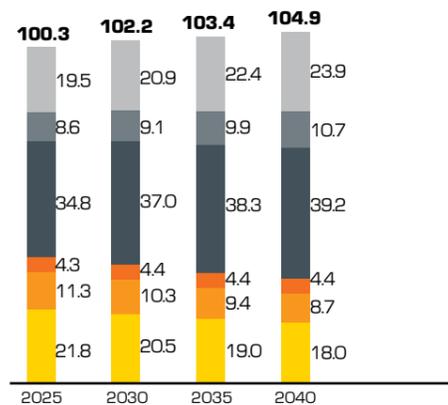
- 31.9% Oil
- 21.9% Gas
- 27.3% Coal
- 4.9% Nuclear
- 2.5% Hydro
- 9.8% Biomass (biofuel)
- 1.7% Other renewables



By 2040, global gas demand<sup>3</sup> will reach 5.30 tcm, with gas consumption expected to grow across the board. The share of gas in global energy consumption will grow from 21.9% in 2016 to 24.8% in 2040, whereas coal will decline from 27.3% in 2016 to 22.3% in 2040.

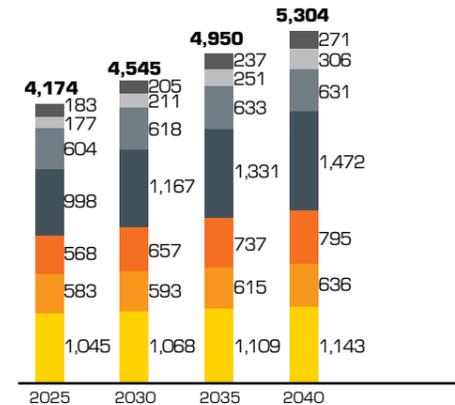
**Oil Demand by Region,<sup>1</sup> IEA's Baseline Scenario, mmb per day**

Source: IEA's forecast of November 2017.



- North America
- Europe
- Eurasia
- Asia-Pacific
- Middle East
- Other<sup>2</sup>

**Gas Demand by Region,<sup>1</sup> bcm**



- North America
- Eurasia
- Middle East
- Asia-Pacific
- Europe
- Africa
- Latin America

<sup>1</sup> Regional demand does not include international aviation (excluded from oil demand estimates only) and bunkering.  
<sup>2</sup> Includes demand for oil from other countries, as well as international aviation and bunkering.  
<sup>3</sup> Regional demand does not include international bunkering.

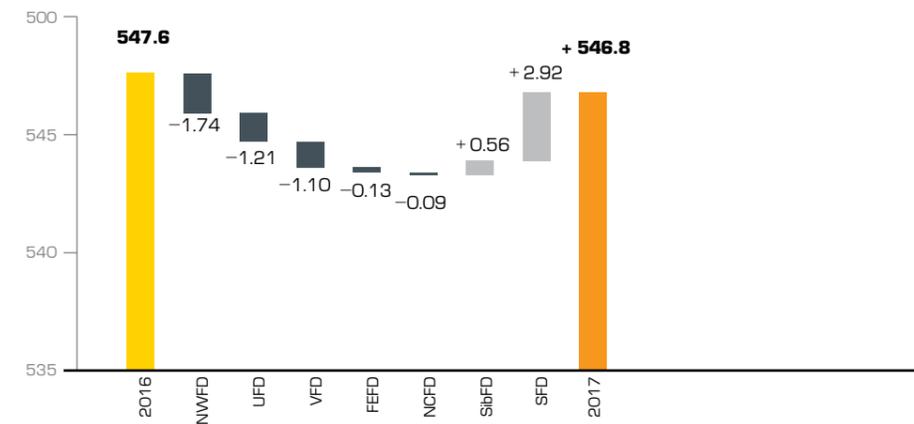
**Russian Oil Industry**

Oil and gas condensate production in Russia amounted to 546.8 mmt in 2017, down by 0.1% year-on-year. The decline results from Russia's participation in an agreement with OPEC countries and other oil producers to cut production in 2017 and 2018.

The Northwestern Federal District was the main contributor to the reduction (down 5.1% year-on-year to 32.0 mmt – 5.9% of Russia's total production), including the 7.2% year-on-year production decrease to 14.0 mmt in the Komi Republic (2.6% of Russia's total production), and by 3.2% year-on-year to 17.3 mmt in the Nenets Autonomous Area (3.2%). Production in the Ural Federal District declined by 0.4% year-on-year to 302.8 mmt (55.4% of Russia's total production in 2017), including a 1.6% year-on-year decline to 235.2 mmt in the Khanty-Mansi Autonomous Area (43%)

**Oil and Gas Condensate Production by Federal District, mmt**

Source: CDU TEK of Russia<sup>4</sup>.



In 2017, Russian oil and gas condensate refining volumes decreased by 0.2% year-on-year to 280 mmt, while oil exports increased by 1.1% year-on-year to 257 mmt, causing the export share in total oil and gas condensate production to rise to 47.0%, reaching its highest level since 2011.

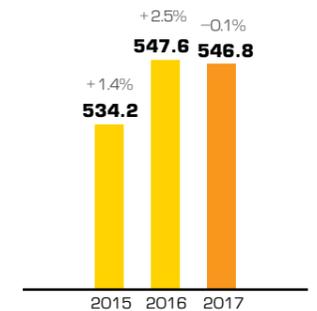
Oil and gas condensate exports to countries outside the CIS increased by 1.2% year-on-year to 238.9 mmt, causing an overall rise in exports. Almost

and a reduction in the Tyumen Region by 11.4% year-on-year to 11.0 mmt (2%), while production in the Yamalo-Nenets Autonomous Area rose by 7.9% to 56.6 mmt (10.4%). Production in the Volga Federal District decreased by 0.9% year-on-year to 117.4 mmt (21.5%).

In 2017, there was a 1.1% year-on-year production growth in the Siberian Federal District, totaling 52.5 mmt, constituting 9.6% of Russia's total production and resulting from increased production in the Krasnoyarsk Region (up 3.8% year-on-year to 23.3 mmt; 4.3%) and the Irkutsk Region (up 2.5% year-on-year to 18.5%; 3.4%). The Southern Federal District also exhibited growth (up 29.7% year-on-year to 12.7%; 2.3%) due to increased production in the Astrakhan Region (up 57.9% year-on-year to 9.2%; 1.7%).

**Oil and Gas Condensate Production in Russia, mmt**

Source: CDU TEK of Russia.



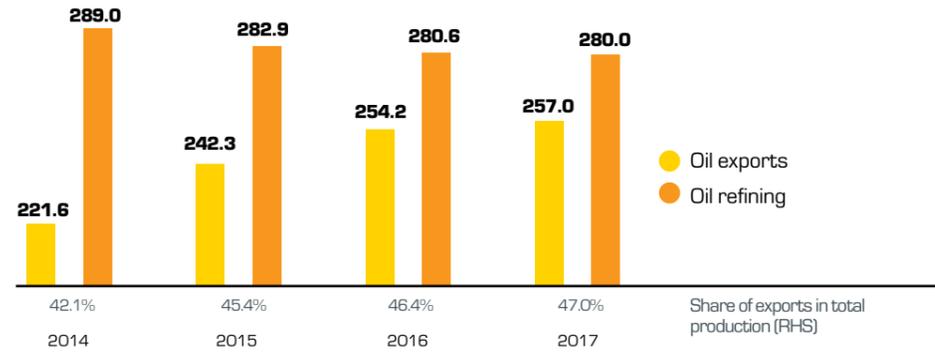
66% (approximately 157.2 mmt) of export volumes outside the CIS were transported by sea, including 18.4% via Primorsk and 13.3% via the Kozmino oil port. Meanwhile, oil and gas condensate exports to CIS countries decreased by 0.4% year-on-year to 18.1 mmt in 2017.

The "big tax maneuver" in the Russian oil industry resulted in a 3.8% increase in oil production in 2017 compared with 2014. Exports grew by 16.0%, while oil refining volumes decreased by 3.1%.

<sup>4</sup> Central Dispatching Department of the Fuel Energy Complex of the Russian Federation.

### Russian Oil and Gas Condensate Exports and Refining, mmt

Source: CDU TEK of Russia.



## Russian Gas Industry

In 2017, natural and associated gas production in Russia increased by 7.9% year-on-year, reaching 691.1 bcm.<sup>1</sup> Rosneft produced 67.6 bcm of gas, constituting approximately 10% of the country's total production.

Gas produced in Russia is both sold on the domestic market and exported.

Russia's natural gas exports amounted to 225.8 bcm in 2017, up by 5.8% year-on-year. Total supplies via Gazprom's pipeline system<sup>2</sup> were 210.2 bcm, 175.9 bcm of which was exported to countries outside the CIS, resulting in a 6.8% increase year-on-year, while exports to CIS countries totaled 34.3 bcm, up 0.8% year-on-year. A total 15.6 bcm (up 6.1% year-on-year) was exported as LNG, mostly by members of Sakhalin-2 PSA<sup>3</sup> consortium.

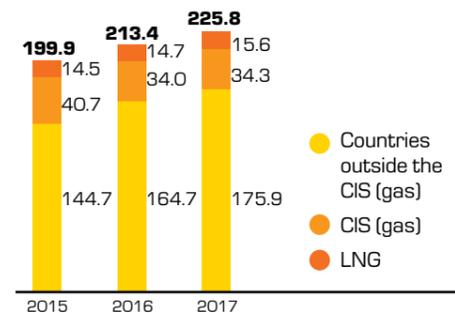
Major gas consumers in Russia include power generation companies, households, utilities, and companies in the oil, metals, and agrochemical industries, altogether accounting for almost 80% of the country's total gas consumption.

Rosneft supplies gas to industrial consumers, as well as to households and municipal utilities.

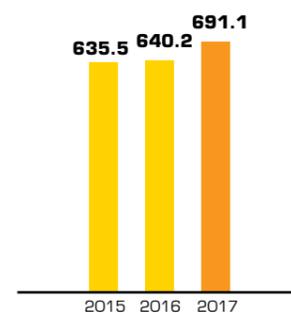
Rosneft's selling prices of gas are based on agreements with customers, and are not regulated by the Government. The wholesale prices of gas produced by Gazprom and its affiliates and sold

### Gas Exports from Russia, bcm

Source: Federal Customs Service of Russia, CDU TEK.



### Gas Production in Russia, bcm

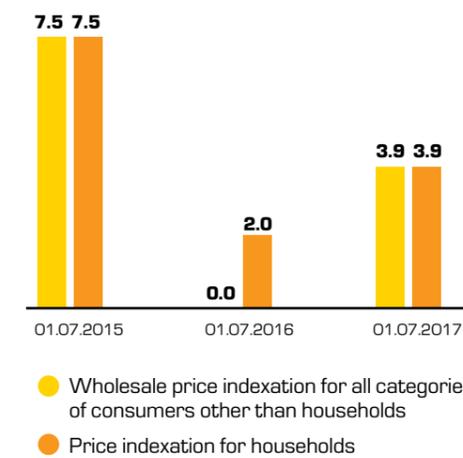


to domestic consumers are used as a benchmark. The prices are fixed by orders of the Federal Anti-Monopoly Service of the Russian Federation ("regulated gas prices").

Regulated gas prices differ by region, generally depending on the distance from the gas production hub in the Yamalo-Nenets Autonomous District.

### Actual Growth in Regulated Gas Prices in Russia, %

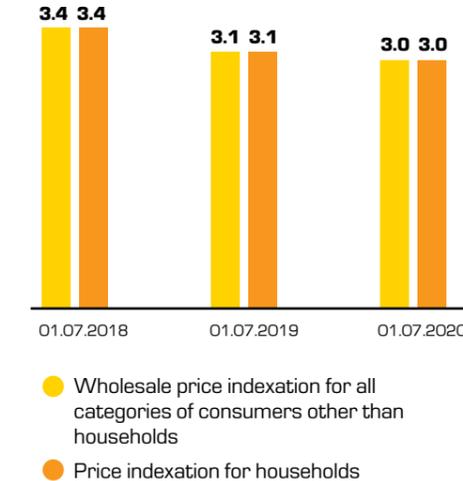
Source: Forecast of Social and Economic Development of the Russian Federation for 2018 and for the 2019-2020 Planning Period, approved at a meeting of the Government of the Russian Federation on 29 June 2017.



Current wholesale prices of gas produced by Gazprom and its affiliates for all categories of Russian consumers (excluding households) were set by Order No. 776/17 of the Federal Anti-Monopoly Service dated 13 June 2017, and the wholesale gas prices for households were set by Order No. 1870/16 of

The indexation benchmark for regulated gas prices is the Forecast of Social and Economic Development of the Russian Federation, published by the Ministry of Economic Development of the Russian Federation.

### Indexation of Regulated Prices (Tariffs) for Infrastructure Sector Products (Services) in 2018-2020, %



the Federal Anti-Monopoly Service dated 26 December 2016. Pursuant to the above Orders, regulated gas prices for household consumers were indexed by 3.9% as of 1 July 2017.

<sup>1</sup> CDU TEK of Russia.  
<sup>2</sup> Pursuant to Federal Law of the Russian Federation No. 117-FZ On Gas Export dated 18 July 2006, the exclusive right to gas export shall be granted to the owner of the Unified Gas Supply System or to its wholly-owned subsidiary.  
<sup>3</sup> Production Sharing Agreement.

Independent gas producers use the Gazprom-owned Unified Gas Supply System for gas supplies to consumers, and transportation charges are set by the FAS Russia (previously by the FTS<sup>1</sup>). Gas transportation service prices are based on a tariff consisting of two fees, one for the use of gas pipelines and the other for gas pumping. The pipeline usage fee depends on the distance between the “inlet” and the “outlet” points, while the pumping fee depends on Gazprom’s handling and transportation costs.

Current tariffs were approved by Order No. 216e/1 of the FTS dated 8 June 2015, and were not revised in 2016 or 2017.

Gazprom also offers underground gas storage (UGS) services to independent gas producers, and 25 underground gas storage facilities are currently located in the main gas consumption regions. Fees for UGS usage are not regulated and are

set by Gazprom on a case-by-case basis for each UGS facility. Rosneft makes use of UGS facilities to offset seasonal and other fluctuations in gas consumption by end users.

In recent years, the domestic gas market has been characterized by increased competition for consumers and a gradually expanding share of independent producers in the total volume of domestic gas sales.

The St. Petersburg International Mercantile Exchange was launched on 24 October 2014 pursuant to the order of the Presidential Commission for Strategic Development of the Fuel and Energy Sector and Environmental Safety. In 2017, it continued to develop organized trade in natural gas, amounting to 20 bcm in trade volume. Since its launch, the Exchange has organized the sale of close to 45 bcm of gas.

## Overview of Key Taxation Changes in the Russian Federation With the Largest Impact on the Company’s Financial and Business Operations

### “BIG TAX MANEUVER”

Another phase of the “big tax maneuver” initiative was completed in 2017. From 1 January 2017 the base rate of the mineral extraction tax (MET) on oil was raised from RUB 857 per tonne to RUB 919 per tonne. The K coefficient in the formula for calculating the total export duty rate for 2017 was set at 30% (42% in 2016) if the average Urals crude oil price (Coil) on global markets exceeds USD 182.5 per tonne {Rate (total) = K \* (Coil – 182.5) + 29.2}.

At the same time, pursuant to Federal Law No. 401 -FZ dated 30 November 2016 (as amended by Federal Law No. 254 -FZ dated 29 July 2017), an additional component (Kk) will be included in the MET rate for oil for the period from 2017 through to 2020. The additional component amounted to RUB 306 per tonne in 2017.

### INCREASE IN THE RATES OF EXCISE ON PETROLEUM PRODUCTS

The Rates of Excise on Individual Petroleum Products were Raised in 2017, RUB per tonne

Types of Excisable Goods	Previous Target Excise Rates for 2017 (Federal Law No. 34 -FZ dated 29 February 2016)	Actual Excise Rates in 2017 (Federal Law No. 401 -FZ dated 30 November 2016)
Motor gasoline		
■ Non-compliant with Euro 5	12,300	13,100
■ Euro 5 compliant	7,430	10,130
Diesel fuel	5,093	6,800
Motor oil	5,400	5,400
Straight-run gasoline	12,300	13,100
Benzene, paraxylene, orthoxylene	2,800	2,800
Jet fuel	2,800	2,800
Middle distillates	5,093	7,800

<sup>1</sup> FTS – Federal Tariff Service of Russia was relinquished by Presidential Decree No. 373 dated 21 July 2015, with the FAS Russia appointed as its successor.

### CHANGES TO THE INCOME TAX CALCULATION AND PAYMENT PROCEDURE

Pursuant to Federal Law No. 401 -FZ dated 30 November 2016, special rules were introduced in 2017 concerning loss recognition for the purpose of the corporate income tax: From 2017 to 2020, taxpayers may reduce the tax base in the current reporting (tax) period by excluding prior period losses in the amount of up to 50% of the tax base in the current tax period, with no limit on the amount of losses excluded after 2020.

As of 2017, the procedure for calculating the tax base of consolidated taxpayer groups was changed and a limit was introduced on reducing the profit generated by some members of consolidated taxpayer groups during the given reporting (tax) period by the amount of losses incurred

by other members of the consolidated taxpayer group (up to 50% of the profit generated by profitable members of the consolidated group of taxpayers).

The previous limit of 10 years on carrying loss forward was additionally lifted from all taxpayer categories, including the consolidated group of taxpayers.

Pursuant to Federal Law No. 401 -FZ dated 30 November 2016 during the period from 2017 through to 2020, part of the income tax payments toward the regional budget amounting to 1 percentage point of the tax rate will be redistributed to the federal budget (now 3% in place of the previous 2%), thereby reducing payments to the regional budget.

### FURTHER CHANGES IN TAX LEGISLATION

As of 1 January 2018, the companies producing oil from license areas located completely within the boundaries of the Nizhnevartovsk District of the Khanty-Mansi Autonomous Area – Yugra with initial recoverable reserves of 450 mmt or more each as at 1 January 2016, will be eligible for a MET deduction in the amount of RUB 2.917 bln for the tax period (calendar month) until 31 December 2027 inclusive. License areas in the Samotlor field with subsoil use rights owned by the Company meet these criteria.

As of 2018, a new taxation procedure will apply to the property tax on movable property and energy-efficient property, whereby regional authorities of the Russian Federation will be authorized to exempt these categories of property from taxation. A transition period is provided for movable property, and in 2018 the tax rate for the movable property taxation will not exceed 1.1%.

# 1.7. COMPETITIVE ANALYSIS

## Hydrocarbon Exploration and Production

Rosneft is the largest oil and gas company in Russia, and among public oil and gas companies, it is the world's largest holder of hydrocarbon reserves and producer of hydrocarbon liquids maintaining a steady growth of economically recoverable hydrocarbon reserves. This is achieved through consistent efforts to increase production from brown fields and launch new fields and prospects, as well as through successful implementation of the exploration program. Rosneft places a special focus on exploration and steady reserves growth at existing license areas, including new regions and the Arctic shelf, as well as resource base integration and expansion across new assets and license areas. According to the audit performed by DeGolyer & MacNaughton under the SEC (U.S. Securities and Exchange Commission) life-of-field classification, Rosneft's proved hydrocarbon reserves totaled 39,907 mmboe (5,395 mmtoe) as of 31 December 2017. Hydrocarbon reserves grew by 2,135 mmboe (284 mmtoe), or 6%, year-on-year. Rosneft's organic SEC-proved reserve

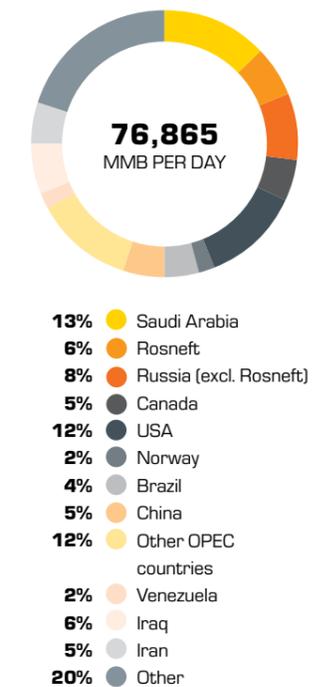
replacement ratio stood at 184%,<sup>1</sup> and its SEC-proved reserve life amounted to 20 years. For several years, Rosneft has been a prominent leader among major public international oil companies in proved reserve life and proved reserve replacement ratio, as well as in exploration and development costs.

As at 31 December 2017, the Company's reserves under the PRMS (Petroleum Resources Management System) classification comprised 46,520 mmboe (6,303 mmtoe) of 1P reserves, 83,838 mmboe (11,357 mmtoe) of 2P reserves, and 120,853 mmboe (16,386 mmtoe) of 3P reserves. 1P reserves grew by 1%, 2P reserves grew by 2%, and total 3P reserves grew by 4% in 2017.

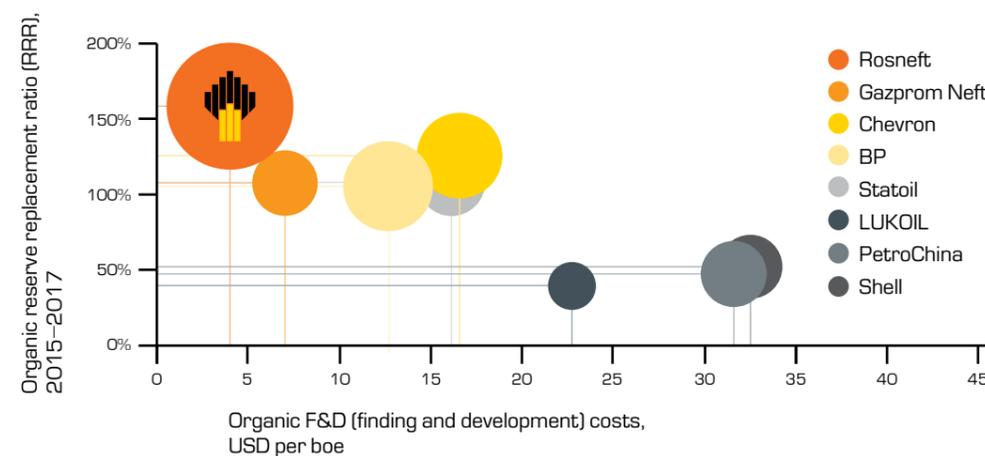
Rosneft is the leader among major Russian and international public oil and gas companies in both volume and cost of organic reserve additions due to its traditionally high efficiency in exploration.

### Global Oil Production in 2017

Source: Wood Mackenzie.



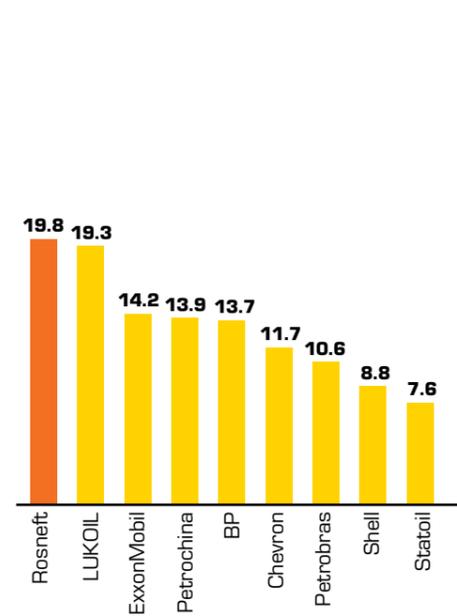
### Reserve Replacement and Upstream Costs<sup>2</sup>



The pie size reflects the organic reserves additions in 2015-2017.

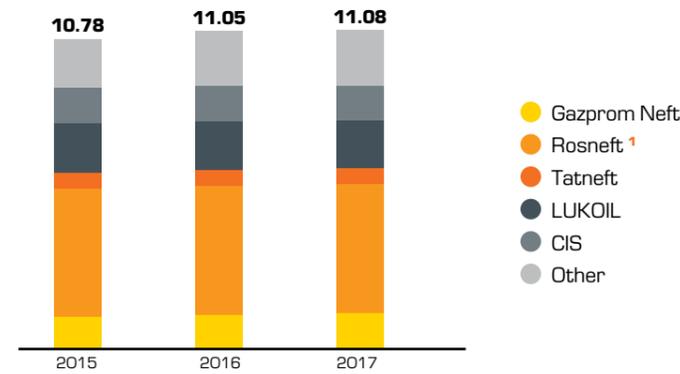
<sup>1</sup> Reserve replacement ratio is calculated in tonnes of oil equivalent; Rosneft's reserve replacement ratio in barrels of oil equivalent was estimated at 186%.  
<sup>2</sup> Including affiliates. Rosneft and PetroChina – excluding affiliates. ExxonMobil and Petrobras are not shown in the chart as they demonstrated negative additions.

Reserve Life (SEC) in 2017, years<sup>2</sup>

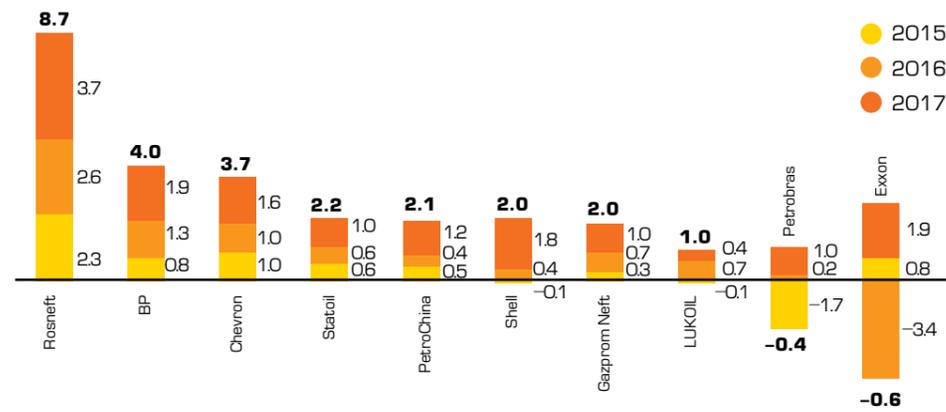


Oil and Gas Condensate Production in Russia, mmb per day

Source: CDU TEK.



Organic Reserves Growth (SEC),<sup>2</sup> bboe



The Company's share in the total oil production of Russia is 41%, and approximately 6% in global oil production.

For years, Rosneft has steadily maintained high levels of its reserve replacement ratio, and intends to replace at least 100% of its hydrocarbon production in 2018–2022 (reserve replacement cost in 2015–2017 was USD 0.2 per boe). The Company also plans to fast-track development of new reserves with shorter project preparation timelines, accelerate resource transfers to reserves based on viability, and improve exploration drilling success rates within the Russian Federation.

Given Russia's commitment under the OPEC+ production cut deal, the Company's average daily liquid hydrocarbons production grew 0.04% (on a pro-forma basis) in 2017 year-on-year (including Bashneft assets from the beginning of 2016). Consolidating production from new assets from the date of acquisition, Rosneft's daily hydrocarbon production grew by 7.6% in 2017, ranking higher than most public oil and gas companies in addition to leading its competitors in average hydrocarbon production growth rate over a 10-year period.

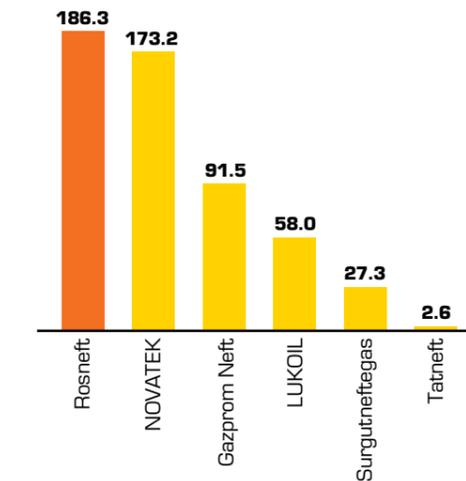
Long-term production growth is ensured by the Company's optimal portfolio of new major upstream projects and the use of advanced production technologies at its existing fields. In 2017, Rosneft commissioned the Kondinskoye field of the Erginsky cluster (Khanty-Mansi Autonomous Area) and the Severo-Tyamkinsky, Kosukhinskoye, the Severo-Tamarginskoye field of the Uvat group of fields (Tyumen Region), and the Kuzovatkinskoye field (Khanty-Mansi Autonomous Area). The Company also began comprehensive technological testing of the Yurubcheno-Tokhomskoye field in the Krasnoyarsk Territory. While

developing these fields, the Company utilizes new drilling technologies (including horizontal well drilling) that have proved to be efficient at the Company's existing fields, enabling development of significant oil and gas reserves, including hard-to-recover reserves. In the medium term, the Company's higher production volumes through organic growth will be ensured by enhancing production from mature fields and developing new high-potential oil and gas projects, including the Vankor cluster, the Erginsky cluster, the Russkoye, Kharampur and North Komsomolskoye fields, Rospan, and the Kynsko-Chaselskoye group of fields.

Against the backdrop of the increasing global production and use of gas as the cleanest fossil fuel, Rosneft continues to expand upon its gas production, keeping its share in total hydrocarbon production volumes at 20% following integration of new, mostly oil, assets. The Company was a leader among independent Russian gas producers in terms of daily average gas production in 2017.

Gas Production in Russia,<sup>3</sup> bcm per day

Source: CDU TEK, for Rosneft – the Central Dispatch Office of Rosneft.



<sup>1</sup> Rosneft data for 2015 and 2016 is shown in the pro-forma including Bashneft, since 1 January 2015.  
<sup>2</sup> Including affiliates. Data for PetroChina does not include affiliates.

<sup>3</sup> Gas production including gas used for LH production.

While expanding its resource base and ensuring a stable gas production growth within the Russian Federation, the Company puts a strong focus on developing its gas business, improving production technologies, building the gas value chain, and implementing natural gas monetization strategies effectively, including LNG production projects, the program on NGV fuel market development in the Russian Federation, building a portfolio of long-term contracts for gas supplies to the domestic market, and capturing gas export opportunities.

Development of the Zohr field, one of the largest gas assets, in partnership with world majors and Rosneft's strategic partners, Eni (60%) and BP (10%), will expand the Company's expertise in joint development of offshore gas fields and sharpen its competitive edge in new, major international exploration and production projects. Through participating in the development of this unique production asset, Rosneft will rapidly increase its gas production abroad and enter the Egyptian gas market, thereby providing opportunities for the Company to further expand its presence in the country and region.

## Downstream (Refining and Commerce)

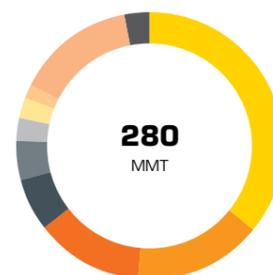
Rosneft is the largest oil and gas refining company in the Russian Federation. In recent years, the Company's oil refining operations have been focused on meeting the market demand for high-quality petroleum products. Rosneft has been consistently implementing a refinery upgrade program for several years, including renovation of the Komsomolsk Refinery, upgrade of the Tuapse Refinery, and renovation and upgrades of the Achinsk Refinery, Angarsk Petrochemical Company, and Samara group refineries, thereby increasing the quality and competitiveness of Rosneft products. Rosneft's refinery upgrade program is the most ambitious of its kind in the Russian oil industry; one of its aims is to fulfil the Company's obligations under a quadripartite agreement. Within the program, the Company fully transitioned its motor fuels production for the Russian domestic market in 2015 to Euro 5 compliant motor fuels, as required by the Technical Regulations of the Russian Federation. In 2016, the Company constructed and commissioned catalytic cracking and MTBE production facilities at the Kuibyshev Refinery, a catalyst regeneration unit was put into operation at the Novokuibyshevsk Catalyzers Plant, and a rapid cycle pressure swing adsorption

(RCPSA) unit was launched at the Syzran Refinery. In 2017, the bitumen production unit at the Ryazan Refinery was fitted with a new oxidation feedstock preparation component, and the production of bitumens with improved consumer properties was launched. The Angarsk Refinery installed core large-capacity process equipment for the ongoing construction of its diesel fuel hydrotreater. As part of its import substitution program, the Company transitioned the Achinsk Refinery's kerosene hydrotreaters and the Ryazan Oil Refining Company's catalytic reformers to catalysts produced by the Angarsk Catalyzers and Organic Synthesis Plant in 2016, and the gasoline reforming units of the Kuibyshev and Saratov Refineries were transitioned in 2017.

Rosneft is an active player in the oil and petroleum products market in Russia and abroad. Rosneft is the largest oil exporter in the Russian Federation; its crude oil is exported to European, Asia-Pacific, and CIS countries, sold in the international market, and supplied for refining to the Company's own refineries in Russia and abroad.

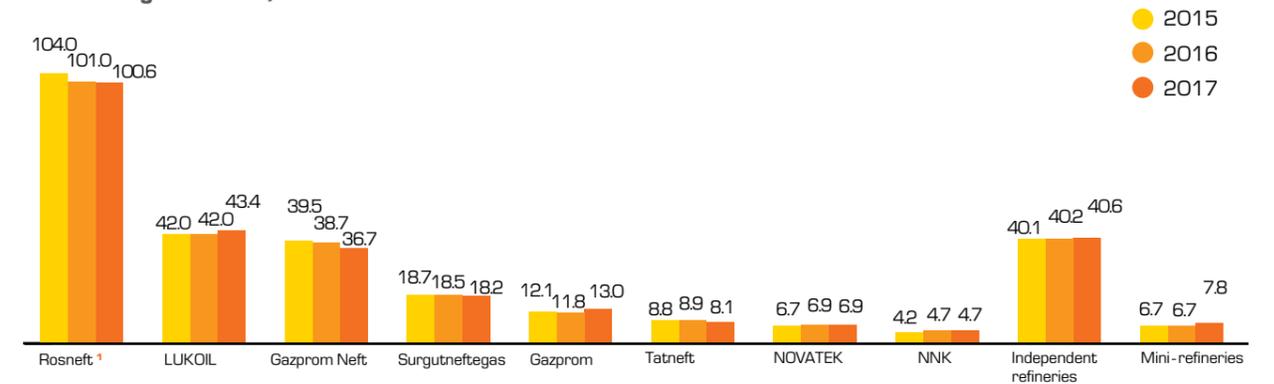
### Russia's Oil Refining Profile, mmt

Source: CDU TEK.



- 100.6 Rosneft<sup>1</sup>
- 43.4 LUKOIL
- 36.7 Gazprom Neft
- 18.2 Surgutneftegas
- 13.0 Gazprom
- 8.1 Tatneft
- 6.9 NOVATEK
- 4.7 NNK
- 40.6 Independent refineries
- 7.8 Mini-refineries

### Oil Refining in Russia, mmt



Amid growing competition in the oil market, the Company pays close attention to boosting its export volumes under long-term contracts, including oil supplies under contracts with CNPC and supplies to Europe under direct contracts. Developing cooperation with key partners in oil supply is essential to enhancing the Company's competitive advantage in the international oil market. In Q4 2016, contracts were signed to supply a total 10.2 mmt of oil to Belarus and 7.3 mmt to Germany in 2017.

Furthermore, an additional agreement was signed to increase oil supplies to China via Kazakhstan by 3 mmt per year to 10 mmt, and the contract was extended to 2019–2023, resulting in up to 56 mmt of oil to be additionally supplied via this route by 2023.

The Company is consolidating its competitive position in the European market through refining oil at German refineries. As of 1 January 2017, following the restructuring of the ROG joint



<sup>1</sup> Rosneft's financial statements.

<sup>1</sup> Rosneft data for 2015 and 2016 is shown in the pro-forma including Bashneft, since 1 January 2015.

venture with BP Plc, Rosneft's indirect interest increased to a 25% stake in the Bayernoil Refinery from 12.5%; a 24% stake in the MiRO Refinery from 12%; and a 54.17% stake in the PCK Refinery (Schwedt) from 35.42%. The Gelsenkirchen Refinery is now fully controlled by BP Plc.

Rosneft is consistently implementing plans for diversification in the Asia-Pacific markets. Rosneft successfully closed a strategic deal to acquire a 49% in Essar Oil Limited in August 2017. The acquisition of a stake in a best-in-class asset with significant development potential enabled the Company to enter the Indian oil refining market, one of the world's fastest growing markets. Rosneft has already begun supplying oil from its contract portfolio to the Vadinar Refinery. The Company's entry to the new growth markets in Asia-Pacific will be supported by establishing strategic partnerships with the region's oil and gas companies, the expansion of direct oil and petroleum product supplies, and implementation of new projects.

A Group Subsidiary signed a contract with the Iraqi Kurdistan Regional Government for the purchase and sale of oil in 2017–2019, its execution will expand the Company's trading opportunities and enable a higher cost efficiency of feedstock supplies to the Company's foreign refineries.

The Company's main competitors in Russian oil exports are Russian vertically integrated companies such as LUKOIL, Surgutneftegas, and Gazprom Neft. At the same time, all Russian producers have their own export schedule for oil transportation outside the Russian customs zone based on equal access to the oil trunk pipeline system and seaport terminals. The main competitors supplying other crude oil grades to the export market are international and national oil companies such as Shell, BP, ExxonMobil, Chevron, Total, Statoil, Saudi Aramco, NIOC, etc.

Rosneft is one of the largest players on Russian gasoline and diesel fuel markets, operating the largest retail chain in Russia, with 2,901 filling stations. Petroleum products are sold in the domestic market across all federal districts of the Russian Federation. The Company relies on extensive own and third-party infrastructure for marketing and distribution of petroleum products (oil depots, filling stations), which takes into account the capacity of regional markets and consumer demand. The Rosneft trademark is one of the most recognizable in the oil products market across the regions of the Company's operation, and it is associated with high-quality fuel sold at filling stations.

As with oil, the Company's petroleum products are exported to European, Asia Pacific, and CIS countries. The Company's competitive advantage is its ability to maintain stable relations with foreign partners, and in particular, expand and renew oil product supply contracts. In Q4 2016, Rosneft signed a new contract with JX Nippon Oil & Energy Corporation for the delivery of up to 1.1 mmt of stable natural gasoline during 2017. To promote existing partnership relations between Petrocas Energy (Rosneft Group Subsidiary) and Motor Oil Hellas (Greece), in Q4 2017, Rosneft, Petrocas Energy, and Motor Oil Hellas Corinth Refineries signed a trilateral agreement of intent for crude oil and petroleum products supply in the next five years, which includes the option to increase supply volumes by 7.5 mmt per year.

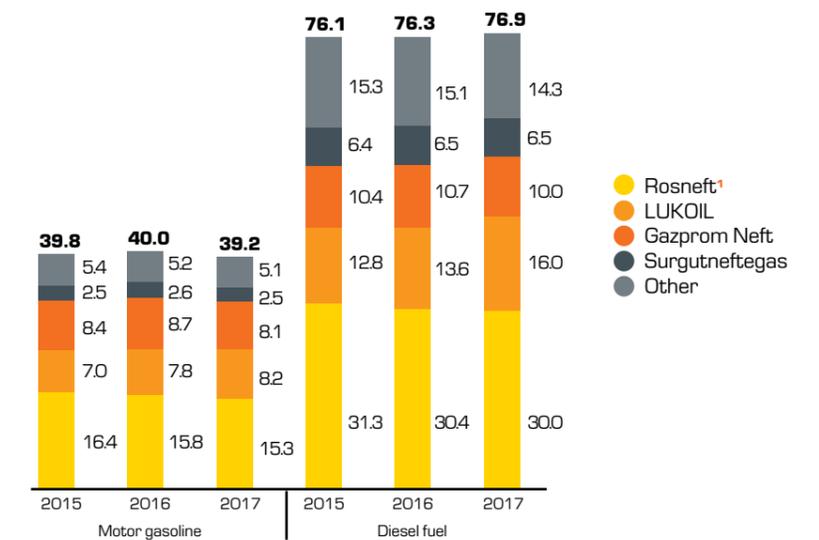
Expanding the geographical distribution of its petroleum products is a crucial priority for the Company. In Q1 2017, Rosneft and Turkish Demiroren Group Companies signed an agreement on petroleum products supply in 2018–2020. The agreement determines the intention of the parties to sign an additional contract for the supply of up to 4.6 mmt of petroleum products by 2020, including 3.6 mmt of diesel fuel with an ultra-

low sulfur content of 10 ppm as well as 1.0 mmt of liquefied petroleum gas. Following the contract's signing, Rosneft will considerably strengthen its position in the Turkish market, and will be able to supply an additional 11.3% of imported diesel fuel, making up about 6% of all diesel fuel consumed in the country. Furthermore, Rosneft and BA Gas Enerji Sanayi ve Ticaret A.S. entered into a cooperative agreement to arrange the supply of up to 6 mmt of petroleum products per year, including those produced by Rosneft, to end consumers in Turkey.

The Company's main competitors in domestic sales of petroleum products are Russian vertically integrated companies such as LUKOIL, Surgutneftegas, Gazprom Neft, and Tatneft, while the main competitors supplying petroleum products to the export market are major international oil companies such as Shell, BP, Total, ExxonMobil, and Chevron.

Motor Fuels Production in Russia, mmt<sup>1</sup>

Source: CDU TEK.



<sup>1</sup> Financial statements. Rosneft data for 2015 and 2016 is shown in the pro-forma including Bashneft, since 1 January 2015.