ANNUAL REPORT 2018

Changing ourselves – strengthening Ukraine
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It is great privilege for me to chair Naftogaz supervisory board in such a difficult and important period for both the company and Ukraine.

I had hoped to be part of crucial reforms to improve the quality of life for tens of millions of people and to enhance the energy security of a young democracy fighting for its independence. The job carries huge responsibilities.

The board’s key priority is to help Naftogaz create great wealth for the Ukrainian people. To do that, we need professional management and immunity to political interference.

Over the past few years, Naftogaz has become a showcase of successful reforms in a big Ukrainian state-owned company. Naftogaz was the first state-owned company to obtain an independent supervisory board and swiftly progressed from a loss-generating black hole to the biggest taxpayer.

Unfortunately, these reforms have recently been largely reversed. This reversal puts at risk the great strides Naftogaz has been making in ensuring it is internationally competitive and is maximizing the value of its assets.

The government needs to reinstate good corporate governance at Naftogaz and then safeguard those achievements and make the changes irreversible. To do this, OECD recommendations on the corporate governance reform at Naftogaz should be implemented.

In its report State-Owned Enterprise Reform in the Hydrocarbons Sector in Ukraine issued in 2019, the OECD highlighted a number of positive changes in Ukraine, including the following:

- enacting the natural gas market law, which aimed to facilitate the implementation of the Third energy Package and other elements of the EU acquis, and introducing transparent public service obligation (PSO) regime for categories of protected consumers; with plans to align gas prices with the market;
- specifying a gas transit operator as part of its unbundling and certification requirements, while also introducing opportunities for more investment and private participation in the energy sector;
- transforming the corporate governance of Naftogaz, including establishing the first-ever independent supervisory board using as a benchmark the OECD Guidelines on Corporate Governance of SOEs;
- progressive upgrading of the SOE corporate governance frameworks, including independent board requirements and external independent audit; annual aggregate reporting by the state-owner; passing the long-awaited Law “On privatization of state and communal property”; and professionalizing board nomination practices.

The OECD also notes that the Ukrainian government needs to make a series of important regulatory decisions to accomplish the corporate governance reform at Naftogaz. First and foremost, to empower the supervisory board with the necessary authority to carry out core functions of hiring/firing of CEO, approve strategy, financial and investment plans as well as to assign an appropriate level of operational autonomy to the executive board and the CEO. The latter includes eliminating the requirement for the government to approve business transactions in the presence of a proper system of internal controls.

For more effective governance, Naftogaz should have control over its assets, including those that are owned by fully-owned subsidiaries. The organizational transformation of Naftogaz group with the transition from separate legal entities to business divisions will ensure relevant functions are not duplicated in individual subsidiaries and facilitate the implementation of best international practices in finance, human resource, strategy, legal, IT and other functions.

Every year’s production depletes our oil and gas fields. To maintain production requires new investment, and increasing production requires additional investment on top. With the government’s take of Naftogaz profits, which was 50% in 2017, rose to 75% in 2018 and is proposed to be 90% in 2019 the company cannot fund the level of investment required even to maintain production. It can only get the funds necessary to invest in increasing production from external sources. Recent deterioration in Naftogaz’s charter and its new dependence on government make the said sources somewhat less accessible, though this funding option remains top priority for production increase.

Naftogaz transit contract with Gazprom terminates at the end of 2019. There is no new contract currently in place. This means we have to plan for the worst-case scenario – the termination of Russian gas transit after 2019 – and design an emergency plan for complete loss of the transit revenue.

In order to ensure domestic and international gas flows in 2020 we will require additional cushion gas. Again, just as with investment for production, Naftogaz will need capital to enable it to buy the necessary gas. Gas will have to be purchased and come into storage over 2019 to be available for 2020.

Since becoming Chair of Naftogaz supervisory board I have taken personal responsibility to deliver TSO unbundling alongside our CEO, Andriy Kobolyev. To ensure everyone can hold Naftogaz to account we hold quarterly stakeholder meetings to report on progress. We are committed to delivering an unbundled TSO by June of this year, allowing time for the necessary legal and legislative actions to be out in place to ensure a fully unbundled TSO by 1 January 2020 when the current contract with Gazprom expires. In order to maintain our ability to pursue our ongoing arbitration with Gazprom, which could be worth USD 10.4-14.8 billion, it is important for Naftogaz to continue to have an economic interest in the assets of the TSO. This requires an ISO model for unbundling.

To be a true ISO it is essential for customers of the pipeline network that the new unbundled TSO treats them in the same non-discriminatory way as they would be treated if the TSO were in fact ownership unbundled. Naftogaz is committed to ensuring that this will be customers reality and we will work with the regulator to deliver this outcome. TSO and SSD branches are already operating within Ukrtransgaz; and the consortium of potential partners for the Ukrainian GTS has been formed. We expect secondees from the consortium to be embedded into the TSO well before June. The international consortium’s involvement is expected to continue into 2020 which should help to ensure both good governance in the new unbundled TSO, and that the new TSO treats all customers in a non-discriminatory way regardless of the economic interests in its assets.

For Naftogaz to continue generate profit and create value for its ultimate owner – the people of Ukraine – the government as a shareholder needs to ensure both the financial stability of the company and the company’s independence from government.

Without both these conditions, the company will not be able to borrow from international markets on beneficial terms. Without capital Naftogaz cannot deliver adequate levels of investments into upstream or fill underground gas storages before the winter season.

I am grateful for the immense support we get from Ukrainian reformers and international stakeholders in changing Naftogaz. The group’s success could be an important driver in the reform of the overall SOE sector in Ukraine and produce far-reaching implications for the society, citizens’ everyday life and other businesses.
Over the last five years, Ukraine has done more to reform its energy sector than during the entire previous period since independence in 1991. Naftogaz is an example of these changes. Unlike in 2014, we no longer pose a threat to Ukraine’s independence. Instead, the company is now central to safeguarding Ukraine’s energy security.

Due to these changes, the Kremlin can no longer dictate to Ukraine over the availability of gas and heat in Ukrainian homes. The reliability of Ukraine’s gas transmission system has helped create a powerful international coalition in the fight against Russian aggression. Meanwhile, modern Western technologies have finally reached Ukraine, helping us to compensate natural declines and increase gas production.

Unlike many previous years, Naftogaz is now the largest contributor to the state budget and supports the Ukrainian government in their efforts to maintain macrofinancial stability. We now face the challenge of preserving these achievements and unlocking the true potential of Naftogaz group. This challenge is crucial, especially as we look ahead to unbundling and the separation of gas transmission activities from Naftogaz group from 1 January 2020.

Our vision for the future

Our objective is to transform Naftogaz from a highly bureaucratic structure into the most efficient energy company in the region. We aim to become flexible, consumer-oriented and competitive in our key markets. The goal is to ensure that the value created by our group is clear and tangible for Ukrainian consumers. We strive to become a company that deserves to be admired.

To reach these objectives, we launched the structural transformation of Naftogaz last year. We have thoroughly analyzed all group assets, risks and opportunities in the markets where we operate. We believe that in the event of successful transformation, Naftogaz can provide Ukraine with an additional 5% of GDP annually and increase the company’s value by USD 35 billion in the medium term.

From 2019, our units will be grouped into business units: Integrated Gas, Oil, Technical, Transmission and Storage and others. Specific goals and clear performance targets will be set for each division. Individual division managers will be personally responsible for the operational and financial results of their division.

In order to be successful, we must become the most attractive employer in Ukraine for gifted and ambitious professionals. We strive to be a transparent and trustworthy employer where personal responsibility is encouraged and where everybody adheres to the highest ethical standards.

In pursuit of these goals, we aim to build a long-term partnership with leading international companies. This will help Naftogaz to integrate into the global economy, paving the way for our country’s continued integration.

Why this is important

First, transformation is a national priority. Given Naftogaz’s size and the attention focused on the group, we have a unique opportunity to lead the way towards Ukraine’s energy independence. We are sufficiently visible to become a model for reform, and to attract significant investment on reasonable terms. I regard this as both an opportunity and a responsibility for Naftogaz.

Second, Ukrainian society stands to benefit directly from our success because we are a 100% state-owned company. By earning money for Ukraine, we help the government do more for all our compatriots.

Third, the transformation process is also important for our customers. We provide gas and energy services, directly or indirectly, to about 90% of Ukrainian homes. In the process of transformation, we plan to increase the number of customers we provide services. We strive to offer reliable delivery, transparent and fair rules, and as high-quality service to Ukrainian consumers. Such service is still far too uncommon in the Ukrainian utility market.

And finally, successful transformation is also important for our team. It will allow them to work in an environment where quality is recognized and rewarded. This is an opportunity for each of us to take responsibility and to change the situation for the better. It is a chance to do something important for Ukraine while developing personally and growing professionally.

How to reach our goals

Making a success of this transformation requires considerable efforts. We plan to:

- Ensure a smooth and timely unbundling of the GTS operator, which will help Ukraine maintain gas transit and improve the efficiency of the domestic gas market.
- Continue developing gas extraction, both independently and together with international partners.
- Achieve complete liberalization and transparency of the national gas market.
- Become a direct supplier of utilities. We aim to take advantage of our experience and position in the market to serve the end user without intermediaries, while at the same time making the utility market more transparent and efficient.
- Enter the energy efficiency market. We plan to offer energy services to households that will help reduce inefficient energy use and decrease customer gas and heat expenditures.
- Enter the renewable energy market using our extensive infrastructure in an optimal way.
- Upgrade infrastructure by implementing the highest IT and automation standards, increasing operational efficiency, and developing our technical capabilities. To achieve this, we need to tackle many issues, from implementation of large-scale IT systems to small but important innovations that will improve the operations of our drilling, mining and transport departments.
- Comprehensively transform our organization, including systems, processes, culture and people. We are developing a new performance management system that will attract and retain talented professionals, give them the opportunity to demonstrate results and receive due recognition.
- Continue corporate governance reform in line with OECD recommendations so that decisions are made quickly, in a transparent way, and in the best interests of the company.
- Ensure high-quality unbundling and preserve gas transit through Ukraine.

We will continue to adhere to our core values of openness, fairness, courage and conscientiousness in everything we do. They will drive the changes in the group from the inside.

In addition to internal transformation, we need to reboot relations with the government and to enhance constructive cooperation with civil society and other stakeholders.

We are well aware that without this step, any further progress in the reforms initiated at Naftogaz is impossible.

As early as in July 2019, we will have to deal with unprecedented challenges caused by a potential liquidity shortage.

In order to cope with these challenges, we need support and combined efforts of a wide range of stakeholders, in order to:

- Change the rules of the game in the national gas market so that Naftogaz does not have to finance the failure to pay by some if its counterparts.
- Ensure that Naftogaz is able to raise debt on attractive terms. Since 2014, our loan portfolio has decreased 6.6 times and is currently unnaturally low for an oil and gas company.
- Ensure high-quality unbundling and preserve gas transit through Ukraine.

I sincerely believe that by working together, being passionate about our business, open and accountable to each other, we are able to make a significant contribution to the development of Ukraine and the well-being of its citizens. I am sure that together, we will make Naftogaz a better company and achieve results that Ukrainians can take pride in.
MARKET AND REFORMS
At first glance, last year’s results i.e. the key macroeconomic indicators give no rise for pessimism. They appear to be the best in the last five-year period – since the Revolution of Dignity, the annexation of the Crimea, and the occupation of territories in eastern Ukraine:

• GDP growth rate exceeded that of 2017 by almost 0.8 percentage points.

• Inflation, for the first time in 5 years, is not within the two-digit range, reaching a mark of 9.8%.

• Gold and foreign exchange reserves, for the first time in the last five years, returned to USD 21 billion.

• The unemployment rate according to ILO methodology, for the first time since 2013, was less than 9%.

• Real average monthly salaries kept growing for the third consecutive year (+ 12.5% in 2018).

However, a more detailed analysis reveals that in 2019-2020, Ukraine will face a number of dangerous challenges to the economy, while the changes achieved by the end of 2018 are insufficient to prevent them. In addition to risks related to the political election cycle, including parliamentary elections in October this year¹, in 2019, the Ukrainian economy will face a number of significant external threats and unresolved old domestic problems. Primarily, this means Ukraine further lagging behind the global economy and the threat of an economic crisis due to the loss of transit in 2020:

• The economy keeps on growing at rates below the growth rates of developing countries. In 2018, Ukraine’s real GDP increased by 3.3%, while average growth rates in developing countries amounted to 6.6% in the Eurozone due to the increase of external demand, which in turn, led to a decrease in the price of Ukrainian commodities in exports. In turn, a decrease in export earnings and the share of commodities in exports. In turn, a decrease in export earnings and the share of commodities in exports.

• According to the IMF, the accumulated gap between the Ukrainian economy and the global economy is not expected to decrease: the average growth rate of Ukraine’s economy in 2019-2024 (3.1%) will be less than the growth rate in 2018, and also less than the global expected average growth rate (3.6%). As a result, even in 2024, the share of the Ukrainian economy in the global economy, according to the IMF forecast (0.18%) will not reach the level recorded in the period before 2014 (0.23% in 2013).

• Even this non-optimistic forecast does not take into account the negative effect of the expected termination of transit in 2020, which will trigger an economic downturn (see. section “Gas transit”).

A year of big challenges

1 According to NBU survey in January 2018, 99% of respondents believed that presidential and parliamentary elections were a major challenge for Ukraine’s economy in 2018. Top 5 challenges also included protection of investors’ rights and freedoms of entrepreneurship (19%), and the upcoming peak of foreign-debt repayment by Ukraine (12%).
The decline in oil prices, which is usually observed when the world economy slows down, entails lower prices for other commodities like grain, which is one of the main Ukrainian exports. As a result, the already high deficit of balance of trade, which is close to the pre-crisis figures for 2008 and 2013, may increase even more due to a possible fall in prices for export commodities produced in Ukraine. If these factors are combined with the loss of more than USD 2.5 billion in transit revenues, it is most likely that in the absence of significant inflows to the financial account of the balance of payments, a currency crisis will be triggered.

In 2019, Ukraine remains exposed to the risks of further intensive labor migration with its negative impact on the level of skills of the labor force in a situation when wages and salaries are under pressure. According to experts, labor migration may be aggravated due to the plans of Germany\(^4\) and the Czech Republic\(^5\) to make employment conditions for foreign nationals more favorable.

Experts say that the effective allocation and use of available resources in the country, as well as creating conditions for more active involvement of direct international investors with their knowledge, technology and financial capital, is critically important in the current situation. These issues are interconnected and their solution will have a positive impact on macroeconomic indicators:

a) attracting investors both with financial resources and relevant technical expertise would allow for the most effective deployment of Ukraine’s competitive advantages, since modern technologies enable more effective use of the resources available in the country;

b) new technologies that are available to international investors would help to cover the shortage of skilled labor force;

c) attracting well-known international investors in various sectors, including in the oil and gas sectors, would contribute to a reduction in the risk of full-scale military aggression by Russia;

d) direct investments would cover part of foreign currency deficit that will arise due to possible lack of gas transit revenues.

For example, the hypothetical loss of gas transit revenues could be offset by the development of Ukraine’s own gas production and energy efficiency\(^6\) improvements. As factual data reveals this scenario is difficult to achieve, so Naftogaz, in order to increase the chances of success, can become a platform to attract international investors to specified segments. As the world practice shows that the major international players in the oil and gas market are very cautious about investing in the Ukrainian economy on their own and need a strong and trustworthy local partner.

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\(^6\) Along with the elimination of corruption schemes in retail gas supply through the market liberalization according to European rules
GLOBAL GAS MARKET

Beast from the East

One of the key events at the beginning of 2018, producing an impact on the market throughout the year, was the sharp rise in prices against the backdrop of anomalous cold spell due to the anticyclone from Siberia (Beast from the East). During the week of late February – early March 2018, prices in European hubs temporarily increased by several times. At the German NCG, the average daily price jumped from around € 20 / MWh to € 70 / MWh.

Since the beginning of February 2018, the natural gas consumption rate by households in the countries of Northwest Europe was very low in January. Furthermore, Russian gas supply through the Ukrainian GTS began to increase gradually and reached maximum consumption in March 2018 under the Stockholm arbitration award in the supply case. However, the Russian side again decided to use gas as a "political weapon", and Gazprom did not supply the pre-paid gas to Naftogaz. This caused a critical situation with gas supply to consumers in Ukraine, and Naftogaz had to urgently purchase natural gas from European countries to replace the Russian gas that had not been supplied. During the period of sharp cooling, increasing consumption and reducing trans-border gas flows in Europe, Naftogaz suffered losses due to the increased purchase price.

The threat of a disruption in the heating season that arose because of Gazprom’s failure on both gas supply and transit contracts was eliminated thanks to the rapid purchase of gas in Europe, an increase in the volume of natural gas withdrawal from UGSs, and the flexibility of Ukraine’s pipeline system.

Impact on the Ukrainian market

Besides the mentioned change in transit flows, the surge in prices caused by the unusual drop in temperature affected the Ukrainian market even more because of a gas shortage during the said period. At the end of February 2018, Naftogaz made a prepayment to Gazprom for gas that should have been delivered in March 2018 under the Stockholm arbitration award in the supply case. However, the Russian

Sources of gas supply to Ukrainian consumers in February-March 2018

62% 62% 60% 59% 60% 61% 62% 62% 64% 61% 62% 63% 64% 65%

3 Calculated based on household consumption data for Germany, France, Belgium and Holland sourced from Thomson Reuters.

4 According to ENTSOG, Thomson Reuters.

5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0

Gas consumption by households in Northwest Europe

January
February
March
April
May
June
July
August
September
October
November
December

Average consumption in 2016-2017
Maximum consumption in 2016-2017
Actual consumption in 2018

Maxima (right axis) Volumes in 2017 (left axis) Volumes in 2018 (left axis) NCG hub price in 2018 (right axis)

Injection into European UGS in 2017-2018

16
17
In general, the change in natural gas prices in the European market during the injection season 2018 had an upward trend, which, in addition to the above factors, was due to the following:

- a decrease in LNG imports in the summer due to high premiums on Asian markets compared with the price of natural gas in Europe;
- a gradual increase in oil and coal prices, as well as the prices for European quotas for greenhouse gas emissions;
- low water levels in the main shipping rivers of Europe, which made the prompt delivery of coal to coal-fired plants impossible.

### Change in trend

As of the start of the gas-off take season in Europe (October 2018), total gas stocks were almost 2 bcm less against the same period in 2017. Meanwhile, higher temperatures throughout continental Europe in November-December 2018 and the extension of the injection period made UGS stocks as of 31 December 2018 almost 6 bcm higher than in 2017. These factors, combined with increased LNG supplies in the second half of 2018 and the situation in other energy markets, became drivers for lower gas demand and prices. In addition, the level of gas stocks led to a decrease in winter season and a rather comfortable Asian regions at the beginning of the same period in 2018. Meanwhile, moderate temperatures in Europe in November-December 2018 led to the redirection of LNG freight flows from the Asia-Pacific region to Europe, which made the prompt delivery of coal to coal-fired plants impossible.

### LNG imports to Europe in 2017-2018

![LNG imports to Europe in 2017-2018](source: Thomson Reuters)

### Price change at NCG hub in summer-winter 2018-2019

![Price change at NCG hub in summer-winter 2018-2019](source: Thomson Reuters)

### Volumes of natural gas transit through Ukraine in 2014-2018

![Volumes of natural gas transit through Ukraine in 2014-2018](source: Ukrtransgaz)

### Distribution of transit flows by exit points in 2017-2018

![Distribution of transit flows by exit points in 2017-2018](source: Ukrtransgaz)

### Change gas volumes via the Ukrainian GTS in 2017-2018

![Change gas volumes via the Ukrainian GTS in 2017-2018](source: Ukrtransgaz)

### Gas transit through Ukraine

The volume of transit in 2018 amounted to 86.8 bcm, which is 6.7 bcm (or 7.2%) less than in 2017.

The transit flow decreased unevenly by exit points – about 65% or 4.3 bcm of total decline in transit volume was due to a decrease in transmission to Slovakia (due to more intensive use of Nord Stream).

The volumes of transit flows in 2018 were higher than those of 2017 in only two periods – during a cold snap in March 2018, and during the maintenance of the Yamal and the Nord Stream pipelines in July 2018. In Q1 2018, the Nord Stream became the main route for supplying Russian gas to the EU (36% of total supply), slightly exceeding transit through Ukraine (34%)\(^4\).

In 2018, the Russian Federation and its partners made a number of steps towards the implementation of the Nord Stream 2 project and its land extension – the EUGAL pipeline. Gazprom is implementing TurkStream – a gas pipeline project that runs through the Black Sea to Turkey and will have two strings with a total capacity of 31.5 bcm / year, which threatens to stop transit through Ukraine in the southern direction.

\(^4\)IEC Quarterly report on European Gas Markets issue 1, quarter of 2018
A permit was granted for construction and operation of a planned pipeline in the territorial waters of Germany, as well as on the coast in Lubmin near Greifswald.

A permit for the construction and operation of the pipeline system Nord Stream 2 in the German exclusive economic zone (EEZ) was received.

The second permit required for the construction and operation of the Nord Stream 2 gas pipeline in the Finnish Exclusive Economic Zone (EEZ) was obtained and the procedure for obtaining permits in Finland was completed.

Nord Stream 2 AG began laying pipes in the Gulf of Finland and the construction of the gas pipeline began.

Works on deep-water laying of the first string of the TurkStream gas pipeline has been completed.

Works on the construction of the coastal part of the TurkStream gas pipeline began.

The Swedish Government granted Nord Stream 2 AG a permit for laying a gas pipeline on the continental shelf within the Swedish economic zone of the Baltic Sea.

Nord Stream 2 AG decided to lay a pipeline outside Danish waters and applied for construction along with an Environmental Impact Assessment.

Nord Stream 2 AG began laying pipes in the Gulf of Finland and the construction of the gas pipeline began.

Nord Stream 2 AG has started laying pipes in the territorial waters of Germany.

All necessary permits for laying pipelines in the Brandenburg region were obtained.

Saxon permit authorities issued a decision to approve project design for the northern part of the pipeline.

Mecklenburg-Western Pomerania became the third federal unit that provided everything that was needed to approve the EUGAL pipeline.

Permission for the construction of a 144-kilometer section of the pipeline in Russian territorial waters was obtained.

Nord Stream 2 AG has started laying pipes in the territorial waters of Germany.

Nord Stream 2 AG began laying pipes in the Baltic Sea.

The marine section of the TurkStream gas pipeline is completed. According to Alexey Miller, the gas pipeline will be commissioned at the end of 2019.

More than 200 km of pipeline has been laid in the Baltic Sea.

Nord Stream 2 AG started laying pipes in the territorial waters of Germany.

Nord Stream 2 AG has decided to lay a pipeline outside Danish waters and applied for construction along with an Environmental Impact Assessment.
Gas production in Ukraine

In 2018, 20.95 bcm of natural gas was produced in Ukraine, which is 450 mcm more than in the previous year. A 2.2% growth was due to:
- a 245 mcm increase in production by Ukrgasvydobuvannya, a key production company of Naftogaz group;
- a 233 mcm increase by private producers.

The year 2018 was marked by an increase in Ukrgasvydobuvannya’s operating performance. The company reached a nine-year record in daily production (43 mcm per day) and a 25-year record in annual production (15.50 bcm).

Gas production in Ukraine

The framework for gas production increase under the shortage of new fields

To meet the expectations embedded in the Framework for Gas Production Increase 2016-2020, each year, Naftogaz group needed 10 new exploration permits to be covered with seismic, studied, assessed and select the most promising for further prospects to be tested by up to 13 exploration well each year. Then, Naftogaz group would have ensured a sufficient increase in recoverable reserves and their further development, drilling more than 10 wells in each new field. Deliberate blocking of new licenses by local authorities increases the risk of a 5.5 bcm underproduction by Ukrgasvydobuvannya by the end of 2020.

The chart shows the framework for gas production increase under the shortage of new fields. The companies are divided into:
- Campaing for exploration and development of new fields
- Drilling program for existing fields
- Production enhancement program
- Pressure optimization program
- Wells recovery program
- Basic production

During the year, Ukrgasvydobuvannya successfully completed a program to offset the natural decline in gas production of about 1 bcm per year through the implementation of numerous technological initiatives. Ukrgasvydobuvannya has procured 575 units of new equipment, thus upgrading 12% of its own equipment fleet. In 2018, 97 wells were drilled, and 64 new wells were put into operation. Ukrgasvydobuvannya managed to maintain gas production and slightly increase daily and annual output from the existing portfolio of deposits through the comprehensive upgrade of its technical capacity, involvement of external drill contractors and technological fleets for the rehabilitation of wells (well workover operations), and enhancement of production (coiled tubing and fracturing). The company also concluded memorandums and multiservice contracts with leading service companies such as Schlumberger, Halliburton, Weatherford and Baker Hughes. Partnership with these companies provides access to cutting-edge technological solutions, which will open up a new scope of works at wells that have been idle for years as plugged and abandoned or killed wells and deposits that were classified as off-balance or were ignored because previously their development had been assessed as unfeasible.

The government initiated a transparent process to engage investors in exploration for new oil and gas fields, using best international practices. The State Service of Geology and Subsoil of Ukraine has prepared more than 30 oil and gas exploration permits with a total area of 4.63 thousand sq. km for online bidding procedures (ProcZoro) to be held in 2019. The government decided on bidding terms and conditions for 12 blocks with a total area of almost 20 thousand sq. km to be offered for production-sharing agreements (PSAs). For the first time in the history of independent Ukraine, the government initiated a transparent process to engage investors in exploration for new oil and gas fields, using best international practices. The State Service of Geology and Subsoil of Ukraine has prepared more than 30 oil and gas exploration permits with a total area of 4.63 thousand sq. km for online bidding procedures (ProcZoro) to be held in 2019. The government decided on bidding terms and conditions for 12 blocks with a total area of almost 20 thousand sq. km to be offered for production-sharing agreements (PSAs). For the first time in the history of independent Ukraine, the government initiated a transparent process to engage investors in exploration for new oil and gas fields, using best international practices. The State Service of Geology and Subsoil of Ukraine has prepared more than 30 oil and gas exploration permits with a total area of 4.63 thousand sq. km for online bidding procedures (ProcZoro) to be held in 2019. The government decided on bidding terms and conditions for 12 blocks with a total area of almost 20 thousand sq. km to be offered for production-sharing agreements (PSAs). For the first time in the history of independent Ukraine, the government initiated a transparent process to engage investors in exploration for new oil and gas fields, using best international practices. The State Service of Geology and Subsoil of Ukraine has prepared more than 30 oil and gas exploration permits with a total area of 4.63 thousand sq. km for online bidding procedures (ProcZoro) to be held in 2019. The government decided on bidding terms and conditions for 12 blocks with a total area of almost 20 thousand sq. km to be offered for production-sharing agreements (PSAs). For the first time in the history of independent Ukraine, the government initiated a transparent process to engage investors in exploration for new oil and gas fields, using best international practices. The State Service of Geology and Subsoil of Ukraine has prepared more than 30 oil and gas exploration permits with a total area of 4.63 thousand sq. km for online bidding procedures (ProcZoro) to be held in 2019. The government decided on bidding terms and conditions for 12 blocks with a total area of almost 20 thousand sq. km to be offered for production-sharing agreements (PSAs).
GAS BALANCE
2018, bcm

3.6 Private importers

7.0 Naftogaz

15.5 Ukrgasvydobuvannya

4.4 Other

1.1 Ukmafta

20.9 Production

10.6 Imports

32.3 Gas sources

-0.8 UGS

15.5 Naftogaz

4.4 Other

32.3 Gas usage

27.6 Gas consumed by users

9.4 Industrial consumers

10.6 Households

15.4 Households

4.8*** Heat producers for households

2.3** Heat producers for public sector, religious organizations, industrial sector

0.5 Public sector and religious organizations

0.3 Ukrgasvydobuvannya

0.5 Uktransgaz

0.1 Other

1.4 Ukmafta

1.0* Gas distribution operations

4.7 Own needs and technological losses

1.9 Uktransgaz

0.3 Ukmafta

1.4 Ukrgasvydobuvannya

0.1 Other

* including unauthorized gas withdrawals (~0.9 bcm)
** including unauthorized gas withdrawals (~0.6 bcm)
*** Source: NSC Naftogaz of Ukraine Gas Sales Department

GAS BALANCE

0.5 Public sector and religious organizations

2.3** Heat producers for public sector, religious organizations, industrial sector

9.4 Industrial consumers

10.6 Households

15.4 Households

4.8*** Heat producers for households

15.5 Naftogaz

4.4 Other

32.3 Gas sources

-0.8 UGS

15.5 Naftogaz

4.4 Other

32.3 Gas usage

27.6 Gas consumed by users

0.5 Ukmafta

0.1 Other

1.4 Ukmafta

1.0* Gas distribution operations

4.7 Own needs and technological losses

1.9 Uktransgaz

0.3 Ukmafta

1.4 Ukrgasvydobuvannya

0.1 Other

* including unauthorized gas withdrawals (~0.9 bcm)
** including unauthorized gas withdrawals (~0.6 bcm)
*** Source: NSC Naftogaz of Ukraine Gas Sales Department

-0.8 UGS

15.5 Naftogaz

4.4 Other

32.3 Gas sources

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0.1 Other

* including unauthorized gas withdrawals (~0.9 bcm)
** including unauthorized gas withdrawals (~0.6 bcm)
*** Source: NSC Naftogaz of Ukraine Gas Sales Department

GAS BALANCE

0.5 Public sector and religious organizations

2.3** Heat producers for public sector, religious organizations, industrial sector

9.4 Industrial consumers

10.6 Households

15.4 Households

4.8*** Heat producers for households

15.5 Naftogaz

4.4 Other

32.3 Gas sources

-0.8 UGS

15.5 Naftogaz

4.4 Other

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0.1 Other

* including unauthorized gas withdrawals (~0.9 bcm)
** including unauthorized gas withdrawals (~0.6 bcm)
*** Source: NSC Naftogaz of Ukraine Gas Sales Department
Gas imports to Ukraine

In 2018, Ukraine imported gas exclusively from the European gas market. Compared to 2017, gas imports decreased by 25%, from 14.6 bcm to 10.6 bcm. At the same time, the share of Naftogaz in the total gas imports to Ukraine increased to 66% in 2018 from 61% in 2017.

In 2018, Naftogaz purchased natural gas from 18 European suppliers (in 2017 - 13). None of these companies supplied more than 30% of the volume imported by Naftogaz.

65 companies imported gas to Ukraine in 2018 (67 companies in 2017). In the second and third quarters of 2018, private importers significantly reduced the volume of imports of natural gas compared to Naftogaz’s imports.

In 2018, the Slovak direction remained the major gas supply route to Ukraine while the share of supplies through Hungary increased for the second consecutive year, from 9% in 2016 to 32% in 2018.

Although Ukraine’s annual need in gas imports is fully covered by the available reverse capacities, gas supplies to Ukraine from neighbouring countries are still not in line with European rules: relations with operators of the adjacent gas system and Gazprom are not in line with European and Ukrainian energy legislation. For instance, the EU’s standard interconnection agreements have not been fully applied.

Households used 10.6 bcm of gas, which is 0.6 bcm less than in 2017 (4.6%) due to the following factors:
- the number of subsidy recipients more than halved in autumn and winter;
- social consumption standards for subsidy recipients were cut by nearly 10% since 1 May 2018;
- the end user gas price grew by 22.9% since 1 November 2018.

Meanwhile, gas consumption by district heating companies for household needs amounted to 4.8 bcm in 2018, which is 0.2 bcm more than in 2017 (+4.3%) due to the following factors:
- lower temperature in 2018 compared to 2017;
- households are largely not able to regulate the use of heat in their homes (or such regulation in individual apartments has little effect on the apartment block due to redistribution of heat among the rest of the apartments). This is why the said gas-saving factors by households are insignificant when it comes to gas use for household heating.

Heat generation for public institutions and the industrial sector accounted for 3.9 bcm, which is 0.4 bcm more than in 2017. Higher gas consumption by this category was not only due to weather conditions but also due to the price factor. This customer category is subject to the PSO Resolution, which means buying gas at regulated prices. In 2017, gas prices for heat producers (to cover the needs of commercial customers) were 1.6 times higher than the prices for household needs, but since November 2018, gas prices for heat production equalized for all customers. This was due to a 21% decrease in the wholesale gas price for heat producers to cover the needs of commercial customers. Other market segments increased their gas consumption by 0.4 bcm from 14.2 bcm to 14.6 bcm.

Gas consumption

Ukraine’s total gas consumption in 2018 increased by 1.3% (from 31.9 to 32.3 bcm) compared to 2017.

- Households used 10.6 bcm of gas, which is 0.6 bcm less than in 2017 (5.4%) due to the following factors:
  - the number of subsidy recipients more than halved in autumn and winter;
  - social consumption standards for subsidy recipients were cut by nearly 10% since 1 May 2018;
  - the end user gas price grew by 22.9% since 1 November 2018.

- Meanwhile, gas consumption by district heating companies for household needs amounted to 4.8 bcm in 2018, which is 0.2 bcm more than in 2017 (+4.3%) due to the following factors:
  - lower temperature in 2018 compared to 2017;
  - households are largely not able to regulate the use of heat in their homes (or such regulation in individual apartments has little effect on the apartment block due to redistribution of heat among the rest of the apartments). This is why the said gas-saving factors by households are insignificant when it comes to gas use for household heating.

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Against the background of economic recovery, the industrial sector posted a 0.2 bcm growth, having used 9.4 bcm.

Debts for unauthorized withdrawal of natural gas continued to accumulate in 2018. In 2018, the debt for unauthorized withdrawal of natural gas grew by UAH 14 billion and amounted to UAH 34 billion as of the end of the year. The volume of gas used for balancing decreased to 3.5 bcm in 2018 from 1.8 bcm in the previous year, which was due to the extension of the PSO Resolution to all heat producers starting from April 2017 and alleviated requirements to heat producers when concluding supply agreements with Naftogaz.

Under the current PSO regime, the difference between the price for industrial customers and the regulated price continued to be tangible in 2018. As of the beginning of the heating season 2018/2019, this difference in prices reached a record 1306%, the highest since 2017.
In 2018, the Ukrainian government extended the terms of the PSO several times. The latest decision of the government, as of the time of preparation of this report, enshrined in the Resolution of the Cabinet of Ministers of Ukraine dated 19 October 2018 (867) provided for the extension of the PSO until 30 April 2020. After long negotiations with the IMF, the government made a compromise and increased the price of natural gas for household consumers. Meanwhile, even with the decrease in the market price at the end of the year, the difference between market and regulated price as of December 2018 was about 50%.

In 2018, hidden subsidies (the difference between market and regulated prices) accounted for 6% of state budget revenues. Such hidden subsidies lead to the following negative consequences:

1. The seller’s proceeds are lower than they are supposed to be (meaning financial losses).
2. Encouraging inefficient consumption of the subsidized product: the lower the price, the more the consumption.
3. Poor people get less benefit from hidden subsidies than those who are richer and consume more.
4. Higher decline in production, since lower the prices usually contribute to lower output.
5. If hidden subsidies are provided only to certain categories of buyers on the market, it stimulates speculation and corruption. Certain buyers purchasing at a price reduced in an administrative way will try to resell it at the market price. Administrative restrictions on these black market transactions will lead to more scheming in order to bypass restrictions.

According to international experts, Ukraine traditionally relied on hidden subsidies for gas, although it would be worthwhile to create conditions for the growth of wages and pensions, which would allow customers to pay market prices.

The gas distribution segment is the "last mile," the interface with the end user. Therefore, the operation of this segment under market rules is important for the development of an efficient market. The publication of the Council of European Regulators for Energy identified some characteristics of a well-functioning retail gas market. From the supply side, there should be a low concentration of market power of any market participant, which allows consumers to benefit from competition and innovations. In addition, entry barriers should be as low as possible, allowing new vendors to enter the market. Finally, there should be a close connection between wholesale and retail prices. This includes transparent pricing for gas as a commodity, giving market participants input in setting retail gas prices. As for demand, it is important that consumers have access to information about offers from different suppliers and the supplier changing procedure. Currently, Ukraine continues fundamental reforms of its gas market. Many of major disadvantages of the previous market model have been completely or almost fully eliminated, but a number of problems remain unresolved. The key remaining problems include lack of competition in retail, accumulation of debt for unauthorized offtake, and administrative regulation of gas prices.

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7 https://zakon.rada.gov.ua/laws/show/867-2018-%D0%BF#n91
8 https://biz.nv.ua/ukr/naftogaz-protiv-gazproma/shcho-take-prihovani-subsidiji-i-chomu-ce-nebezpechno-dlya-derzhavi-50008684.html
9 Noorlander, M. (February 2016). What should a well-functioning retail energy market look like? The Council of European Regulators of Energy, CEER.
GLOBAL OIL MARKET

In 2018, like in previous periods, political factors played one of the key roles in shaping prices. In mid-April, the president of the United States voiced criticism towards OPEC – he accused the organization of artificially inflated oil prices, calling such actions unacceptable\(^1\). The statement concerned the deal between members of the Organization of Petroleum Exporting Countries (OPEC) and other non-member states, including Russia, with regard to the curtailing oil production. The deal was reached at the end of 2016 and were repeatedly extended. Then on 8 May 2018, the United States announced their withdrawal from the nuclear agreement with Iran and their readiness to impose sanctions on the country. It was also claimed that the United States would resume economic sanctions against Iran, which were relieved under the terms of the agreement, and would introduce new restrictions that would come into force in 90 and 180 days. The commodity market responded to such events by the growth of oil quotations to the level of November 2014, and subsequently for several months in view of uncertainty as to the possible effect of the imposition of sanctions, prices remained at a rather high level, in the range USD 72 to 80 per barrel.

Existing expectations that the world economy could slow down and, consequently, lead to a possible reduction in demand for oil in the future periods coincided with the decision of OPEC countries in June 2018 to increase production by 1 million barrels per day. This led to a minor decrease in prices in the beginning of the second half of 2018 to USD 65-67 per barrel. However, in the autumn, the market was rather uncertain about the assessment of the real economic consequences of the US withdrawal from the nuclear agreement and the possible reduction of supply on the market due to the imposition of sanctions on Iran, including in the energy sector. These factors contributed to a gradual increase in prices to USD 85 per barrel in November 2018.

At the end of 2018, the price of oil was formed under the influence of a new round of trade wars between China and the United States\(^2\), which caused, among other things, negative expectations regarding the transformation of the conflict into a global trade war and further downturn of the global economy.\(^3\) In addition to the trade conflict, an increase in interest rates in developing countries and the deterioration of economic growth in the EU led to a decline in IMF forecasts for global economic growth in 2018 and 2019 by 0.2%. The difficulties faced by the US in adopting a budget added to fears of recession. All this meant that demand for oil could drop significantly – and such expectations led to a sharp drop in prices.

In addition, a significant gap between supply and demand persisted for several months. Relatively high prices established back in May have contributed to world growth of oil production – from May to November 2018, this has grown by 2.5 million barrels per day. Meanwhile, oil exports from Iran began to decline during the summer, indicating that pressure from the United States and expectations of possible sanctions in the energy sector had an impact. However, the pace of decline in production and export of oil by Iran, which was expected as a result of the introduction of sanctions, appeared to be overestimated, and the pace of decline in production appeared to be slower. According to the OPEC Secretariat, oil production in Iran in 2018 amounted to 3.56 million barrels per day, compared to 3.8 million barrels per day in 2017. The final negative factor for prices was the granted waivers for purchase of Iranian oil for eight countries, which reduced the effect of sanctions.

\(^1\)https://www.savingstar.com/usa/articles/2018-05-04/does-it-equal-up-for-oil-when-iran-exits-the-nuclear-accord
\(^3\)On September 17, the United States imposed duties on the largest portion of Chinese imports worth USD 200 billion a year. Soon China replied that they would impose import duties on US imports worth USD 60 billion a year.

European oil refining market

Unlike 2017, which had been successful for European refineries due to high margins and capacity utilization level, the situation changed in 2018. The relatively high oil prices in the first to third quarter of 2018 led both to a decrease in the consumption levels of petroleum products, and to a decrease in the profitability of European refineries (which, as a rule, are not able to entirely transfer the increase in raw material prices into a comparative increase in prices for petroleum products).

EU-16 refineries capacity utilization level and Brent oil price

EU-16 refineries capacity utilization level and Brent oil price

Source: EIA, S&P Global Platts; EIA/IEA, Monthly Global Indicator Belfield Mergers

Global oil demand and supply in 2018

Source: EIA, S&P Global Platts

EU-16 refineries capacity utilization level and refining margin

Source: EIA, S&P Global Platts, EIA/IEA, Monthly Global Indicator Belfield Mergers

Development of Brent oil spot prices in 2018

Source: S&P Global Platts
A striking trend in 2018 was that during the summer season, the margins for oil refineries were kept at the same level due to the sale of gasoline fractions. Due to increased demand in the African and US East Coast markets, gasoline stocks decreased significantly and oil refineries could supply gasoline to these markets at higher prices.

In recent years, long-term expectations trend to prevail in the market. This means that the trend in Europe to increase the consumption of energy from renewable sources will hold back the development of the oil refining industry. In addition, the more stringent environmental standards introduced by the European Union and national governments can further reduce demand for oil in the region and accordingly affect the margins of oil refining in European countries, which is already lower than in other regions. The trend towards reducing oil refining capacities in Europe is clearly traced against the background of global trends. The global capacity of Fluid Catalytic Cracking Unit of refineries (FCCU) has increased from 19.65 million barrels per day in 2013 to 20.64 million barrels per day in 2018 (an annual increase of about 3%). This rate is expected to increase to 25.76 million barrels per day in 2023 (+ 4.4%) Unlikely global trends, FCCU capacity in Europe has actually dropped from 2.47 million barrels per day in 2013 to 2.34 million barrels per day in 2018, with a negative annual growth rate of 1.3%. This trend is expected to continue.

In view of the fact that Ukrgasvydobuvannya does not have its own oil refining capacity, the company, in accordance with Article 4 of the Law of Ukraine “On Oil and Gas,” sells oil and gas condensate, its own production, at auction. Ukrgasvydobuvannya processes oil and gas condensate using its own production facilities. The results of these auctions show that the trend in oil and condensate sale prices corresponded to the trend of changes in world oil prices. Taking into account the peculiarities of the formation of the starting price for auctions for the sale of oil and condensate, the price of oil sales was lower than the average monthly price of Brent oil in the first three quarters of 2018 (when the average price on the world market increased) and higher than Brent prices in the fourth quarter of 2018 (when the price in the world market declined).

At present, Kremenchuk oil refinery (Ukrnafta) accounts for almost all oil imports. According to the State Fiscal Service, imports of oil to the country decreased in 2018 by 25% to 0.87 million tons from 1.01 million tons in 2017. Despite a number of statements about the possibilities to fully provide Ukraine with high-quality fuels, in 2018 Ukrnafta failed to increase the amount of raw material processing. According to the company’s reports, this was due to the anticompetitive actions of oil producers in the Russian Federation and Belarus which, in turn, buy oil in Russia at a price that does not include export duty, this is in turn boost refinery margins of Russian and Belarussian refineries. Due to the protectionist policy of Customs Union countries with regard to refineries and logistic proximity, the latter manage to maintain a high share of the Ukrainian fuel market. In 2018, Shebelynska gas processing plant (Shebelynska VPGBK), the main oil refining asset of Ukrgasvydobuvannya, continued its systematic work on the implementation of projects aimed at intensification of hydrocarbon commodities processing using modern deep processing technology, increasing Euro-5 gasoline production volumes and optimizing its product portfolio. The volume of petroleum gas processing at the plant in 2018 decreased due to the reduction of gas condensate and oil production by Ukrgasvydobuvannya.
Despite the relatively tangible success of domestic refineries in improving the quality of petroleum products, the domestic market continues to be significantly dependent on imported supplies of petroleum products. In 2018, approximately 76% was imported. According to the State Fiscal Service, in 2018 Ukraine imported 8.06 million tons of petroleum products worth USD 5.54 billion, which is 33% more than in 2017 in monetary terms.

Since the Ukrainian petroleum product market is dependent on imports, the price of petroleum products on the domestic market is formed based on price quotations in the major European hubs in South and North Western Europe.

**Oil transit and transportation**

Transportation of oil via the main pipelines in Ukraine is carried out exclusively by Ukrtransnafta, which is part of Naftogaz group. In 2018, the total volume of transported oil amounted to about 15.4 million tons. A decline in volumes of transportation is observed both in transit flows (due to reduced utilization of European refineries capacities), and transportation of oil that is imported to Ukraine. At the same time, records showed the growth of transportation of oil produced in Ukraine (from 1.25 million tons in 2017 to 1.34 million tons in 2018).

Reducing the volume of oil transit has been a long-term trend. Over the past ten years, the volume of transit through the Ukrainian oil transportation system has decreased by more than half. In view of the fact that the volume of oil transit depends on Russia’s policy as the main customer of oil transportation services through Ukraine, as well as on the resource supply and diversification of oil supplies to the refineries of the Czech Republic, Slovakia and Hungary, the operator of the oil transportation system of Ukraine is considering the extension of the number of customers of transportation services. One of the steps towards achieving this goal is the implementation of a project that would enable transportation of different types of oil to European refineries using the “Southern Friendship” pipeline, which involves the use of existing infrastructure and available stranded oil transit capacities. On 29 November 2018, the project was assigned the status of PMI (Project of Mutual Interest) in a resolution from the Energy Community Ministerial Council. This decision was the result of cooperation between Ukrtransnafta and other stakeholders during the selection of projects nominated for the status of PMI.

Another important issue is the establishment of economically feasible tariffs for oil transportation services for Ukrainian consumers, which still remains a loss-making segment of Ukrtransnafta’s operations.

Back in the summer of 2017, the NCREU adopted a resolution approving a new procedure for the formation of tariffs for the transportation of oil and petroleum products via the main pipelines. Ukrtransnafta, for its part, based on the approved procedure, developed a package of documents for changing the existing tariffs for oil transportation, which would allow the introduction of an effective and economically sound tariff policy. However, when the proposed changes were discussed, domestic oil producing and oil refining companies expressed their unwillingness to adopt a new tariff mechanism.

Taking into account the position of the enterprises of the oil extracting and oil refining sectors, Ukrtransnafta offered a phased recalculcation of tariffs within three years. At the beginning of 2018, the company submitted its proposals to NCREU. The NCREU Resolution of 10.10.18 №1350 approved changes to the procedure, including the envisaged transition period of three years. During this period, the tariffs for oil transportation through the main pipelines for consumers in Ukraine shall be calculated using a simplified methodology and the annual tariff growth rate. By the end of the transition period, the tariff for the transportation of oil through the main pipelines for each route should reach the target level.

*Including the volume of transportation of oil and liquefied petroleum gas

* The procedure for the formation of tariffs for oil and petroleum product transportation through the main pipelines, approved by the resolution of the National Commission for State Regulation in Energy and Utilities Sector, dated 29 May 2017, №158

**Comparative dynamics of wholesale gasoline prices in Ukraine and North West Europe in 2018 (price as of 04.01.2018 = 100%)**

<table>
<thead>
<tr>
<th>Month</th>
<th>Ukraine</th>
<th>North West Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>22%</td>
<td>23%</td>
</tr>
<tr>
<td>Feb</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>March</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>April</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>May</td>
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<td>June</td>
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<td>Aug</td>
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<td>Oct</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Nov</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Dec</td>
<td>-2%</td>
<td>-2%</td>
</tr>
</tbody>
</table>

**Volumes of domestic transportation of imported oil and domestically produced oil in 2016-2018**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ukraine</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>2017</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>2018</td>
<td>2.0</td>
<td>2.3</td>
</tr>
</tbody>
</table>

**Volumes of oil transit in 2016-2018**

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume (mio. tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>13.8</td>
</tr>
<tr>
<td>2017</td>
<td>13.9</td>
</tr>
<tr>
<td>2018</td>
<td>13.3</td>
</tr>
</tbody>
</table>
UNBUNDLING

In February 2018 awards in transit case against Gazprom were rendered by the Arbitration Institute of the Stockholm Chamber of Commerce. Arbitration rulings provided more clarity with regard to feasible unbundling options. Stockholm tribunal unfortunately rejected Naftogaz’s request to review the contract in respect of the transfer of rights and obligations to the designated TSO without Gazprom’s consent. Given that Gazprom ligations to the designated TSO without feasible unbundling options. Stockholm Chamber of Commerce. Arbitration rul

Arbitration Institute of the Stockholm

Markets and Reforms Annual Report 2018

Any other model can potentially put Ukraine in a situation similar to 2011, when Russia launched Nord Stream and moved significant gas flows from Ukraine without any compensation. It would also give the Ukrainian side an effective bargaining power in post-2019 transit contract negotiations.

Naftogaz role and proposed unbundling structuring

Naftogaz, as a vertically integrated company, has a side responsibility for correct implementation of unbundling according to the current Ukrainian law. With this being said, Naftogaz fulfills a number of very important functions. The CMU imposed a responsibility on Naftogaz to ensure (i) security of natural gas supply to consumers in Ukraine and (ii) uninterrupted natural gas transit to EU countries. This responsibility rests with Naftogaz until 1 January 2020.

For the unbundling process, this means that any GTS functions, assets, and technical and human resources cannot be transferred outside Naftogaz’s control till 1 January 2020. Naftogaz is even more interested in clean unbundling, which is essentially ensuring non-discriminatory access to the GTS, and sustainable and efficient future TSO. That is why Naftogaz heavily engages its executive and supervisory boards, international stakeholders and reputable independent consultants to deliver on unbundling commitments.

In 2018 Naftogaz proposed unbundling roadmap and unbundling structure, which envisages creation TSO as a new separate company, initially within Naftogaz group on a preparation stage and legally unbundled in future with engagement of GTS partner. The roadmap was presented to the government in January 2019.

The unbundling action plan pursued by Naftogaz covers three stages:

Stage 1. Separation of storage activity (SSO) from the transmission system (TSO).

The unbundled TSO should not engage in storage activities for a number of reasons, in particular, in order to release the unbundled TSO from legacy problems regarding the disputable stock of gas, avoid cross-subsidizing storage business and increase investment attractiveness. In 2018, Naftogaz completed the first stage. The Branch SSO was established as a separate branch of UTG and transferred all related assets, revenue-generating contracts, processes and 1800 employees.

Revision is also connected with potential compensation of nearly USD 12 billion impairment charges by Gazprom, if no Russian transit beyond 2019. Naftogaz is the only entity, which has legal grounds to claim this compensation being the only transit contract holder through Ukraine. In order to demonstrate eligibility for the impairment charges Naftogaz needs to continue to be entitled to receiving economic benefits from the GTS in the future.

The idea of “quasi-ownership” based on rudimentary concept commercial use of gas transmission infrastructure is largely advertised as compliant ownership unbundling. Such “quasi-ownership” is incompatible with an OU model, as TSO cannot exercise ownership rights duly, i.e. pledge the assets would be forbidden.

Another arbitration proceeding between Gazprom and Naftogaz, initiated in 2018, is a critically important limitation to be considered while implementing the unbundling model. This case is based on Naftogaz claim against Gazprom to revise the transit tariff in 2018-2019. Such
Stage 2. Expansion and optimization of Branch TSO.

Naftogaz established a Branch TSO in UTG following the recommendations of international advisors and the European Commission Naftogaz implements TSO target operating model. Naftogaz established a Branch TSO in UTG according to the recommendations of the international consulting company WECOM and EC provided in 2018, is systematically filling it with functions and personnel in preparation for spin-off into an unbundled TSO. Our target is to have a fully-fledged entity capable of carrying out all activities as a new TSO, responsible for both international (transit) and domestic natural gas transmission via the high-pressure pipelines. As of now, Naftogaz has transferred all transmission-related assets and have started transferring people.

Stage 3. Legal unbundling preparation and implementation.

The new TSO company is expected to be certified prior to 1 January 2020 and its corporate rights to be transferred to MGU (or another entity, designated by the State). In 2019, UTG established a separate legal entity to manage restructuring and TSO certification within the following year, Naftogaz established a separate company (Gas TSO Ukraine LLC), where the required personnel and functions will be moved.

Call for urgent and decisive actions

Given the nature, complexity and strict requirements for unbundling:

1) Select the ISO model stipulated in Article 27 of the Gas Market Law as the unbundling model for the operator of the transmission system, which is state-owned and is not subject to privatization.
2) Assign the entity to apply for certification with the Ukrainian Regulator.
3) Grant the concession for TSO assets to the new TSO as of 1 January 2020 (pursuant to the a.7 of the Gas Pipeline Transport Law).
4) Terminate or amend CMU Resolution of 01.07.2016 #496 and the previous Naftogaz Restructuring Plan.
5) Authorize the State Property Fund of Ukraine, Naftogaz and UTG to amend agreements on the GTS use, with 1 January 2020 as the effective date.
6) Assign Transmission System Operator LLC (TSO LLC) established by UTG as the entity to apply for certification with the Ukrainian Regulator.

III. The CMU needs to make a decision on the model and other critical requirements for unbundling:

(I) The CMU needs to adopt the Draft Concession Law

Such adoption would allow executing the 4 agreements required for Legal unbundling (Exhibit XX) and business entity assigned by the CMU - to apply for certification with the Ukrainian Regulator.

IV. Adoption of cost-reflective entry and exit transmission tariffs by the Regulator

The Ukrainian Regulator must adopt new transmission tariffs for the next regulatory period and ensure that these tariffs are cost-reflective thus helping the new TSO to become financially viable.

Naftogaz suggests that the unbundling of GTS would be accomplished with a transfer to MGU of both: a) Gas TSO LLC and b) property rights for transmission related assets on 1 January 2020. These transfers, a.k.a., the unbundling, will be governed by agreements, listed below:

(i) Sales and Purchase Agreement, concluded between UTG and MGU to transfer the corporate rights in the Gas TSO LLC with the effective date of 1 January 2020.
(ii) Service Level Agreement between UTG and the TSO for UTG to provide service functions, for the allowed period, to the unbundled TSO; and
(iii) Concession Agreement between UTG and the new TSO with an effective date of 1 January 2020 to equip the latter with all the necessary transmission-related assets to conduct transmission function.
KEY REGULATORY CHANGES

In 2018, despite a number of positive changes, the trend of slowing down the process of harmonization of Ukrainian legislation with the European rules of the natural gas market and the Law of Ukraine “On the Natural Gas Market”, continued. The transition to daily balancing in the natural gas market was delayed, while no natural gas market liberalization for the population occurred. The activities of the state authorities focused on the adoption of regulatory acts to comply with the requirements of laws and the improvement of previously adopted subsidiary legislation.

REGULATORY CHANGES  IMPACT OF CHANGES

Conditions created for transparency in extractive industries

The Law of Ukraine #2345-VIII “On Ensuring Transparency in Extractive Industries” of 18 September 2009 defines the organizational and legal framework for information disclosure in extractive industries, establishes specific obligations and methods of information disclosure, and implies responsibility for disclosing entities.

A positive event for the market

The Law introduces international standards to Ukraine and best practices of the information disclosure in extractive industries in accordance with the Extractive Industries Transparency Initiative (EITI).

Measures deregulating the oil and gas industry were taken

The Law of Ukraine #2314-VIII “On the Introduction of Amendments to Certain Laws of Ukraine On Deregulation in the Oil and Gas Industry” was adopted, simplifying the procedure for obtaining permits for oil and gas extraction.

Subsurface users were allowed to independently dispose of geological information in their ownership taking into account the requirements of the Laws of Ukraine “On State Secret” and “On Sanctions”.

In addition, Resolution of the Cabinet of Ministers of Ukraine #393 “Issue of the Disposal of Geological Information” of 7 November 2018 was adopted that simplified access to geological information that is state property and the procedure for the transfer of rights to geological information owned by legal entities and individuals.


A positive event for the market

The resolution should facilitate access to geological information for foreign investors and those interested in implementing projects on extraction of mineral resources in Ukraine.

A positive event for the market

The introduction of electronic auctions as part of auctions for the sale of special permits for subsurface use will increase transparency and attract new investors to the Ukrainian extractive industry.

Measures to resume the activities of the State Joint Stock Company “Chornomornaftogaz” were taken

The Law of Ukraine #2320-VIII “On the Introduction of Amendments to Certain Laws of Ukraine on the Stabilization of the Activity of the State Joint Stock Company “Chornomornaftogaz” in Connection with the Temporary Occupation of the Territory of Ukraine” of 13 March 2018 stipulates that bankruptcy proceedings against the State Joint Stock Company “Chornomornaftogaz” (hereinafter referred to as “Chornomornaftogaz”) shall not be initiated until 1 January 2019, and bankruptcy proceedings initiated before 1 January 2017 shall be dismissed, unless the liquidation is carried out by the owner’s decision.

In addition, the Law allows Chornomornaftogaz to retain special permits for subsurface use at sites located in temporarily occupied territory that will ensure the effective protection of the Company’s rights in international court jurisdictions, substantiation of losses caused as a result of armed aggression by the Russian Federation, since the validity period of permits affects the calculation of the Company’s lost profits.

Tariffs for oil and petroleum product transportation services, as well as natural gas storage services (injection, withdrawal) in underground gas storage facilities were established

NCREU Resolution #480 of 19 June 2018 established tariffs for natural gas storage services (injection, withdrawal) in Ukrtransgaz’s underground gas storage facilities.

NCREU Resolution of #1150 “On Approval of Amendments to the Procedure for Formation of Tariffs for Oil and Petroleum Products Transportation by Main Pipelines” of 4 October 2018 addressed the procedure for calculating tariffs for oil transportation by main pipelines to Ukrainian consumers during a three-year transitional period, calculated on a simplified basis using an annual tariff growth rate.

The The Regulator established temporary tariffs for transportation

NCREU Resolution #2001 “On the Establishment of Temporary Tariffs for ICS “Ukrtransgaz” for Natural Gas Transportation Services for Entry/Exit Points for the First Year of the Second Regulatory Period and the Validation of Certain Resolutions of the NCREU” established temporary tariffs for the Company for natural gas transportation for entry/exit points for 2019. These tariffs were calculated using methodology which is not in compliance with European standards, specifically: European Commission Regulation (EU) 2017/460 of 16 March “On Establishing a Network Code on Harmonised Transmission Tariff Structures for Gas”.

A negative event for the GTS operator

Taking into account the established tariffs, expected revenues will not cover all the GTS operator’s projected costs. The use of temporary tariffs along with the unresolved issue of payment for imbalances will result in a deficit of about UAH 22 billion. According to Ukrtransgaz’s calculations, if no standing charges proposed by the GTS Operator are established as soon as possible, the company’s financial position will be so critical that it may result in bankruptcy during the year.

Moreover, the NCREU’s approach applied in calculating tariffs will further result in tariffs being raised by almost half for interior points for 2020-2023 due to the necessity to include Ukrtransgaz’s expenses related to the return of invested capital.

A positive event for Naftogaz group

These laws create conditions for the resumption of Chornomornaftogaz natural gas extraction activities.

A positive event both for the oil and gas market and for Naftogaz group companies

New tariffs create positive conditions for the oil and gas market, allowing companies to plan their business activities, finance operating and capital expenses, and receive revenues from the provision of oil, petroleum products and natural gas transportation services, as well as natural gas storage services (injection, withdrawal) in underground gas storage facilities.
The introduction of daily balancing in the Ukrainian natural gas market was postponed

NCREU Resolution #789 of 27 July 2018 postponed the term of daily balancing introduction till 1 October, and on 28 September 2018 the NCREU introduced amendments to the said resolution which postponed daily balancing introduction till 1 December 2018. NCREU Resolution #1573 of 30 November 2018 postponed the third time the date of introduction of daily balancing in the Ukrainian natural gas market till 1 March 2019.

The procedure for financing benefits and housing subsidies was changed

Starting 1 January 2018, CMU Resolution #951 of 8 November 2018 (together with Decree of the Ministry of Finance of Ukraine #1) has cancelled the mechanism of “clearing” settlements on benefits and housing subsidies, which required a preliminary joint protocol resolution of all the settlement participants (CMU Resolution #20 of 11 January 2005), and introduced a mechanism to transfer benefit and subsidy amounts using treasury accounts, which allows that providers of housing and utility services make their own decisions on the amounts and timing of subsidy transfers to other settlement participants.

A positive event for both the market and Naftogaz group

The newly adopted Resolution introduced as “subsidy monetization” has in practice put on hold the subsidy settlement system effective since 1 January 2018, which in fact hampered the natural gas market competition. In addition, this Resolution has created preferences for providers of housing and utility services allowing them independent calculations of amounts, timing and targets of subsidy funds within the defined list of settlement participants, which does not contribute to the fair allocation of funds.
REGULATORY CHANGES

Gas procurements by heat generating entities under PSO have been liberalized

CMU Resolution #942 of 14 November 2018 extended the effect (from 1 April 2019 to 1 January 2020) of the maximum rate of transfer of funds to DHC (“teplokomunenergo”) accounts, which used to restrict the adjusting factor effect and did not allow increases in the rate of fund transfers from DHC special-purpose accounts for gas-related debt settlements; it allows the purchase of gas under PSO with a lower rate of gas settlements (78% for all DHC and 60% for the DHC under the management of the State Property Fund of Ukraine, instead of 90% for all DHC during the period from 1 December 2018 to 1 April 2019.

The procedure for transferring subsidies in 2019 was changed

CMU Resolution #1176 “On Certain Issues of Granting Housing Subsidies to the Population in Cash” of 27 December 2018 provides for a phased change of settlements on benefits and housing subsidies from treasury accounts to Oschadbank accounts in 2019 with the simultaneous retention of the model for subsidies transfers to service providers, but not directly to the subsidy recipient.

A negative event for both the market and Naftogaz group

This newly adopted Resolution has created preferences for specific consumer categories – heat energy producers - and shifted responsibility for their operations from the government to the company as an entity, as well as brought considerable financial losses to the company resulting from the decreased rate of settlements between the heat energy producers and the company for natural gas sold under PSO.

A negative event for both the market and Naftogaz group

The newly adopted Resolution introduced as “subsidy monetization” in practice provides for the retention and relief of settlement systems effective in 2018, which in fact hampered natural gas market competition. In addition, the updated procedure does not stipulate the obligatory entering of subsidies to special accounts of housing and public utility service providers, which creates the threat of unfair distribution of subsidies or their improper use.

A positive event for the market

• for the first time in Ukraine’s history, housing subsidies for Housing and Public Utility Services (about 4.5 million households) are paid in cash. This changes the settlement principles for a significant part of the retail gas market segment, as well as having a significant impact on the behavioral model of subsidy recipients (regarding the subsidy allocation for payment for Housing and Public Utility Services);
• the desire of subsidy recipients to retain as much money as possible at their disposal may result in a significant reduction of natural gas consumption in the PSO segment;
• money in the subsidy recipient’s hands will encourage the consumer to be more meticulous about the verification of gas volumes accrued to him/her that should result in a decrease in manipulations with gas consumption in the PSO segment.

A positive event for the company

• the subsidy payment directly to the subsidy recipient and the opportunity for the subsidy recipient to dispose of these funds on their own will contribute to the development of competition among natural gas suppliers;
• refusal of settlements through treasury accounts and a single Oschadbank account will mitigate the risks of corrupt schemes among gas utility companies;
• an increase in liquidity will result in the Company receiving more ready cash;
• a decrease in gas consumption by subsidy recipients will result in a decrease in the volumes of imported gas purchases for the household needs.

IMPACT OF CHANGES

A positive event for the market

CMU Resolution #62 of 6 February 2019 concerning the monetization of subsidies which:
• provides for the payment of subsidies for February-April 2019 in March-May 2019 in cash:
  - to pensioners - to pension accounts or via Ukrposhta;
  - to other subsidy recipients - through the cash desk or current accounts at Oschadbank.

A positive event for the company

2019¹

The procedure for financing benefits and housing subsidies for the population in March-May 2019 was changed

CMU Resolution #62 of 6 February 2019 concerning the monetization of subsidies which:

¹ In the first months of 2019 prior to the publication of this report, there have been a number of changes to laws that will significantly affect market functioning and Naftogaz group activities. The respective information is included in this 2018 report.
OPERATIONS
### NAFTOGAZ TRANSFORMATION

#### From turnaround to transformation

Naftogaz has achieved significant progress on a number of fronts through the four-year turnaround stage. The Stockholm arbitration decisions resulted in Gazprom’s net liability to pay Naftogaz USD 2.8 billion and lower the price until the end of the existing supply contract. Market liberalization and the switch from hidden to target subsidies has reduced opportunities for corruption, stimulated a decrease in natural gas consumption, and lowered import costs. Elimination of rent seeking by vested interests (in procurement, joint activity agreements, gas supply etc.) has allowed Ukraine’s national interests to be put first and work for the benefit of the people of Ukraine. Turning around the domestic production decline at Ukrgasvydobuvannya to growth trajectory was an important step towards the objective of reaching natural gas self-sufficiency and independence from imports. We are proud that Naftogaz is no longer an instrument against Ukraine’s energy independence, but has once again become the backbone of national energy security, of the oil and gas industry, and of the Ukrainian economy. Thanks to these reforms, we as Ukrainians are no longer dependent on Russian gas. Instead, Naftogaz is now a major contributor to the state budget and helps the government to ensure microfinancial stability independence.

The transformation of Naftogaz into an integrated and properly governed national oil and gas company is the way forward for Naftogaz to address key issues and the potential market risks of the Ukrainian oil and gas market. The group can potentially create additional value for its shareholder — the people of Ukraine, if it is successful in its strategy. This transformation will touch all businesses of the group. The pillars of this transformation include:

- Continue increasing gas production through development of in-house capacities and entering into partnerships with international players.
- Ensure full gas market liberalization and abolishment of PSO along with implementation of fully monetised subsidy system for those who truly need state support.
- Ensure smooth and timely TSO unbundling that will help both preserving future transit gas flow through Ukraine and improving efficiency of domestic gas market.
- Become a utilities company, Naftogaz will use its skills and position in the market to serve the end customer directly, providing them with a superior customer experience while at the same time bringing transparency, efficiency and healthy competition to the utilities market.
- Enter the energy efficiency market. We will start offering energy services to households.
- Enter the renewable energy market capitalizing on vast existing infrastructure.
- Substantially improve the group’s presence in the oil segment by developing a financially viable downstream presence and enhancing customer experience of interacting with Naftogaz brand.

#### Why we call it a “turnaround”

<table>
<thead>
<tr>
<th>From net importer to net exporter</th>
<th>From declining to growing gas production</th>
<th>From losing to making money</th>
<th>From net recipient to the biggest donor to the state budget of Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues from gas transit minus costs of gas import, USD billion</td>
<td>Gas production by UGS (gross), bcm</td>
<td>Net profit/(loss) of Naftogaz group, UAH billion</td>
<td>Contribution to the state budget of Ukraine, UAH billion</td>
</tr>
<tr>
<td>14.5</td>
<td>11.6</td>
<td>15.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Source: Naftogaz Financial statements, Ukrgasvydobuvannya

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#### Next phase: transformation

In 2018, Naftogaz group entered a new phase of its development to preserve the gains it had made and to achieve its full potential.

- Modernize infrastructure, achieving excellence in IT and digitalization, driving operational efficiency and developing the group's technical capabilities. This means addressing challenges large and small — from large IT systems to small but important improvements to the gear that Naftogaz drillers, production and transport workers work with every day.
  - Create a technical business unit, which will become a center of excellence for complex investment projects.
  - Holistically transform organization, including Naftogaz systems, processes, culture and personnel.
  - Achieve world-class performance benchmarks and make sure decisions regarding Naftogaz are in the company’s best interest.

In order to achieve the above, the Naftogaz management took on board a new organizational concept following the successful examples of leading oil and gas companies such as BG Group (UK) and Statoil (Norway). The selected operating model means organizing the operations of Naftogaz group into Business Delivery Units, Business Enabling Units and corporate functions based on a portfolio of assets and processes. Business Delivery Units (BDUs) deliver on the group's principal activities. They create most value to Naftogaz and focus on achieving financial and operational goals. In particular, BDUs should operate across each of the key stages of the gas and oil value chain, including gas prospecting, exploration and production, hydrocarbon preparation, treatment and processing, gas transmission, gas storage, and the sale and supply of gas, oil, petroleum products, LPG and CNG.

The Business Delivery Units are four core businesses of the group: Integrated Gas, Gas Transmission & Storage, Oil Midstream & Downstream, and Gas Transit. The Business Enabling Unit (Technical) is to act as an internal
During the first quarter of 2019, following approval from the Naftogaz supervisory board, Integrated Gas Business delivery Unit, Oil Midstream and Downstream Business Delivery Unit and Technical Business Enabling Unit were established. Selection and appointment of leaders followed the presentation of their vision for the future business unit and respective five-year business plan to promote ongoing performance improvement.

The transformation of Naftogaz requires an efficient organizational model, which would enable sufficient control over business units grouped into respective business units to drive growth and achieve synergies. The model assumes significantly strengthening the role of the corporate center – both in terms of technical and functional capability and from the compliance and control perspective.

The key pillars of the new organization:
- Individual accountability for results: organization of business units and functions in such a way that each leader has a clear responsibility to achieve financial results and/or create value, allowing it to measure its own performance covering both operating activity and strategic initiatives.
- Clarity of roles and responsibilities: strengthening of key roles in the organization while spelling out the authority and responsibility for achieving Naftogaz goals. Streamlined decision-making: strengthening the role for leaders of business delivery and enabling units, limited span of control and building out standardized efficient business processes.
- Focus on value-creation: delivering better product, better service or better result, constantly creating value propositions in a financially sustainable way, development of efficient performance management system.
- Ensure national interest: develop national market, technical and business infrastructure, local ecosystems and human capital, establish international partnerships with clear and transparent risk and benefit sharing.
- Focus on synergies: understanding and fully accounting for transaction costs, economies of scale, scope and skill. Exploring benefits from vertical integration within the group.

During the transformation, business units and functions shall be organized as follows. Corporate functions should support BDUs in order to maximize the value of the group. These functions are responsible for developing most of the competences across the value chain and therefore should be central to how the group operates.
Andrew Favorov

INTEGRATED GAS BUSINESS UNIT

Key results:

• The largest business of Naftogaz group by size (accounting for 42.3% of total consolidated revenues in 2018).
• Domestic production by Ukrgasvydobuvannya (which increased by 1.3% to a 25-year maximum in 2018 to almost 13.5 bcm) is the main source of gas for this segment.
• Sales volumes to retail supply companies in 2018 were 10.4 bcm. Direct supply to households amounted to 0.2 bcm.
• Sales volumes to DHCs supplying heat to households in 2018 were 4.8 bcm (4.6% more compared to 2017). This segment sources gas from both imports and domestic production by the group.
• In 2018, Naftogaz continued to accumulate debts from suppliers under PSD, which reached UAH 57.8 billion by the end of the year. The share of receivables from DHCs is UAH 20.4 billion, the share of retail supply companies equals UAH 30.3 billion. A further UAH 7.1 billion was accumulated by other PSD consumers.
• ROIC of this business in 2018 was more than three times lower than the estimated UAH denominated cost of capital (6.9% against 18.9%). This gap suggests that the current model of this business does not unlock the potential for creating additional value for the company’s shareholder.

The Integrated Gas Business Unit includes the following entities and departments:

• JSC Ukrgasvydobuvannya (excluding refining, sales of oil products and services);
• Gas of Ukraine Subsidiary Company;
• Naftogaz of Ukraine Gas Supply Company LLC;
• Naftogaz Trading Gas Supply Company LLC;
• Naftogaz Teplo Gas Supply Company LLC;
• Naftogaz Trading Europe AG;
• Tsentrgaz, JSC Kirovogradgaz subsidiary;
• NSIC Naftogaz of Ukraine departments: gas balance, dispatching, metrology and metering, gas sales; gas imports and customs clearance, gas trading.

The Gas Business Unit was created to integrate all businesses related to gas production and sales, and to ensure material increases in each of them and achieve synergies.

Our focus is managing gas production, trading and retail assets, while other services like construction of wells, access roads and pipelines will be sourced from our in-house contractor – the Technical Unit.

This approach has several advantages. For instance, we are going to abandon measuring efficiency of the gas business in meterage or wells drilled. In line with the world’s leading companies, we will focus on more important aspects, namely the profitability of the business and benefits for the shareholder.

Naftogaz supervisory board has approved a comprehensive development strategy for the Gas Business Unit. If implemented successfully, the Unit’s estimated value may rise to USD 14 billion within five years. What do we need to do to achieve this goal?

Firstly, we need to ensure production. It will be quite a challenge, considering existing fields are 80-85% exhausted and natural production is decreasing by 1.2-1.5 bcm per year.

We have to maximize the output and efficiency of existing fields. A real breakthrough in gas production nevertheless requires much more, including new licensed fields and their proper development within a short-term period. Naftogaz has a substantial amount of geological information in need of updating. We are planning to invest in seismic surveys to ensure a dedicated decision-analytic framework on drilling operations. This requires partnerships with the world’s best service providers, modern technology and, of course, huge investments.

The Unit’s Investment Program 2019 will amount from UAH 20 to UAH 40 billion, depending on the compensation for PSD to be paid by the government to Naftogaz. However, we need much more. We must therefore engage partners that are capable of funding our projects.

We have started to conclude production enhancement contracts aimed at engaging investors for gas production enhancement. Naftogaz group is open to dialogue to establish partnerships in all other domains with all reputable companies in technology and manufacturing.

Another important goal, besides gas production, is building transparent and effective sales channels. We have two basic elements here – exchange trading and retail.

A clear and liquid commodity exchange is important for us and for gas consumers as well. It would guarantee that pricing is market-based rather than regulated. Several exchanges are currently operating in Ukraine. Naftogaz group has successful experience of selling oil products through one of them. The Gas Unit will start to trade natural gas there in the near future.

The key task for 2019 is to ensure that all exchange trading tools, processes and procedures are in place. The next step, planned for 2020, is to establish our own exchange.

We also seek to enter the retail market. As a gas producer and importer, we often sell to intermediaries, which quite often turn out to be dishonest. To be successful, we need to offer our end-users not just gas, but an interesting product with high quality and convenient service.

Whatever we do, safety is our top priority. We need to introduce high HSE standards. Priorities also include the professional growth of our employees, their training with modern equipment and new methodologies, and comprehensive development of staff members.

In Ukraine, we should be innovators and pioneers in all of the abovementioned areas. This requires persistence, commitment, openness, initiative, and outside-the-box solutions. The goal is worth the effort. Following transformation, Naftogaz group can become a technology leader, market maker and excellent provider of energy products. Everyone would benefit from this, including the entire team of Naftogaz and ultimately the Ukrainian people. We should remember that every Ukrainian citizen is not just our consumer, but also our owner. Naftogaz is the country’s biggest taxpayer, having contributed 75% of its profits to the state budget last year. This year, the government wants us to contribute 90%. The effective work of the Gas Business Unit and Naftogaz group as a whole means prosperity for citizens and development for Ukraine.

Andrew Favorov

head of the integrated gas business unit
1) in upstream, Integrated Gas focuses on growth and commercialization of the hydrocarbons reserve base of Naftogaz group through effective management of its brownfield and greenfield license portfolio, improving its own geological and reservoir management capabilities and exploiting partnership options for de-risking and accelerating reserve development;

2) in midstream, Integrated Gas focuses on working efficiently with the transmission & storage business of Naftogaz group to ensure security of supply while optimizing capital investment into natural gas stocks;

3) in downstream, Integrated Gas focuses on developing trading capability while building out its retail function and working on its accounts receivable portfolio.

INTEGRATED GAS BUSINESS DELIVERY UNIT

Integrated Gas Business Delivery Unit structure

Hydrocarbon Reserves and Resources of Naftogaz Group

<table>
<thead>
<tr>
<th>Naftogaz**</th>
<th>Proven developed</th>
<th>Proven undeveloped</th>
<th>Probable</th>
<th>Production of hydrocarbons</th>
<th>Increase in hydrocarbons reserves</th>
<th>Resources as of 31.12.2018</th>
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</table>

* Note: The audit of hydrocarbon resources of Naftogaz performed by Ryder Scott as of 30 April 2018.

** Note: The audit of the group’s reserves with assessment of prospective resources of Naftogaz performed by Ryder Scott as of 31 December 2018.

** Sources: The audit of hydrocarbon reserves of Ukrvazvydobuvannya performed by Ryder Scott as of 30 April 2018.

** Sources: The audit of hydrocarbon resources of Naftogaz performed by Ryder Scott as of 30 April 2018.

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Despite accounting for ≈39% of licenses, UGV represents 75% of production.

Only 15% of all license applications were granted to UGV over the past 10 years.

A third of all new licenses are issued to private companies.
In addition to gas-related activities, Integrated Gas BDU includes production of oil and condensate by Naftogaz group. While focused on creating customer value and business delivery, Integrated Gas will delegate all its capital project execution activities to the Technical Business Enabling Unit (further – Technical or Technical BEU). Technical BEU will be in charge of procuring and delivering turnkey capital projects according to plans agreed with other business delivery units.

**Key strategic objectives and initiatives of Integrated Gas Business Unit**

Today, the management of Naftogaz group and of Integrated Gas BDU have identified a set of priority objectives to focus on in order to lay the foundations for sustainable development:

1. Drive upstream growth through modernization and strategic partnership.
2. Build a strong and agile Integrated Gas organization, which would accelerate decision-making.
3. Build the Naftogaz group retail business.
4. Drive upstream growth through modernization and strategic partnership.
5. Obtain compensation for implementing Public Service obligations, imposed by the Cabinet of Ministers of Ukraine by its Resolution No 867 of 19 October 2018 (PSO).

### Goal #1: Drive upstream growth through modernization and strategic partnership

#### Naftogaz group achievements in 2016-2018

<table>
<thead>
<tr>
<th>Objective</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Production</td>
<td>16.3 bcm</td>
<td>15.5 bcm</td>
<td>15.5 bcm</td>
</tr>
<tr>
<td>• Growth of resource base</td>
<td>25-year record of production achieved</td>
<td>15.6 bcm in 2018</td>
<td></td>
</tr>
<tr>
<td>• Increase in 3D seismic volume since 2015</td>
<td>5 years of monthly production achievement</td>
<td>43.8 bcm in 2018</td>
<td></td>
</tr>
</tbody>
</table>

#### UGV gross production in 2015-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Production (bcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>14.5</td>
</tr>
<tr>
<td>2016</td>
<td>14.6</td>
</tr>
<tr>
<td>2017</td>
<td>15.3</td>
</tr>
<tr>
<td>2018</td>
<td>15.5</td>
</tr>
</tbody>
</table>

### Goal #2: Build a strong and agile Integrated Gas organization

#### Naftogaz objectives

- Ensure sustainable production increase through greenfield development
- Share risks and invest in resource base development
- Efficiently scale up
- Build technological capability
- Ensure profitable growth
- Maximize value of depleted brownfield reserves

#### Partnership considerations

- Partner requirements – proven track record, technological excellence, readiness and ability to scale in Ukraine
- Contract type – Production Sharing Agreement (PSA)

### Goal #3: Build Naftogaz group retail business

- Maximize value of depleted brownfield reserves
- Minimize costs and increase profitability
- Commericalize Naftogaz and Ukraine’s tight gas resources
- Ensure sustainable production increase through greenfield development
- Optimize capital commitment
- Partner requirements – proven track record, significant capital exposure, readiness to scale in Ukraine
- Contract type – Integrated Project Management (IPM)

#### New exploration effort

Today, Naftogaz’s retail business is represented largely by 0.3 million customers mostly in Kievograd region. The remaining household supply is done via regional supply companies under PSO obligation, which leads to two major negative consequences for Naftogaz group:

1. Naftogaz group does not get paid timely and in full for the natural gas volume it sells to the regional supply companies with limited ability to monitor and influence payment discipline from the final consumer;
2. Naftogaz group is not able to monitor and prevent possible leakages when natural gas is sold under PSO is directed for commercial usage.

At the same time, regional supply companies earn a guaranteed margin of 2.5% on the supply of gas to households. In addition to the above, Naftogaz group’s entry into the direct household supply business is aimed at ensuring a smooth transition to the post-PSO environment in May 2020 and prevention of potential supply disruptions.

Although limited in its current retail presence, Naftogaz believes it can leverage its scale and partnership opportunities to quickly ramp up its presence while offering retail customers an attractive service and financial value proposition.
Goal #4: Build a 3 bcm extra safety cushion to hedge against possible zero transit and gas import disruption in 2020

Due to the risk of zero transit from the Russian Federation starting from 1 January 2020, and the consequent potential disruptions in imports of gas to Ukraine, Integrated Gas has begun the creation of an extra safety stock of natural gas of 3 bcm to ensure availability of extra gas withdrawal from underground storages in case of disruption. While this is a one-off measure, it requires additional funding of USD 0.9 bn that was budgeted in the financial plan for 2019.

Goal #5: Obtain PSO compensation

Since 2015, Naftogaz group has accumulated pre-tax losses from its activities under PSO obligations of UAH 114 billion as of 31 Dec 2018. The above and need in development of in-house production and import of natural gas to supply during the heating season of 2019-2020, as well as keeping a safety stock in case of import disruption, has put Integrated Gas BDU and Naftogaz group as a whole in a position of being unable to finance its activities with internal cash flow.

Summary: Integrated Gas goals for 2019 are to cope with the challenges of the current year while laying down a strong foundation for the profitable and sustainable growth of the group while ensuring the national interests of Ukraine.
Key results in oil midstream:

- 13.3 million tons of transit, which is 4.3% decrease as compared to the previous year.
- Volumes of oil transmission to Ukrainian refineries increased by 0.3% to 2.1 million tons.
- Operation of the oil pipeline Odesa-Kremenchuk section and the first phase of Mosyr-Brody oil pipeline were renewed.

Key results in oil downstream:

- Shebelynka refining volumes reached 454 thousand tons, which is 8% less compared to 2017.
- Over 85% of produced fuel products were sold through wholesale channels.

The Oil Unit includes assets related to oil transmission segment performance, which is the result of below reasons:

- Historical oil transmission infrastructure underutilization and sub-optimal tariff structure.

The matrix approach to management is a widespread form of modern business asset management. For 20 years, all the companies of Naftogaz group were managed as legal entities, when each company existed in its own closed production cycle and was unable to thoroughly assess the potential for optimization of production processes. I believe that a completely new approach to the analysis of business operations is one of the key positive outcomes of the transformation.

The unit’s key objectives are to increase the value of assets and generate more profit.

The unit will use some of its investments to contribute to the governmental program for the reserve of oil and oil products. By 2022, the state reserve is expected to accumulate 500-600 thousand tons of oil and 1.5 million tons of light petroleum products. Being the only licensee that is eligible to transport oil, Ukrtransnafta will operate the oil reserve. We are upgrading all our facilities so that they can participate in this program. Modernization of oil reservoirs with total capacity of about 700 thousand tons will allow us to consider the whole system as a participant of the program. The draft law “On minimal reserve of oil and oil products” stipulates that the storage provider will be compensated for storage costs. We have calculated the costs, submitted the relevant proposal.

Currently, the major share of the unit’s revenues accounts for gas condensate and LPG trading, equaling about USD 7 billion per year. Oil transportation is the second largest revenue totalling about USD 5 billion. For now, four routes are in operation: transit to Western Europe via Ukraine, transportation of Azeri oil from Odesa to the Kremenchuk oil refinery, transportation of domestically produced oil from the Poltava fields to the Kremenchuk oil refinery and Western Ukraine (about 350 thousand tons). Kremenchuk oil refinery is the only one currently operating in Ukraine, while other refineries are unlikely to resume their operations within the next 5-7 years.

Significant capacity of Ukraine’s trunk oil pipeline system is not used now. We are operating the Druzhba oil pipeline system in a completely stable mode. The design capacity of this system is about 17 million tons per each of its two strings. We can therefore provide transmission of up to 30 million tons of oil per year. Instead, the volume of oil transit in 2018 was only 13.5 million tons. This is the total demand of the three European refineries located in the Czech Republic, Hungary and Slovakia, which receive Russian Urals oil. Over the last three years, there has been a trend for diversification of oil supplies to these plants and we lost about 1.5 million tons of transit in this period. This is due to the fact that European companies are gradually shifting to other oil brands. The oil transportation market is one of the most conservative markets. It is closely connected to production and refining sites. Recycling facilities are quite conservative too. They were designed and constructed based on the quality of oil. Our outlook for the next 10 years is therefore rather stable in terms of projected volumes of oil transportation of about 12-13 million tons.

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OIL UNIT STRUCTURE

Oil Midstream and Downstream Business Delivery Unit (Oil M&D or Oil M&D BDU) encompasses all activities of Naftogaz group related to import/export, transportation, sale, supply of oil, natural gas refineries, gas condensate, petroleum products, petrochemicals, components and related services of Naftogaz group. Oil Midstream & Downstream BDU operates related with transportation by Ukrtransnafta and liquids and fuel products commercial operations of Ukrtransnafta, LPG transportation by Ukreptransgaz and CNG retail by Ukravtogaz.

Oil Midstream & Downstream BDU consolidates the oil and fuel product midstream and downstream operations of Naftogaz group, ensuring an integrated approach to developing the Naftogaz fuel product portfolio and sales channel mix. Oil M&D BDU focuses on the following sets of activities along the oil and fuel value chain:
1) In midstream, oil M&D BDU focuses mostly on securing the supply of oil and pipeline infrastructure maintenance to ensure the oil transport & transmission business as well as managing the biggest LPG transportation railcar fleet;
2) In downstream, Oil M&D focuses on efficiency and the portfolio of its refining operations and optimization of its sales channel mix, including managing a CNG station network. Similar to Integrated Gas, Oil Midstream & Downstream BDU will delegate all its capital project delivery activities to the Technical BEU while focusing on business development and operational efficiency.

Key strategic objectives and initiatives of Oil M&D BDU

In its downstream segment, the challenges of the BDU include:
- suboptimal scale and still outdated and inefficient refining technology resulting in suboptimal fuel product mix and high cost;
- low utilization and limited options for economically attractive liquids supply;
- insufficient sourcing/trading capability and retail channels.

To address these challenges, Oil Midstream & Downstream BDU will be focusing on the following objectives:
1) preserve the oil transit business while trying to minimize losses in the domestic transmission business;
2) modernize and scale up refining capacity with a focus on high-margin products;
3) develop oil and fuel product trading capability;
4) optimize retail network.

Goal #1: Preserve oil transit business and diversify supply in oil midstream segment

The Oil Midstream & Downstream BDU management team is working hard to negotiate and sign an oil transit contract (the current one expires at the end of 2019) with Transneft. Preserving this contract is essential to sustain the overall business and maintenance of Ukrantransnafta assets.

Goal #2: Modernize and scale up refining capacity with focus on high-margin products

The current fuel product market is dominated by the following trends that are essential for thrust performance and future of the downstream segment of the Oil Midstream & Downstream BDU:
- failing – although levelling off; gasoline sales vs. recent rapid growth in LPG;
- limited local production with market dominance by imports, mostly from Russia and Belarus.

Key strategic initiatives undertaken by the Oil Midstream & Downstream BDU assume the following initiatives:
1) modernization of Shebelynka refinery: construction of isomerization and hydro cleaning unit and benzene production system which would allow to switch from A90 to A95 gasoline type and reach ~300 benzene production from the currently loss-making pygas;
2) increase of LPG production capacity; given the high demand and growth dynamics, together with competitive position in the market as well as strong economics of LPG extraction from Naftogaz-produced gas, the BDU is initiating a project to construct the Khreustysche LPG plant with a total LPG capacity of ~200K tons per year.

Goal #3: Develop oil and fuel product trading capability

Today Oil Midstream & Downstream BDU experience insufficient capability in securing the needed hydrocarbon raw materials to supply Shebelynka refinery. In addition, the BDU sells over 95% of its fuel products through wholesale channels.

Developing its own wholesale trading capability for liquid hydrocarbons and fuel products, also through leveraging existing and new sea terminals infrastructure for transshipment of new volumes of fuel products, will become an important enabler for increasing the profitability of the refining and distribution operations of Oil Midstream & Downstream BDU.
Goal #4: Optimize retail network

The two retail networks within the scope of Oil Midstream & Downstream are historical underperformers with their own individual set of fundamentals:
- retail network of Ukrgasvydobuvannya has been loss-making due to a low-scale, mono-fuel model, poor service and unfavorable locations (with the notable exception of the new branded U.GO station);
- large CNG station network has suffered from steeply declining market, poor location, equipment, and historic mismanagement.

Today’s strategy towards retail chains focuses primarily on optimization through detailed location studies, due diligence, operational efficiency measures, and optimization of the number of stations. Following this turnaround, the BDU’s management is considering investing in 50 new full service multi-fuel retail stations.

Summary: Oil Midstream & Downstream goals for 2019 are to ensure extension of oil transit contract while kicking off modernization of Shebelynka refinery and boosting LPG capacity as well as starting to build trading capability and diversifying liquids and fuel products supply.
For several decades, the company’s asset structuring into business units has been the standard for the world’s largest oil and gas companies. This structure has proven its efficiency primarily in terms of a clear separation of functions and responsibilities. One of the key ideas for the transformation of Naftogaz is the clear specification of structures, business processes and individuals responsible for implementing strategy and for the results for each business line.

The technical business enabling unit was created as an auxiliary service unit, which would be responsible for the relevant business processes and optimize their implementation. For example, the budgets of Naftogaz, its subsidiaries, the procurement budgets, capital investments and the drilling process are not currently sufficiently synchronized with each other, which jeopardizes the optimal use of resources in one unit and non-fulfillment of production plans in another. In order to use funds as efficiently as possible and to make this process more transparent, Naftogaz group decided to streamline production budget management and to make the technical business enabling unit the central unit responsible for it.

The goal is to achieve the best possible result at a lower cost.

Our unit will make purchases for the benefit of the group’s companies, as well as capital investments according to approved plans. According to our predictions, the majority of purchases (about 100% for Ukrtransgaz, about 80% for Ukrgasvydobuvannya) will be carried out through the e-procurement system ProZorro. At the same time, we are negotiating with representatives of the Big Four of the world’s oil and gas service companies – Schlumberger, Halliburton, Weatherford and Baker Hughes, on direct procurement opportunities. These companies are operating under extremely rigorous US anti-corruption legislation, so we estimate the risk of abuse in transactions with their participation as minimal.

The scope of responsibility of the unit will include R&D, design and engineering, and capital construction from design to commissioning.

Today, these functions are scattered throughout a range of companies, many of which belong to Naftogaz group. For example, both Ukrgasvydobuvannya and Ukrtransgaz include companies involved in construction. They build roads, gas infrastructure objects, gas pipelines, compressor stations, and much more.

All these companies became part of the unit. According to the recommendations of international consultants, the unit will also perform drilling operations as well as hydraulic fracturing for group companies. There is sufficient reason for this as Naftogaz group has its own internal contractor, Ukrburgaz company.

The planned number of staff within the unit is up to 15 000 employees. The number of staff will be optimized based on a number of priorities including efficiency, labor productivity, etc.

My main function, as I see it, is to centralize the scattered financial, production, and procurement functions, and to create an effective project management system. We have already started establishing a Project Management Office (PMO) that will deal with these issues. The PMO will work in close co-operation with the Capital Projects and Capital Construction Department, which will report to me, while from the organizational point of view, it will be under Naftogaz.

The key tasks of the unit for the current year include the following:

- Development of standards and policies
- Development of an updated CAPEX plan for 2019
- Optimization of processes and purchase plan for 2019
- Introduction of functional structure of the unit
- Implementation of project management system
- Development of business interface and internal SLA contract

My personal KPI will be the same as the KPI of Andrew Favorov, the head of the integrated gas business unit – the level of production. All activities of the unit will focus exclusively on increasing the level of extraction with the most efficient use of resources.

The development of so-called interfaces and rules of interaction between our two units is an important task. Regulations should ensure the most efficient cooperation. I am convinced that if the unit structure had been introduced five years ago, we would already be extracting 20 bcm of gas a year. I expect to have a key effect of management system restructuring in 2020-2021.
TECHNICAL BUSINESS ENABLING UNIT

Context, progress and challenges to capital project activities in Naftogaz group

Since 2014 when the new management team came to Naftogaz, the results of the market and company reforms have made it possible to direct growing investments into modernization and growth of key subsidiaries of Naftogaz group, primarily into the natural gas exploration & production activities of Ukrgasvydobuvannya. The USD-denominated volume of investments in the three biggest subsidiaries has increased almost 6 times over 4 years. This increase has placed a strain on the technical, operational and procurement resources of Naftogaz group.

The Technical Business Enabling Unit (further – Technical or Technical BEU) includes all general and oil & gas field services, R&D and capital project activities including engineering and procurement.

Technical BEU encompasses all service units of Ukrgasvydobuvannya and Ukrtransgaz as well as all teams responsible for capital project planning and execution and procurement located in Naftogaz or its subsidiary HQs or other organizational units managed by other BDUs.

Gas production increase and new efficiency level since 2015

Operations of UGV’s service divisions

Cooperation with Schlumberger

Schlumberger and UGV started cooperation in Q1 2018, and it has ramped up significantly since then:

- Multi-Service Agreement (MSA) was signed in March 2018, and currently has 16 service lines under it
- UGV and Schlumberger signed Memorandum of strategic cooperation in October 2018
- Long-term (3-year) Coiled Tubing services contract for 4 fully-equipped CT units and advanced downhole tools and technologies was signed in October 2018
- Schlumberger is currently the key supplier of high-tech services and products to UGV, including drilling (cementing, mud, MWD, drill bits), well-intervention (CT), engineering and G&G (software, wireline logging)
- In 2018 alone UGV has contracted Schlumberger for USD 120+ million across 15+ different service lines and products

Cooperation with Weatherford

Weatherford was the first world-leading OFSC, which UGV began cooperation with in 2017:

- Bundle service contract for Fishing tools and services was signed in 2017
- UGV has already obtained over 150 mcm of gas through Weatherford services
- Weatherford provided UGV engineering services on well candidates selection and design for Work Over, Fishing and Artificial-lift programs in 2017-2018
- Multi-Service Agreement (MSA) was signed in May 2018, and currently has 8 service lines under it
- Weatherford is key UGV’s provider of Liner Hangers, Artificial-lift systems and Fishing tools and services
The role of the Technical BEU is to be the technical heart of Naftogaz group, supporting Naftogaz Business Delivery Units to add and protect value for Naftogaz group. While remaining ultimately accountable for final result, Business Delivery Units delegate delivery responsibility to the Technical Business Enabling Unit for activities where there is a clear value case.

Creating clear accountability for capital project delivery with a clear-cut business interface and focus on project management excellence and speed and efficiency of business delivery were the key advantages for creating the Technical BEU within Naftogaz group.

### Key advantages of creating an integrated Technical Business Enabling Unit

- **Single accountability**
  - Single responsibility in Capex execution
  - Clear boundary between production unit and service unit

- **Project management focus**
  - Capex execution and control by Project
  - Project manager handles all issues from zero to end

- **Speed and efficiency**
  - Secure Capex execution on time with high-quality is the best way to add value
  - Minimize cross control and duplication of functions for transparency purpose

- **Well-made business interface**
  - Clear understanding of responsibility and business process between business unit and service unit
  - Minimize operation risks

- **Single accountability structure**
  - Single responsibility in Capex execution
GAS TRANSMISSION AND STORAGE BUSINESS DELIVERY UNIT

ROIC for the Gas Transmission and Storage Business Delivery Unit was -2.2% in 2018 compared to the estimated USD denominated cost of capital of 12.0%. The major reasons of negative ROIC were unauthorized offtakes and non-implementation of RAB tariff on internal entry points in 2018.

Key results in gas transmission

- Total volumes transmitted to domestic users – 28.5 bcm, which is marginally above the volumes transmitted previous year
- Gas imports from the EU comprised 10.6 bcm, or 24.8% less year-over-year. Of these volumes, 61% were imported from Slovakia, 32% from Hungary and 7% from Poland.
- ROIC in 2018 was -5.2% due to the effect of provisions for unauthorized offtakes and non-implementation of RAB tariff on internal entry points in 2018.

Composition and overview

The Unit is responsible for securing safe and economically viable gas transmission and storage services while integrating the Ukrainian gas infrastructure with the European system. Pawel Stanczak, Director of the Ukrtransgaz branch “Operator of the Gas Transportation System of Ukraine” (“Branch TSO”) was selected as the leader of the unit.

From 1 January 2020, Ukraine is required to unbundled gas transmission activities from the group pursuant to Ukraine’s obligations under the Treaty on the Establishment of the Energy Community and the Third Energy Package. The Unit’s key objective is to ensure uninterrupted operation of the Ukrainian GTS during the restructuring and creation of an independent and full-fledged TSO in 2020 ( unbundling).

Gas transmission and storage

The Unit is responsible for operating Ukraine’s GTS and for ensuring the reliable and safe operation, maintenance and development of the system. UTG is responsible for the transportation of all gas entering the Ukrainian GTS (including the group’s own produced gas), providing gas transmission services within the territory of Ukraine (domestic gas transmission), including to Ukrainian clients and foreign clients for gas imports, as well as technically supporting gas transit services to Gazprom.

This Unit also includes 12 underground storage facilities in mainland Ukraine. Meanwhile, Krasnopopivske UGS facility is located in the temporarily uncontrolled territory of Luhansk region. The group anticipates that after 1 January 2020 The group anticipates that beyond the stated date it will no longer control the gas transmission system operator, while it will maintain control over the gas storage system operator.

Key results in gas storage

- Injection to the storages by all parties comprised 9.8 bcm (7.3% y-o-y). Withdrawal volumes by all parties were 10.6 bcm (64% increase, compared to previous year). As of 1 January 2019, 13.9 billion cubic meters of gas were accumulated in Ukraine’s gas storages, which is by 5.4% less than a year ago, but by 15.6% more than those volumes of gas stored in Ukrainian storages as of 1 January 2017.
- ROIC in 2018 was -1.1% that was significantly lower than the estimated cost of capital.

Business activities beyond the Gas Transmission and Storage Unit

Gas transmission

Due to legacy problems and, in particular, the inability of Naftogaz to reassign transit contracts with Gazprom to Ukrtransgaz, described in more detail in section “Arbitration proceedings” of this report, both for management and reporting purposes, Naftogaz distinguishes natural gas transit as a separate segment. The gas transit segment and a dedicated team at Naftogaz, led by Yuriy Vitrenko, Naftogaz group executive officer, are responsible for servicing the current transit contract with Gazprom, negotiating the post-2019 transit contract, as well as protecting Naftogaz interests in arbitration proceedings in Stockholm. (For more information on this business segment see page 84).

Service functions

Apart from its core businesses, Ukrtransgaz also offers services such as construction, diagnostics, repairs and engineering services, acting as internal contractor for core transmission and storage activities, as well as other non-core activities (agriculture, heating, etc.).

This part of the Ukrtransgaz business is part of the Technical Business Enabling Unit and not related to the Gas Transmission and Storage Business Delivery Unit.
Key challenges for the Unit development

Uncertainties regarding transit after 2019

Historically, the Ukrainian GTS transited ca. 120 bcm of gas to Europe (compared to designed transit exit capacity up to 146 bcm). However, the volume of gas transited consequently decreased e.g. by partial transit rerouting on alternative (new) routes bypassing the territory of Ukraine (Yamal-Europe, Nord Stream).

The group does not have any reasons to believe that there will be long-term and material transit flows through Ukraine after 2019 as planned additional bypassing routes (Nord Stream 2 and Turkish Stream) are becoming more viable. Loss of transit would cause significant underutilization of GTS and substantial revenue drop.

Decrease of domestic gas consumption

Ukraine’s natural gas consumption has been in decline during recent years, falling from 76 bcm in 2005 to 32.3 bcm in 2018, leading to lower utilization of the gas system for domestic transmission. This clear trend of significant reduction of gas consumption in Ukraine is due to increases in energy efficiency technologies and energy saving measures, along with an economic crisis inhibiting gas consumption in the industrial segment.

Consumption is set to follow this downward trend in the future, which will have an adverse influence on demand for transport services.

Unauthorized offtakes

Gas transmission and Storage BDU faced unauthorized offtakes by district heating companies and regional distribution companies (in 2018 unauthorized offtakes equaled ~1.3 bcm), creating liquidity problems and rapid increase in provision for bad debts for balancing services (from UAH 0.1 bn in 2015 to UAH 28.3 bn in 2018).

Disproportionate distribution of risks and benefits among market participants

Regional gas supply and distribution companies (oblgazs and oblgazzbuts) are not obliged to pay in advance or to pay financial sanctions in case of untimely payment or even non-payment, causing poor receivables collectibility.

Pending implementation of cost-reflective transmission tariffs

Tariffs based on the regulatory asset base (RAB) for domestic entry/exit points were not applied by the NEURC during 2016-2018 (in March 2017 the National Energy and Utilities Regulatory Commission (NERCU) adopted a resolution setting capacity-based exit tariffs and then cancelled it in April 2018). The situation did not change in 2018 – RAB-based tariffs were not introduced for gas transmission at internal entry and exit points.

On 21 December 2018, NEURC adopted Resolution №2001, which set temporary entry and exit transmission tariffs for 2019. Under this resolution, the allowed transmission revenue was reduced to a level that is not cost-reflective for the transmission system operator, which is expected to face significant cash shortfall in 2019 unless tariff levels are reviewed.

Key initiatives

In natural gas transmission:

Unbundling in compliance with the EU Third Energy Package. In order to meet the legal requirements and, taking into account the existing limitations of Ukraine (for more details please refer to the Unbundling section of this Report), Ukrtransgaz is implementing a comprehensive action plan. This has been developed under the supervision of international consulting firm PwC Polska z.o.o., to prepare the organization for unbundling in early 2020 after the expiration of the existing transit contract between Naftogaz and Gazprom.

Achieving EU regulatory and standards compliance including the introduction of daily balancing. The ultimate purpose of the initiative is to introduce EU best practices and to comply with the established EU regulatory framework, which shall increase Ukrainian gas market’s development and support integration with the European market. The purpose shall be achieved through the following actions:

- introduction of daily balancing, which shall: (i) support more efficient balancing of supply and demand, (ii) more efficient gas consumption and supply, (iii) increase TSO responsiveness to any abusive actions from customers, (iv) improve financial risk management in terms of receivables collection; alignment with EU network codes, including with respect to balancing, tariffs, interoperability rules, and capacity allocation mechanisms;

- signing and enforcing of direct interconnection agreements with neighboring European gas transmission system operators and annual capacity auctioning in July 2019.

On 1 March 2019, the Ukrainian gas market switched to a daily balancing regime. To support this transition, Ukrtransgaz introduced a new information platform.

This step finalizes one of the key reforms in the energy sector of Ukraine, bringing it into line with the model applied to gas balancing zones within the borders of the EU.

Labor efficiency improvement. Some functions, commonly outsourced by EU operators, shall remain outside the perimeter of the gas transmission operator after unbundling. In addition, the new target operating model developed by the international consulting firm is expected to be adopted by the TSO after unbundling. In future, additional labor efficiency can be achieved through digitalization and automation of processes.

The group aims to achieve effective digitalization and automation of gas infrastructure through investments in relevant hardware and software systems including SCADA, Enterprise Pipeline Management System used as telemetric and telemechanic system, contract management system.

In natural gas storage:

Adjusting storage capacity to demand through storage optimization. Due to significant underutilization and poor financial performance, storage capacities need to be optimized and tailored to actual needs stemming from market demand and supply security in Ukraine. Due to these initiatives, the asset base and OPEx related to the storages will decrease, thereby increasing UTD’s return on assets in the long term.

Advocating and supporting the introduction of tariffs that reflect costs and cover depreciation for gas storage services.

Introduction of new products and revenue streams. As one of the ways to increase revenue and infrastructure utilization, the UTD plans to introduce new products in order to increase the share of revenue from services other than traditional seasonal storage, following the trends of European SOEs. The new services will be especially dedicated to European clients, taking advantage of Ukraine’s location and developed infrastructure in the Western part of the country.
Key results in 2018:

- Gas transit contributes 28% to the consolidated revenue of the group and it accounts for 17% of the carrying value of property, plant and equipment and net working capital of the group.
- Gas transit volume amounted to 86.8 bcm (-7% compared to 2017). This corresponds to almost 40% of the total gas supplied by Gazprom in 2018 to European countries.
- Under the final award in the transit contract case issued by the Arbitration Institute of the Stockholm Chamber of Commerce, Gazprom must pay Naftogaz USD 4.63 billion of compensation breach of the minimum contractual volume of gas transit in 2009-2017. Naftogaz has already received USD 2.1 billion through a set-off according to the award and continues to enforce the rest of the awarded amount.
- As of the date of this report, Gazprom and Naftogaz have no transit arrangements reached for the period beyond 2019. Preparation of a claim against Gazprom regarding the revision of the transit tariff for 2018-2019 is in process.

In 2018, the volume of Russian gas transit through Ukraine amounted to 86.8 bcm, or 6.7 bcm less than in 2017. At the same time, the revenues of Naftogaz from transit services provided to Gazprom in 2018 amounted to USD 2.65 billion, which is 4% less than the revenues for gas transit in 2017 (mainly due to reduced transit volumes).

This decrease in transit volumes is explained by three main factors:

1. Reduced reverse supplies of imported gas from Europe to Ukraine by 3.5 bcm compared with 2017. The purchase of gas by Ukrainian importers in the EU and not in Russia increases the overall level of demand in Europe—so the reverse purchases have a positive effect on the volume of transit. According to our estimates, due to the purchase of gas in the EU, in 2018 alone Naftogaz group received additional transit revenue of UAH 9.2 billion.

2. A higher level of utilization of the Nord Stream pipeline capacity compared to 2017. The reduced supply of Russian gas to Western Europe via the Ukrainian route in 2018 (36% according to Thomson Reuters) compared with 2017 (40%) is due to the fact that the OPAL pipeline and, accordingly, the Nord Stream pipeline became available at maximum possible capacity in the second half of 2017.

3. Decreased gas consumption in Europe in 2018 (by 3.4% according to Eurostat). Much of this was due to weather conditions, however energy efficiency measures also played a role.

Despite the fact that volumes of transit in 2018 exceeded average volumes in the last 5 years by 11%, these volumes were still lower than the volumes specified in the 2009 gas transit contract between Naftogaz and Gazprom by 2.3 bcm.

During the Stockholm Arbitration on the transit case, the Tribunal, in its decision of 28 February 2018, acknowledged that in 2009-2017 Gazprom was obliged to pump contractual volumes through Ukrainian pipelines and on this basis awarded Naftogaz compensation of USD 4.63 billion. Taking into account the cross claims between Naftogaz and Gazprom and based on the results of the arbitration proceedings concerning the gas supply contract and the transit contract, the Arbitration ruling was that Gazprom shall pay Naftogaz USD 2.56 billion, as well as interest for late payment (which constitutes ≈ USD 0.5 million for each day of delay).
The Tribunal in its award of 28 February 2018 did not support the claim of Naftogaz to review or apply regulated tariffs, arguing this point as follows: 1) the Tribunal rejected the claim of Naftogaz to align the gas transit contract with the EU’s and Ukraine’s competitive and energy legislation, arguing that EU legislation does not apply to this dispute, and the implementation of reforms in Ukraine (including the application of new tariffs) falls within the competence of the Ukrainian regulator; 2) when applying in its claim to review the tariff in 2009, Naftogaz failed to comply with all the procedures specified in the gas transit contract. In its decision of 28 February 2018, the Tribunal also rejected the claim of Naftogaz regarding the possibility of assigning rights and obligations to Naftogaz under the transit contract to Ukrtransgas or any other legal entity assigned as the GTS operator. The satisfaction of this claim would allow Ukraine to keep gas transit under the current contract and at the same time to unbundle the GTS operator. The Tribunal also noted that “the invalidation of the relevant provisions of the contract or amendments to them falls within the competence of the regulator, and it is only the regulator who has been entrusted with mandatory control functions, the respective competence and mechanisms to enforce the said”. 

**Transit beyond 2019**

During 2018, the Russian Federation and its partners took a number of consistent steps that brought the North Stream 2 (with its land extensions) and Turkish Stream projects closer to realization. The gas pipelines are planned to be commissioned by the end of 2019, indicating a high risk of ending the transit of Russian gas from 2020. In view of the completion of the gas transit contract between Naftogaz and Gazprom in 2019, and the importance of the issue to Ukraine, in the summer 2018, the Ukrainian and European sides initiated trilateral negotiations on transit terms after 2019. Later in 2018, several rounds of trilateral negotiations, as well as bilateral and trilateral expert consultations between the Ukrainian and Russian sides with the participation of the EU took place.

At the time of writing this report, no agreement on the terms of the transit contract after 2019 has been reached. During the last negotiations in January 2019, the Ukrainian side was open to discuss suggestions on the transit of Russian gas in the future, in view of the fact that the new contract should be based on the norms of European and Ukrainian law. However, agreement has not yet been achieved. Since Gazprom does not agree to the standard European terms for signing a new contract for the period after 2019, the management of Naftogaz is currently considering the following scenario:

- Zero volumes of Russian gas transit through the territory of Ukraine starting from 2020.
- Naftogaz continues a new arbitration proceeding on the revision of the transit tariff, which was initiated in July 2018, according to which Naftogaz is able to receive multi-billion compensation for Gazprom’s refusal to review the transit tariff.

Naftogaz has taken the existing limitations related to the contract and new arbitration proceedings into consideration while preparing the unbundling of the GTS operator.

**New arbitration proceedings related to gas transit**

In April 2018, Gazprom initiated a new arbitration proceeding with the Arbitration Institute of the Stockholm Chamber of Commerce, essentially trying to cancel the arbitration awards, or, alternatively, terminate the gas supply contract and the gas transit contract. Naftogaz in turn put forward a series of counter-claims regarding Gazprom’s violations of both contracts, the amount of compensation for which is to be determined later.

As part of the arbitration proceedings concerning the gas transit contract, the Tribunal in its decision of 28 February 2018 did not hear the Naftogaz case on merits for a revision of the transit tariff as its application to revise the tariff in 2009, Naftogaz failed to comply with all the procedures stipulated in the gas transit contract. Nevertheless, this decision did not deny the right of Naftogaz to claim a revision of the tariff – so Naftogaz sent a request to Gazprom to revise the tariff in March 2018, which triggered the initiation of negotiations on the terms of the gas transit contract.

Since the parties did not come to a mutually acceptable solution during negotiations on this issue, Naftogaz had to seek arbitration in accordance with the terms of the contract. Therefore, on 6 July 2018, Naftogaz submitted a request for arbitration to the Arbitration Institute of the Stockholm Chamber of Commerce, requesting a revision of the tariff under the gas transit contract. In 2018, the Board of the Stockholm Chamber of Commerce combined the case initiated by Gazprom on the revocation of the previous awards of the arbitration and the case initiated by Naftogaz concerning the revision of the tariff, into one proceeding.

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2. Paragraph 3783 of the Tribunal’s decision regarding the gas transit contract of 28 February 2018
3. For more details, see section “European gas market”
4. The term of gas transit is expected to reduce the Ukrainian GDP by at least 4%
In 2018, Ukrnafta return on investment capital (ROIC)2 improved from 5.0% to 10.8%, but still remains twice lower than the cost of capital rate estimated at 21.8%. This means that Ukrnafta’s businesses of hydrocarbons extraction and production as well as petroleum products sales still do not generate the value to the company in a financially sustainable way.

In 2018, Ukrnafta paid UAH 15.3 billion of taxes to the state budgets of all levels, including UAH 1.2 billion as repayment of an overdue tax debt. The amount of tax payments for the past year exceeded the corresponding figure in 2017 by 45.7% (UAH 10.5 billion), and in 2016 by 88.9% (UAH 8.1 billion). In 2018, the company fully paid its current tax liabilities, while repaying its past due tax on a regular basis.

Over 2017-2018, Ukrnafta reduced its tax liability to UAH 11.9 billion (of which 89% was overdue), however, due to the accrued fines and penalties for past due of taxes and duties, the total debt grew by UAH 4.5 billion to UAH 29 billion as of the end of 2018. The average effective rate of fines and penalties accrued on the principal amount of tax debt is 23.4% per annum, which exceeds the Ukrnafta’s cost of capital, which is 21.8%. This indicates that ignoring the issue of repayment of Ukrnafta’s tax debt leads to the destruction of the company’s value.

In order to bring Ukrnafta out of crisis and to achieve the financial stabilization of one of the largest enterprises in the oil and gas industry in Ukraine without applying bankruptcy and sanction procedures, including to reduce social tension and retain its personnel capacity, the company’s management has repeatedly appealed to the executive authorities requesting to restructure its tax debt. To support the implementation of the company’s financial recovery plan, in March 2019, an extraordinary general meeting of shareholders of Ukrnafta discussed a number of issues related to the company’s management and operations. In particular, the decisions of the shareholders included the approval of changes that brought the company’s corporate governance system into line with the best international standards and OECD recommendations, and also agreed to enter into the contracts between Ukrnafta PJSC and NSIC Naftogaz of Ukraine on the sale and purchase of natural gas for a total of 4.062 bcm.

The contracts stipulate that Naftogaz will acquire 2.062 bcm of Ukrnafta gas from underground gas storage, as well as 2 bcm of gas that will be extracted in the future. Payments are to be made by the funds received by Naftogaz from the CMU as compensation for the fulfillment of special gas supply obligations for the needs of households and district heating companies. In turn, Ukrnafta will use the money received solely to repay its tax debts, as well as other tax liabilities that will arise during the fulfillment of the contracts.

2 ROIC is calculated as NOPLAT divided by investment capital, which is determined on the basis of original invested in fixed assets and net working capital. The capital invested in fixed assets is calculated based on the company’s proprietary estimates of opportunity cost of hydrocarbons reserves and the value of petroleum industry’s market.


The table shows the comparison of Ukrnafta’s tax liabilities and provision for fines and penalties in 2017-2018, UAH billion:

<table>
<thead>
<tr>
<th>Year</th>
<th>Provision for fines and penalties, UAH billions</th>
<th>Ukrnafta’s tax liabilities, UAH billions</th>
<th>Including overex as of 31 December 2018, UAH billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>14.3</td>
<td>26.9</td>
<td>41.2</td>
</tr>
<tr>
<td>2018</td>
<td>13.3</td>
<td>26.9</td>
<td>40.2</td>
</tr>
<tr>
<td>2019</td>
<td>12.8</td>
<td>29.0</td>
<td>41.8</td>
</tr>
<tr>
<td>2020</td>
<td>10.5</td>
<td>29.0</td>
<td>39.5</td>
</tr>
</tbody>
</table>
NEW BUSINESSES. ENERGY SERVICE

Modernization of individual and district heating systems

Increasing energy efficiency is the most important way to increase the energy security of Ukraine. Given the significant share of total energy expenditure on heating where gas is the predominant fuel, reducing gas use by installing efficient heating systems would bring the country closer to this goal. Given the global volatility of energy prices, this would increase consumer protection from energy poverty, and offer particular protection to socially vulnerable consumers.

Naftogaz group is implementing several energy efficiency programs for households. For example, the Chernihiv region implements “Affordable Heat for employees”. The project aims to enhance the efficiency of gas consumption to heat the homes of Naftogaz group employees and in the cities and villages where the group is present.

In recent decades, small settlements have accumulated serious problems related to the district heating system caused by unsystematic disconnection of individual apartments from district heating systems. Since 2018, in the village of Myrn, Chernihiv region, apartments in two- to three-storied multi-apartment buildings began to shift to individual heating. This would enable the shutting down of the boiler plant in 2019, which brought losses to Naftogaz group of at least UAH 500,000 per year.

Following the modernization of their heating equipment, consumers have been saving 80% on heating.

The residents of the village of Myrn enjoyed a corporate discount of 40% for new heating equipment provided by producers under cooperation agreements with Naftogaz. Moreover, some consumers, supported by SE Naftogaz-Energoservis, received additional compensation of 35% for expenses incurred during the installation of energy-efficient equipment under the EBRD IQ Energy program.

In 2018, the Affordable Heat program was implemented by Naftogaz Group in two areas: energy services for the residents of the city of Kropyvnytskyi and Kirovohrad region, and installation of individual heating equipment for the residents of Kropyvnytskyi jointly with the municipality. For the convenience of the residents of the region, an energy service center was set up in Kropyvnytskyi. This center provides professional advice, accepts requests for “turnkey” projects to upgrade the heating system of houses, and provides support obtaining the required permits. In addition, Naftogaz group companies together with the local authorities of Kropyvnytskyi are engaged in the transformation to individual heating in 95 residential houses in the city. Low-income citizens have already benefited from this program and received guaranteed compensation from local authorities at a rate of 50%, or from the EBRD IQ Energy program, and received an additional 35% compensation for purchased services, components and equipment.

In 2018, under the “Affordable Heat” program, heating systems in 704 houses underwent upgrades. Customers who have switched to individual heating have cut their heating costs by half or more. Customers who have upgraded obsolete individual heating systems reduced their costs by 10% to 60%.

The implementation of the “Affordable Heat” program made it possible to reduce gas consumption by more than 200 tcm for the period from November 2018 to March 2019.

Naftogaz considers opportunities to extend the energy service and energy efficiency program for the household segment. The company also seeks to increase renewable generation.

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Estimated budget for the energy modernization of housing in Ukraine, USD bn

- **Ukrainian households are 6 times behind Polish households in terms of energy efficiency**
- **Ukraine has spent USD 54 billion on direct and cross subsidies for households over the last 10 years**
- **Naftogaz paid USD 60 billion to Russian gas suppliers in 2006-2015**

- **36 USD bn**
  - 39% Private houses
  - 10% Apartment houses
  - 30% DHCs
  - 10% Insulation of DHCs

- **10.3 USD bn** Insulation of private houses
- **3.7 USD bn** Upgrading of heating systems for private houses
- **2.0 USD bn** Upgrading of heating systems for heat producers
- **1.7 USD bn** Upgrading networks of heat producers
- **2.4 USD bn** Metering and thermoregulation in apartment buildings
- **15.9 USD bn** Insulation of apartment buildings

Ukrainian households are 6 times behind Polish households in terms of energy efficiency.
2014 Gas Sales and Gas Transit Arbitrations

The Gas Sales Arbitration was initiated by both Naftogaz and Gazprom on 16 June 2014 under the auspices of the Arbitration Institute of the Stockholm Chamber of Commerce ("SCC Arbitration Institute"). In its Request for Arbitration, Gazprom claimed payment of unpaid invoices for gas delivered under the Gas Sales Contract from November 2013 to May 2014, while Naftogaz claimed a retroactive revision of the price under the Gas Sales Contract, and compensation for previous overpayments under the prices applied before the revision. Gazprom has later added a claim for payment of gas which Gazprom did not deliver, but which Naftogaz allegedly nevertheless was obliged to pay for under the Contract (the so-called "take or pay" claim). On 13 October 2014, Naftogaz initiated another arbitration under the Gas Transit Contract claiming a revision of the transit tariff with retroactive effect, compensation for underpayments as a result of tariff revision, compensation of under delivery of volumes for transit and revision of certain provisions of the Gas Transit Contract.

The tribunal has obliged the parties to determine the elements of gas price formula to be used for gas supplies starting from 27 April 2014 through negotiations. Such negotiations took place during June-August 2017, but the parties failed to reach agreement on remaining issues and thus the Tribunal had to decide on these issues.

The tribunal decided on the case of Naftogaz against Gazprom relating to the Gas Sales Contract by rendering the separate and final awards in the Gas Sales Arbitration. The tribunal decided that:

- the clauses of the Gas Sales Contract concerning the minimum contract amounts and "take-or-pay" provision are invalid from 19 January 2009 and until the date of the final award and must be amended starting from the date of the final award taking into account the real import demand from Naftogaz;
- the price formula provided in the Gas Sales Contract shall be revised starting from 27 April 2014 so as to bring the price to the market level;
- Naftogaz is entitled to repayment of amounts paid in cases of a factual payments price excess over the price as provided by the revised formula of the Gas Sales Contract; and
- the clause of the Gas Sales Contract on the prohibition to Naftogaz to sell gas purchased under the Gas Sales Contract outside Ukraine is invalid from 19 January 2009.

On 31 May 2017, the arbitral tribunal decided on the case of Naftogaz against Gazprom relating to the Gas Sales Contract by rendering the separate and final award on the case of Naftogaz against Gazprom relating to the Gas Sales Contract. The tribunal:

- revised the price formula of the Gas Sales Contract and fully linked the price for gas to European (German) hub prices, starting from 27 April 2014;
- reduced the annual contract volume obligations of Naftogaz from 52 billion cubic metres to 5 billion cubic metres in 2018 and 2019;
- fully rejected Gazprom’s take-or-pay claims to Naftogaz (amounting to USD56 billion for 2009-2017);
- found that Naftogaz is not responsible for gas supplies by Gazprom to any third parties in the uncontrolled territories in Donets and Luhansk regions; and
- obliged Naftogaz to pay USD2 billion in favour of Gazprom for the volume of gas received but not paid for by Naftogaz in certain months of 2013 and 2014.

On 22 December 2017, the arbitral tribunal issued the final award on the case of Naftogaz against Gazprom relating to the Gas Sales Contract. The tribunal:

- confirmed obligations of Gazprom in respect of supplies of minimum transit amounts of 110 bcm of gas under the Gas Transit Contract, which is effective until the end of 2019;
- rejected Naftogaz’s claim for tariff revision due to procedural reasons, as Naftogaz in its request for transit tariff revision in 2009 did not follow the procedural requirements established by the Gas Transit Contract;
- rejected Naftogaz’s claim in respect of the prospective assignment of its rights and obligations under the Contract to Ukrtransgaz or any other entity designated as transmission system operator;
- rejected Naftogaz’s claim in respect of adjustments of the Gas Transit Contract according to the EU and Ukrainian competition and energy law, stating that the EU law does not apply to the dispute and that it is not the role of the Tribunal to implement reforms in Ukraine, which should be decided by the Ukrainian government; and
- made the set-off of amounts owing between Naftogaz and Gazprom pursuant to the Gas Sales Arbitration and the Gas Transit Arbitration with the effect of net amount of USD 2.56 billion to be paid by Gazprom to Naftogaz.

Gazprom’s challenges to the awards

After both arbitration awards were rendered, Gazprom launched the challenge proceedings against the awards in the Swedish courts, though challenging the final award does not suspend its enforcement by default.

Gazprom filed the challenges with the Svea Court of Appeals (Sweden) against the separate and final awards in the Gas Sales Arbitration on 8 November 2017 and 21 March 2018 respectively. On 29 March 2018 Gazprom filed a challenge (as supplemented on 28 May 2018) with the Svea Court of Appeal against the final award in the dispute with Naftogaz over the Gas Transit Contract, alleging inter alia that the administrative Secretary of the tribunal wrote a large part of the reasons of the award.

Gazprom filed the challenges against the local debt enforcement office’s earlier decision to lift the security attachments.

In June 2018, the Commercial Court in London issued an order to enforce the Transit Award. In addition to freezing assets, it requires Gazprom to provide Naftogaz with a list of all assets with a value greater than USD 50.000 located in England or Wales. According to the ruling of the London Commercial Court of 15 March 2019, the enforcement of the award should be adjourned until the decision of the Svea Court of Appeal if Gazprom undertakes certain obligations, in particular, withholding from hiding or reducing its assets in England and the Netherlands.

In July 2018, the Zug Superior Court, Switzerland re-instated attachment of Gazprom’s shares in Nord Stream AG and Nord Stream 2 AG. These attachments will stay in place until the Zug Superior Court decides on Naftogaz’s appeal against the local debt enforcement office’s earlier decision to lift the security attachments.

In 2018 Gazprom-Naftogaz Arbitrations

In furtherance of the refusal both to settle the debt under the final award in the Gas Transit Arbitration and to resume gas supplies to Ukraine in compliance with the final award in the Gas Sales Arbitration, Gazprom initiated a new SCC arbitration on 20 April 2018 (the “Reversal Claim”) essentially attempting to reverse the outcome of the awards of 2014 Arbitrations. The preliminary relief sought by Gazprom in the Swedish courts, though challenging the final award does not suspend its enforcement by default.

Naftogaz’s efforts to enforce the Transit Award

Based on the final awards and in view of the Gazprom’s failure to comply with the awards Naftogaz has moved to pursue enforcement and attach Gazprom’s assets in several jurisdictions, including the Netherlands, Switzerland and England.

In late May 2018, Naftogaz received permission from a Dutch judge to attach Gazprom’s shares in its seven Dutch subsidiaries and the debts those subsidiaries owe to Gazprom. Six of them refused to cooperate with enforcement authorities.

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On 15 September 2017, Naftogaz and six subsidiaries — Chornomornaftogaz, Ukrtransgaz, Ukrgasvydobuvannya, Ukrtransnafta, Likvo, and Gas of Ukraine — submitted a statement of claim to the tribunal claiming compensation for damages caused by the Russian Federation’s illegal expropriation of the Group’s assets in Crimea.

On 14 to 17 May 2018, oral hearings were held at the Peace Palace in The Hague. Quantum was bifurcated and will be heard and considered during the second phase of the proceedings, after the first arbitral award (on jurisdiction and the merits) is rendered. On 22 February 2019 the tribunal rendered its first award and found that the Russian Federation violated the Russia-Ukraine bilateral investment treaty by seizing assets owned by Naftogaz and its subsidiaries in Crimea. The tribunal has launched a second phase of the proceedings to determine the amount of compensation Russia owes to Naftogaz. Naftogaz experts have estimated the value of Naftogaz’s over 5 billion pecuniary claims.

Parts of article 9 of the shareholders agreement — stipulating that six members of the Ukrnafta supervisory board are elected from among candidates suggested by Naftogaz while the other five members and CEO from among those suggested by Ukrnafta minority shareholders, i.e. the companies controlled by Ihor Kolomoyskyi — are unenforceable. Article 9 also provides that the amount of the claim, assuming the application of the revised tariffs sought by Naftogaz, is USD 11.58 billion.

Upon request from Gazprom, on 06 September 2018 the SCC Board made a decision to consolidate both the Reversal Claim and the Tariff Revision Claim into the one joint proceeding.
CORPORATE GOVERNANCE AND CSR
REPORT OF NAFTOGAZ SUPERVISORY BOARD

Structure of the board and its committees

The new composition of the supervisory board had been formed by Ordinance of the Cabinet of Ministers of Ukraine dated 13 December 2017 # 895-p “On certain matters of the Supervisory board of Public Joint Stock Company ‘National Joint-Stock Company Naftogaz of Ukraine’ which came into force on 15 December 2017. Spottiswoode Clare Mary Joan, Lescoeur Bruno, Jean, Gaston, Hochstyn Amos and Haysom Steven John were elected as independent directors. They were joined by Popyk Sergii Dmytrovyч, Kudrytskyi Volodymyr Dmytrovyч and Demchysyn Volodymyr Vasylvyч as government appointees.

During 2018, Haysom Steven John did not discharge his duties as supervisory board member and, in particular, did not participate in meetings of the Supervisory board and its committees. He did not enter into a service agreement with ‘National Joint-Stock Company Naftogaz of Ukraine’. He was not remunerated and did not make statement of his independence

Appointments within the supervisory board

Following the formation of the new supervisory board, at the first meeting which was held on 22 December 2017, Spottiswoode Clare Mary Joan was elected as the chair of the supervisory board. All members of the supervisory board supported the motion that Demchysyn Volodymyr Vasylvyч should continue to hold the position of the deputy chair of the supervisory board.

The new composition of the supervisory board’s committees was elected at the meeting held in January 2018, and in July 2018, Lescoeur Bruno, Jean, Gaston was elected as the chair of the committee on health, safety, environment and reserves. The current composition of the committees is as follows:

- audit and risks committee: Lescoeur Bruno, Jean, Gaston – chair of the committee, Spottiswoode Clare Mary Joan and Kudrytskyi Volodymyr Dmytrovyч
- nomination and remuneration committee: Hochstyn Amos – chair of the committee, Hochstyn Amos, Lescoeur Bruno, Jean, Gaston and Popyk Sergii Dmytrovyч – members of the committee;
- committee on health, safety, environment and reserves: Lescoeur Bruno, Jean, Gaston – chair of the committee, Hochstyn Amos, Kudrytskyi Volodymyr Dmytrovyч and Popyk Sergii Dmytrovyч – members of the committee.

Proceedings of the board and its committees

The majority of the supervisory board members devoted twice as much time to the discharge of their duties compared to time commitment required by the Rules of Procedure of the supervisory board.

In 2018, the company’s supervisory board held 17 meetings during which it passed resolutions on more than 130 items of agenda and considered numerous matters submitted for discussion. The most frequent matters submitted by the executive board for consideration at meetings of the supervisory board and its committees were those pertaining to endorsement of financial plans of the company and key business companies of Naftogaz group, increase in natural gas production, personnel-related matters, internal transformation of Naftogaz group, approval of entry to transactions exceeding the thresholds set out in clause 27 of the company’s Charter, the matters of unbundling of the natural gas transmission business and liquidity of the company and Naftogaz group as a whole. The supervisory board focused substantially on ensuring the proper operation of the internal audit department and risk management office, and in 2018, approved a series of key documents, policies and procedures in the areas of internal audit and risk management in Naftogaz group. In preparation for the annual general shareholder’s meeting for 2017, the supervisory board endorsed for approval by the shareholder the restated version of the company’s Charter that was proposed for aligning provisions of the company’s Charter with the effective laws and the requirements for implementation of the system of internal control of the company and Naftogaz group. The supervisory board also proposed for approval at the annual general shareholder’s meeting the key directions of Public Joint Stock Company “National Joint-Stock Company Naftogaz of Ukraine” for 2018. Charters of key business companies of Naftogaz groups incorporated as joint stock companies were restated so that they comply with the laws and approved by the supervisory board and the executive board of the company at the beginning of Q2 2018. Furthermore, during the reporting year, members of the supervisory board participated in a number of events related to the preparation of Naftogaz group for unbundling of the natural gas transmission business, including meetings with the shareholder, external stakeholders, EU representatives and other stakeholders.

Also, as part of the competencies development program members of the supervisory board undertook the training on best corporate governance practices in operation of two-tier boards, which was delivered in April 2018 by the professionals from Deloitte Corporate Governance Academy.
Conflict of interest
During a number of supervisory board meetings, Kudryt'ky Volodymyr Dmytrychov notified of a potential conflict of interest in relation to agenda items on the performance assessment and resolving other matters reserved to the supervisory board as regards Havrylenko Mykola Mykolaiovych, members of the executive board of the company and director general of JSC Utkrtransnafta, because he had been direct subordinate of Havrylenko Mykola Mykolaiovych in his previous positions.

Board priorities
The priorities of the supervisory board in 2018 were to continue working on the implementation of the system of internal control of the company and to collaborate with the executive board and key subsidiaries of the group in ensuring the increase in natural gas production and preparation of Naftogaz Group for unbundling of the natural gas transmission business by 1 January 2020.

Other issues intensively reviewed by the Supervisory board included liquidity of the companies across Naftogaz Group, as well as approval and monitoring of implementation of the internal audit plan for 2018.

Shareholder and external communication
In 2018, the supervisory board maintained close ties with the Prime Minister of Ukraine and other representatives of the government by holding joint meetings with the Prime Minister of Ukraine and other representatives of the shareholder.

Additionally, the board regularly met and held public events and ongoing international consortium partners and other key stakeholders who engaged in unbundling matters. Members of the Supervisory board also took part in the round table discussion “Cooperation in the Parliament Government, Naftogaz Triangle” which was held at the Verkhovna Rada Committees in February 2018 engaging dialogue of the members of the parliament, government and the company on important topics of unbundling and role of the supervisory boards in SOEs.

COMPETENCE AND PROCEEDINGS OF SUPERVISORY BOARD COMMITTEES

Audit and risks committee
Key functions of the committee
The new version of the Regulations on the Audit and Risks Committee of the supervisory board was approved by resolution of the supervisory board in February 2018. According to these Regulations define the key tasks and functions of the committee:

1. Assisting the supervisory board in protection of the company’s interests by preparing drafts and providing recommendations and proposals regarding:
   1) the completeness, accuracy and timeliness of the preparation of the company’s financial statements;
   2) the effectiveness of the internal accounting and financial controls of the company;
   3) the effectiveness of the company's risk management activities;
   4) the selection, appointment, performance of the work of the external (independent) auditor;
   5) the selection, appointment, reimbursement or dismissal of the chief audit executive, performance and ongoing work of the internal audit;
   6) the treasury arrangements in place for the company.

2. In accordance with the above tasks, the committee shall perform the following functions:

   2.1. To organize and perform preliminary review of the matters included into the agendas of the committee and the supervisory board meetings, and related to finance, audit and risk management.

   2.2. To organize and elaborate drafting of conclusions, proposals, recommendations, other documents, draft audit strategies, rules of procedure, procedures, decisions related to finance, audit and risk management, and submit them for supervisory board’s review.

   2.3. To organize and perform the following functions related to financial statements:
   1) to monitor and review the accuracy and timeliness of the preparation of financial information of the company;
   2) to review the management of the company and the external auditor of the company as summary financial statements, as well as justification and applicability of applied principles and methods of accountancy, and any material correction of the statements;
   3) to monitor the compliance and consistency of any changes to accounting methods and the effect of such changes on the financial statements, across the company and its subsidiaries;

   3) to consider any significant differences between the external auditor and management regarding the company’s financial statements.

   4) To organize and perform the following functions related to internal controls and risk management:
   1) to review at least annually the overall state and efficiency of the company’s internal control and risk management systems, including review of reports of the external and internal auditors;
   2) to review the effectiveness of corrective actions taken by the management with respect to improvement of the system of internal control and risk management;
   3) to meet regularly with the executive board of the company to review significant risks and issues of control and planning.

   5) To organize and perform the following functions related to external audit of the supervisory board:
   1) to make recommendations to the supervisory board and where appropriate to the general shareholders’ meeting on the appointment, reappointment or removal of the chief audit executive;
   2) to make recommendations to the supervisory board on the terms of labor agreements which are hereby entered into to the supervisory audit staff (including with the chief audit executive);
   3) to prepare the draft budget of the supervisory board, including the budget of the internal audit and submit it for approval by the supervisory board;
   4) to consider in principle with the Law of Ukraine “On Public Procurement” as of 25 December 2013 No. 1242-PZ additional regulatory applicable legislation in the selection of the external auditor;
   5) to control independence and objectivity of the external auditor in line with the Handbook of International Quality Control, Auditing, Review, Other Assurance, and Related Services;
   6) to establish and approve adequate resources for the effective performance of the internal audit.

2.8. To organize and perform the following functions related to treasury arrangements of the company to review and report to the supervisory board on the overall management of treasury activities in the company, including:
   - banking arrangements and relationships;
   - liquidity management and forecasting;
   - debt management;
   - treasury internal control.

2.9. To organize and perform other responsibilities in the company, including:
   1) to initiate and conduct special investigations, including involving independent consultants (experts);
   2) to consider cases of fraud and assess the adequacy of measures taken by the management to deal with the fraud;
   3) to consider the need for amendments to these Regulations;
   4) to provide the supervisory board on the selection, appointment, reappointment and dismissal of the head of the budgeting unit;
   5) to provide the supervisory board with the report on the committee’s activity at least once every six months, as also, upon supervisory board's demand, regular reports or information about any matters of the committee’s activity;
   6) to submit for review by the supervisory board a board of draft new versions of these Regulations or necessary amendments and additions including the respective substantiation;
   7) to perform other duties related to the committee’s competence when requested by the supervisory board.

The Regulations governing the committee’s activity provide for reporting to the supervisory board not less than once per six months.

Key results in 2018
In 2018, the audit and risks committee held 13 meetings during which it passed more than 45 resolutions. In January 2018, the supervisory board resolved on renaming this committee to audit and risks committee by extending the competences of this committee to risk management matters, as reflected in the restated version of the Regulations on the Audit and Risks Committee which came into force in February 2018. In 2018, this committee focused on consideration and endorsement of financial and investment plans of the company and key business companies of Naftogaz group, review of the results of internal audits and revisions of operations conducted in the company and across Naftogaz group, matters of internal audit and ensuring appropriate action based on recommendations of the internal and external audits of JSC “Naftogaz” and Naftogaz group companies. During 2018, the committee worked closely with the external auditor of the company on the results of audit of consolidated financial statements of the company for 2018 and plans for the internal audit for 2018, including meetings without the company’s management.

PRSc “Deloitte” and “TOUCHE USC” was elected as the external auditor of the company for the period. The external auditor of the company was elected through an open bidding for the procurement of services on financial audit and revision of financial and business operations of National Joint Stock Company “Naftogaz of Ukraine” conducted in line with the Law of Ukraine “On Public Procurement”. In addition, the company approved the existence of the auditor, namely its compliance with the specific requirements of the Law of Ukraine “On Public Procurement” as of the date of such verification, and performed internal compliance procedures. The supervisory board, in its meeting held on 22 April 2019 PRSc “Deloitte” and “TOUCHE USC” informed the company and the audit and risks committee, along with the audit partner and auditors engaged in auditing were independent from the company.
Ethics and unbundling committee

Key functions of the committee

The restated version of the Regulations on the Ethics and Unbundling Committee of the supervisory board was approved by resolution of the supervisory board in February 2018. In line with these Regulations, the key task of the committee is to assist the supervisory board in protection of the company’s interests by evaluating and providing recommendations and proposals regarding:

1) application of the Code of corporate ethics;
2) conflict of interest at the level of the officers and employees of the company;
3) amendments to the Code of corporate ethics as mandated by the company’s mission and strategy in the changing operative environment;
4) effective implementation of the Code of corporate ethics in the company;
5) specific rules and procedures for handling complaints related to ethics breaches committed by the company’s officers and employees;
6) appropriate means to mitigate negative consequences caused by ethics breaches committed by the company’s officers and employees;
7) processes pertaining to or associated with the gas transmission system operator, which are taking place both inside and outside of Naftogaz group and agreed with the Law of Ukraine “On Natural Gas Market”, the Third Energy Package, and the common interests of Naftogaz group.

The ethics and unbundling committee shall organize and perform the functions related to:

1. Assist the supervisory board in preparing draft:
   1) selection of nominees for the position of the chief executive officer in case of termination of authorities of the current chief executive officer, in order to ensure continuous work of the executive board;
   2) policies and standards of the company on selection of nominees for the positions of the chief executive officer and members of the executive board, other officers of the company nominated and dismissed by the supervisory board, aimed at engagement of qualified specialists for the management of the company;
   3) principles for defining of remuneration for the chief executive officer and members of the executive board in order to create necessary incentives for the efficient work in implementation of the company’s development strategy;
   4) terms of employment agreements (contracts) to be concluded with the chief executive officer and members of the executive board, other officers of the company nominated and dismissed by the supervisory board;
   5) determination and ensuring selection procedures, nomination of candidates for vacancies in the Supervisory board, the executive board or other officers of the company nominated and dismissed by the supervisory board;
   6) preparation and submission for review of the general meeting or the supervisory board (as established by the Charter) of recommendations regarding election or termination of authorities of the chief executive officer and members of the executive board, other officers of the company nominated and dismissed by the supervisory board;
   7) making comparative analysis and informing the supervisory board on the personal practice, situation at the employment market regarding levels and systems of remuneration of the executive bodies of business entities, proposals of remuneration to the chief executive officer and members of the executive board;
   8) submitting proposals to the supervisory board concerning individual remuneration for members of the executive board, with understanding remuneration with the remuneration policy adopted by the company and compliance with the assessment of the chief executive officer and members of the executive board, as well as other officials (if applicable);
   9) organization of drafting and processing of draft policies, strategies, rules, regulations, resolutions and other documents that regulate the activity in the sphere of nominations and remunerations of the chief executive officer and members of the executive board, preparing conclusions, recommendations and proposals for the supervisory board;
   10) analysis of current and expected needs of the company in professional qualification of the chief executive officer and members of the executive board, other officers of the company nominated and dismissed by the supervisory board, aimed at engagement of qualified specialists for the management of the company;
   11) periodical assessment of the structure, size, composition and performance of the board, based on the company’s interests and development strategy, defining the eligibility criteria for non the Ethics and Unbundling Committee’s supervision of recommendations for any changes;
   12) periodical assessment of the chief executive officer and members of the executive board for conformity with the Code of corporate ethics, relevant reporting to the supervisory board;
   13) development of the succession plans for the chair and members of the supervisory board;
   14) development of the succession plans for the executive board, ensuring that the executive board has an appropriate successor plan for the company’s executives;
   15) advising the supervisory board on the composition of its committees and periodic rotation of committees’ members;
   16) ensuring training programs for members of the supervisory board and the executive board required for their efficient performance in the corporate governance framework implemented by the company;
   17) preliminary analysis of performance results of the chief executive officer and members of the executive board, including in view of possible remuneration increase, application of performance-based remuneration;
   18) monitoring of the supervisory board decisions’ fulfillment within the terms established by the management of the company’s executives;
   19) approving nomination of the company’s executives at their request, in compliance with the rules adopted by the supervisory board;
   20) controlling the level and structure of remuneration of the company’s executives, recommendations to the executive board on these issues;
   21) making a report to the supervisory board on the activity of the committee including information on the composition, number of meetings and main activities of the committee, and also, upon supervisory board’s demand, regular reports or information on certain matters of the committee’s activity.

The Regulations governing the committee’s activity and procedures for reporting to the supervisory board not less than once a year.

Key results in 2018

In 2018, the nomination and
remuneration committee held 11 meetings during which it passed more than 40 resolutions. In February 2018, the restated version of the nomination and remuneration committee of the supervisory board came into force. In 2018, this committee focused on the matters pertaining to reform of the remuneration system in the company and Naftogaz group as a whole, introduction of the system of staff performance evaluation and ensuring establishment of key functions of the committee: The restated version of the Regulations on the Committee on Health, Safety, Environment and Reserves of the supervisory board was approved by resolution of the supervisory board of 21-22 February 2018. In particular, these Regulations define the following key tasks and functions of the committee:

1. Examine and prepare for consideration by the supervisory board of the items with regard to exercise of the control over:
   1) HSE and evaluation and management of hydrocarbon resources and reserves (Reserves) strategy, plans and related risk assessment and management of the overall business strategy of the company,
   2) focus of policies and action plans prepared to support delivery of the HSE and Reserves and planning, financing and mitigation of related risks;
   3) implementations of plans, internal performance and controls in relation to HSE and Reserves strategy, implementation of plans and measures ensuring emergency and accident (accident situation) response plan;
   4) scope and outcomes of social investment programs and social development partnerships;
   5) evaluation of major and recurring failures within the company in terms of HSE and Reserves governance and performance and its influence on general economic activities, including those that lead to significant legal consequences;
   6) integrations of HSE and Reserves into a major business process including major capital programs, exploration programs, mergers and acquisitions, and acquisition into new ventures;
   7) external disclosures of information relating to HSE and Reserves;
   8) the relationship of the governance management, and appropriateness of methods and measures that achieve the main goal and make the appropriate management decisions;
   9) creating favorable conditions for attaining project goals, including the production of hydrocarbons.

2. Review the rating and position of the company with respect to international best practice for HSE and Reserves, and legal requirements on these issues including relevant corporate governance developments.

The Regulations governing the committee’s activity provide for reporting to the supervisory board not less than once a year.

Key functions of the committee: Board members of National Joint-Stock Company “Naftogaz of Ukraine” and chief executives of business companies in which National Joint-Stock Company “Naftogaz of Ukraine” is the sole shareholder (founder, participant).

The committee also placed a strong emphasis on the matters of the graded Remuneration system in the company and Naftogaz group (as well as on the introduction of a comprehensive performance management system in all companies of Naftogaz group).

In 2018, the committee on health, safety, environment and reserves held three meetings during which it passed one resolution and discussed five matters submitted for consideration of this committee. The total number of meetings includes the meeting of 20 December 2018 which was not valid due to the absence of quorum, however, during that meeting, the present members of the committee held discussions on the items of agenda. In January 2018, the supervisory board resolved on renaming this committee to committee on health, safety, environment and reserves by extending the competence of this committee to reserves matters, as reflected in the restated version of the Regulations on the committee on health, safety, environment and reserves which came into force in February 2018.

The committee had in mind the following issues:

1) strategic development of the organization;
2) the resource base and increase in natural gas production. Furthermore, in October 2018, the committee members visited one of JSC Ukrtransgas’s production facilities to show supervisory board’s commitment to addressing the matters of occupational health and safety, environmental protection, industrial safety and prevention of man-made emergencies.

Key results in 2018:

In 2018, the committee on health, safety, environment and reserves resolved on renaming this committee to committee on health, safety, environment and reserves by extending the competence of this committee to reserves matters, as reflected in the restated version of the Regulations on the committee on health, safety, environment and reserves which came into force in February 2018. In 2018, this committee focused on the matters pertaining to mitigation of risks of occupational injuries, accidents, emergencies and other incidents across Naftogaz group, as well as on expanding the resource base and increase in natural gas production. Furthermore, in October 2018, the committee members visited one of JSC Ukrtransgas’s production facilities to show supervisory board’s commitment to addressing the matters of occupational health and safety, environmental protection, industrial safety and prevention of man-made emergencies.
KEY MANAGERS AND THEIR REMUNERATION

Naftogaz executive board members

- Andriy Kobolyev
  Chief executive officer
- Sergiy Pereloma
  First deputy chief executive officer
- Sergiy Konovets
  Deputy chief executive officer (chief financial officer)
- Yuriy Kolbushkin
  Executive board member
- Oleg Prokhorenko
  Executive board member (Ukrtransgaz vice-president until 15 March 2019)
- Mykola Havrylenko
  Executive board member
  Head of the Oil Unit

Remuneration of the management team in 2018*

<table>
<thead>
<tr>
<th>Name</th>
<th>Remuneration (UAH mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andriy Kobolyev</td>
<td>286,5</td>
</tr>
<tr>
<td>Sergiy Pereloma</td>
<td>27,5</td>
</tr>
<tr>
<td>Sergiy Konovets</td>
<td>22,7</td>
</tr>
<tr>
<td>Yuriy Kolbushkin</td>
<td>17,3</td>
</tr>
<tr>
<td>Oleg Prokhorenko**</td>
<td>20,6</td>
</tr>
<tr>
<td>Mykola Havrylenko**</td>
<td>14,7</td>
</tr>
<tr>
<td>** Total</td>
<td>389,3</td>
</tr>
</tbody>
</table>

* Including the bonus for winning the Stockholm arbitration. For more detail see pages 106-107.
** Oleg Prokhorenko and Mykola Havrylenko are not rewarded as executive board members.

Other top executives

- Yuriy Vitrenko
  Naftogaz group executive officer
  Chairman of Ukrtransgaz supervisory board since 11 April 2019
- Andrew Favorov
  Head of the Integrated Gas Business Unit
- Andriy Khomenko
  Head of the Technical Business Enabling Unit
- Pawel Staliczak
  Ukrtransgaz vice-president
- Yaroslav Teklyuk
  Director for legal affairs
- Vitaliy Shcherbenko
  Director for administrative activity and energy efficiency

- Margarita Koretskova
  Naftogaz group personnel management and social policy director
- Orest Logunov
  Naftogaz group chief procurement officer
- Maryna Kvashhina
  IT director
- Oleg Didenko
  Naftogaz group director for corporate debt workout, gas distribution systems and retail gas supply
- Aliana Osmolovska
  Corporate communications director
Winning the biggest ever commercial arbitration: achievements and remuneration

USD 20.7 mn
bonus actually paid to 41 team-members*

USD 4.6 bn
Instead won

THE STOCKHOLM ARBITRATION 2014-2018

USD 81.4 bn
could have been lost if we had failed**

USD 130.8 bn
Ukraine’s GDP in 2018

The supervisory board decided to remunerate 41 team-members with a bonus equal to 1% of the recovered amount. USD 21 billion has been recovered so far, which enabled Naftogaz to pay UAH 56 billion in taxes and dividends to the state budget. USD 20.7 million was paid as of the date of the report.

* The amount includes all actual pecuniary claims by Gazprom under the take-or-pay clause in 2012-2016; the effect of applying the take-or-pay clause in 2017-2019; the effect of applying the initial contract gas price in April 2017-2019 instead of the price revised by the tribunal; and the payment for volumes delivered in the first half of 2014 but not paid upon the offtake, according to the evaluation as of the date of the final award in the transit case rendered on 28 February 2018.

** The amount includes all actual pecuniary claims by Gazprom under the take-or-pay clause in 2012-2016; the effect of applying the take-or-pay clause in 2017-2019; the effect of applying the initial contract gas price in April 2017-2019 instead of the price revised by the tribunal; and the payment for volumes delivered in the first half of 2014 but not paid upon the offtake, according to the evaluation as of the date of the final award in the transit case rendered on 28 February 2018.
During 2018, the group continued developing an efficient, comprehensive risk management system and the coordination of risk management processes at Naftogaz group. In July 2018, the supervisory board approved the Risk Appetite Statement of Naftogaz Group.

This document involves the world’s best practices and outlines the company’s risk appetite, i.e. level and extent of risk that Naftogaz is ready to be exposed to, given its financial and operational potential, and still be able to achieve its strategic and operational goals. The Risk Appetite Statement provides restrictions not only for the existing risks identified in particular during annual risk assessment, but also potentially for areas that have significant influence on achieving the success rate of new licenses, as well as for the existing risks identified in previous years.

Also in 2018, the group developed a number of internal documents that outline the management procedure for specific risks, in particular: Financial Risk Management Methodology and Rules, Tax Risk Management Rules, Information Security Risk Management Policy. Among other things, to manage a target approach to the company’s natural gas procurements with strong involvement of the risk management office, a gas balance optimization model was developed. This model aims to bring the company to a new level of gas procurement planning and balancing.

During 2018, not only the company’s risks were subject to annual assessment, but also those of Naftogaz group companies. Following assessment, consolidated risks register for Naftogaz group was created. It includes 265 risks. Among the key risks identified during 2018 at Naftogaz group, the following should be emphasized:

**Strategic**
- Natural gas transmission unbundling and implementation of optimal UOG use model
- Corporate governance reform
- Ensuring the company’s control over the Naftogaz group companies
- Ensuring the uninterrupted transit of natural gas
- Ensuring the required natural gas production in 2018
- Ensuring the required sufficient level of natural gas reserves for the implementation of P5O Regulations

**Compliance**
- Compliance with the Code of Corporate Ethics, prevention of conflict of interest, manifestations of corruption, application of sanctions
- Ensuring adequate internal audit and compliance of audit activities

**Financial**
- Ensuring performance of obligations under loan agreements with financial institutions
- Ensuring sufficient level of liquidity to finance key expenditure items
- Adherence of target exposure to currency risk

**Operational**
- Volumes of natural gas sold by the company to industrial consumers in 2018
- Ensuring reliable IT infrastructure within Naftogaz group
- Recruiting and retaining of skilled employees
- Creation of succession pool for key positions within the company and Naftogaz group companies
- Establishment of generic policy and HR management principles within Naftogaz group
- Ensuring the required success rate of new UOG wells
- Production and exploration works
- Ensuring of the requirements of existing and new licenses for extraction and trade of natural gas

**Regulatory**
- Prevention of any discrimination in labor rights
- Prevention of use of child labor
- Providing and using information about the company, including providing personal data of its employees
- Compliance with requirements of state authorities and local self-government bodies

**Reputational**
- Responses to threats of reputation deterioration
- Violation of occupational health and safety, environmental safety

**Environmental, Health, and Safety**
- Prevention of fire and other accidents, ensuring safe environment
- Prevention of environmental impacts
- Implementation of the corporate social responsibility program

**Legal**
- Compliance with corporate legislation
- Compliance with requirements of state authorities
- Increase of company’s reputation and image

**Strategic**
- Natural gas transmission unbundling and implementation of optimal UOG use model
- Corporate governance reform
- Ensuring the company’s control over the Naftogaz group companies
- Ensuring the uninterrupted transit of natural gas
- Ensuring the required natural gas production in 2018
- Ensuring the required sufficient level of natural gas reserves for the implementation of P5O Regulations

During 2018, Gazprom obtained from the Turkish government all the required permits and completed the construction of the offshore section of the Turkish Stream gas pipeline. As of the date of report preparation, the situation is still unclear with regards to the legal framework of the Nord Stream 2 project, in particular with the application of the Third Energy Package requirements.

Additional information on the company’s actions regarding this risk is provided in the report section "The European Natural Gas Market".

Extension of validity of provisions on imposing special obligations (P5O) on unfavorable terms for the company, and continued gas sales through regional suppliers ("oblgazzbut") and municipal heat generating entities (MHE)

On 19 October 2018, the Ukrainian government approved new provisions imposing P5O regulations on the company until May 2020. According to these provisions, minimal settlements of mutual compensation among mutual heating generating entities (MHE) with the company decreased from 90% to 78%, which results in the accumulation of bad debts for supplied natural gas.

As of 31 December 2018, MHE’s debt to Naftogaz was about UAH 30 billion, the debt of regional gas supply companies (RSC) was about UAH 19 billion. This level of debt significantly affects the company’s liquidity, as described below.

Additional information on the P5O impact on the group’s operations is provided in the report section "Important Regulatory Changes in 2018-2019".
Financial

Liquidity risk

Liquidity risk exposure is predetermined by a number of interrelated factors, including:

• seasonal nature of income and expenses: revenues from natural gas sales and transmission are generated during the heating season. Over the summer period, sales volumes are significantly less and the group incurs significant expenses related to the financing of natural gas injection into underground storage facilities for the next heating season;
• payment of dividends as scheduled by the resolutions of the Cabinet of Ministers of Ukraine, with no consideration of whether the group has funds available;
• fixed due dates of loans in national and foreign banks attracted to buy natural gas in preparation for the heating season;
• accumulation of bad debts by MHEs and RSCs for natural gas supplied.

To minimize this risk, Naftogaz takes all the required measures to extend deadlines for loan liabilities to national and foreign banks, obtain a shareholder’s permit to pay dividends in parts and one from the National Bank of Ukraine to sell transit revenues for these purposes.

Regulatory

Failure to obtain new licenses1

As part of implementation of the Strategy 20/20 by Ukrgasvydobuvannya regarding maintaining and further increasing Ukrainian gas production, the entity takes certain efforts to obtain new licenses. However, since 2016, Ukrgasvydobuvannya has been denied in over 105 applications for licenses for new fields and extensions of existing licenses, as well as for the Black Sea and Azov Sea offshore gas developments.

This situation changed for the better in 4Q 2018, after the Cabinet of Ministers approved the Resolution “On the Implementation of a Pilot Project on the Launch of Auctions for the Sale of Special Permits for the Use of Subsoil Through Electronic Auctions”. The introduction of a system of online auctions for license sales through electronic auctions will ensure transparency of administrative services to entities.

Expropriation (loss) of licenses for gas extraction

The license-bearing fields of Naftogaz and Ukrgasvydobuvannya where gas exploration and extraction can take place are partially located within or close to the temporarily occupied territories in eastern Ukraine. As such, their wells are not being operated. This may result in deviation from the approved Extraction Program at the existing wells or violation of specific environmental, health and safety requirements.

Environmental, health and safety

Within its operational activities, Naftogaz group companies face the risk of serious accidents that may result in harm to people’s health and the environment, loss of production facilities, and suspension of operating activities. The situation is complicated by the presence of outdated production equipment in the group’s drilling fleet and a high level of human factor impact.

To mitigate this risk, Naftogaz group companies provide for personnel training on a regular basis to adhere to the requirements of national and international standards and labor safety practices. In addition to the above, Naftogaz group invests extensively in modernization of the existing production facilities and introduction of the world’s best practices for exploitation and diagnostics in this area.

Operational

Risk of lost access to buffer gas in underground gas storage facilities resulting from their inappropriate unbundling from Naftogaz of Ukraine

In order to achieve natural gas market liberalization according to the EU Third Energy Package, Ukraine has undertaken to provide unbundling – to separate the gas transmission system from Naftogaz as a standalone company. To begin this process, Resolution #801 of the Cabinet of Ministers dd. 9 November 2016 established the company “Main Gas Pipelines of Ukraine”, and later, by shareholder’s decision #218 dated 1 November 2018, a separate branch was established within the GTS operator, Ukrtransgaz, to be in charge of gas transmission. As part of implementing the next stage of the Roadmap for GTS operator separation, on 29 January 2019, a new company was established: “Gas Transmission System Operator of Ukraine”, 100% owned by Ukrtransgaz.

According to the Naftogaz of Ukraine restructuring plan approved by the Ukrainian government, functions relating to natural gas storage (injection, withdrawal) should also be separated. Inappropriate unbundling of the underground gas storage facilities from Naftogaz group creates a high risk of losing access to the buffer gas in those underground gas storage facilities, which will bring considerable financial losses to Naftogaz group.

The company, with the involvement of international experts, is now developing and approving a new restructuring plan, which would ensure that the natural gas storage activities are not unbundled from Naftogaz group.

Legal

Risk of unclear legal framework for natural gas procurements without tenders after transition to daily-basis balancing

Starting 1 March 2019, one of the key energy sector reforms – gas market transition from monthly- to daily-basis balancing – has become effective. Meanwhile, natural gas procurements are still subject to the Law of Ukraine “On Public Procurement”, which means natural gas should be procured by tender. To avoid this risk, the appropriate amendments should be introduced to the Law of Ukraine “On Public Procurement”.

Footnotes:
1 Until 2018, this risk fell within Operational risks. In 2018, as part of the company’s annual risk assessment, the category of this risk was updated.
HUMAN RESOURCES MANAGEMENT

HR management priority areas in 2018:
- Support for group transformation project;
- Reforming the remuneration scheme existing at group enterprises, unification of approaches to forming incentive plans for group personnel, gradual introduction of remuneration system based on goal-oriented performance appraisal;
- Implementation of training projects in order to provide skilled personnel to group companies;
- Implementation of social policy at group enterprises aimed at maintaining and increasing personnel involvement, creating work-life balance, protecting investments in human capital;
- Continuation of forming a group managerial personnel reserve within the MBA program, provision of the first online programs for employee training;
- Improvement of HR processes in group companies, implementation of pilot projects for personnel evaluation;
- Digitalization of HR functions.

The personnel of Naftogaz group - quantitative and qualitative profile

As of 31 December 2018, the number of full-time employees at Naftogaz group enterprises was 68,386 employees.

In 2018, the total number of full-time employees included 7,990 managers of all levels (11.7%), 13,056 professionals and specialists (19.1%), 284 technical staff (0.4%), 47,056 qualified and other workers (68.8%).

The gender structure of group enterprises is dominated by men, which is related to the specifics of operations: 55,939 men (78%) and 15,942 women (22%).

93.5% of staff work in key enterprises of Naftogaz Group: JSC Ukrnafta (22,050 persons); JSC Ukrgasvydobuvannya (19,459 persons); JSC Ukrtransgaz (18,674 persons) and JSC Ukrtransnafta (3,742 persons). 21.5% of employees are employed directly in gas and oil production, while 35.5% in gas and oil transportation.

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The personnel turnover rate at Naftogaz group was 3.9% in 2018 (with an average of 19% across Ukraine according to sector-wide surveys by EY).

Employee remuneration

To create a transparent remuneration system, the enterprises of Naftogaz group continued introducing a grade remuneration scheme (covering 95% of Group employees) in 2018.

Important steps have been taken to unify the approaches to forming systems of material incentives for group employees. The introduction of a variable remuneration system continued, which links the results of enterprises with the performance of specific employees.

According to the results of 2018, the average employee wages across Naftogaz group increased by 20% compared to 2017 and amounted to UAH 16,042 (according to Ernst & Young review, this indicator for Ukraine as a whole was 16%). Wage growth is one of the measures taken by the company in response to a shortage of labor force, labor migration of skilled production personnel abroad, inflation, rising cost of living, etc.

In order to attract, retain and motivate managers possessing the necessary skills, knowledge and competencies, to achieve the objectives defined by the group’s Corporate Strategy, and to establish common principles, determining manager remuneration, a remuneration policy was devised and implemented in 2018 (including the size of base remuneration) for company board members and managers of the joint stock companies of Naftogaz group (collectively, the “managers”). Additionally, a management system for variable remuneration of managers, including bonuses for achieving goals and key results, was implemented. Goals were set for executives in 2018 and 2019. This goal-setting system has been fully implemented and operated for 2 years in Ukrgasvydobuvannya and Ukrtransnafta.
Social security

Naftogaz group social policy is an important tool for attracting, retaining, and socially protecting skilled workers whose professional skills are currently unique and critical. To a large extend, it affects the creation of a positive motivation climate and is a real competitive advantage for the enterprise in the modern labor market. Social development and the social activities of Naftogaz group enterprises include voluntary health insurance and employee healthcare, accident insurance, health promotion and recreation of workers and their family members, maintenance of social infrastructure assets, and material assistance payments.

As part of implementation of the strategy for retaining employees through non-material motivation and organization of cultural leisure for those who do not have access to such services, a cooperation project between Naftogaz group enterprises and the Kyiv Academic Drama Theater on Podil was launched. In 2018, 560 employees of the State Drama Theater on Podil was launched. In 2018, work on implementing staff evaluation at Naftogaz group enterprises continued:

Ukrgasyodobyvannya

Ukrgasyodobyvannya developed a system of staff evaluation based on a model of competencies, and carried out evaluation of managers at two management levels. This evaluation of executives made it possible to identify potential and determine areas of professional development, leading to a number of personnel decisions. Work was also continued on setting individual annual goals and key performance indicators.

Ukrtransnafta

An evaluation of company staff took place in November 2018 in order to plan careers and the promotion of employees from the personnel reserve of the company, determine the training and development needs of staff, and review remuneration. About 1,000 executives from all levels of Ukrtransgaz branches underwent training to implement the first stage of a distance learning system: the company created educational video content on geology, drilling and development of non-specialized, career-critical skills (soft skills) of new employees.

Digital HR:

In 2018, work on implementing modern IT solutions in the HR sphere at group enterprises continued:

- detailed analysis of the software market for HR processes automation has been conducted;
- development of the statute of the Talent Management System project followed by its implementation in Naftogaz group in 2019 was initiated;
- Ukrgasyodobyvannya conducted setup and preparatory work for implementation of IS-PRO HR Process Automation system in test mode (launch) for the automation of personnel recruitment and salary calculation in Q4 of 2018;
- Ugrofulgasyodobyvannya implemented the first stage of a distance learning system: the company created educational video content on geology, drilling and development of non-specialized, career-critical skills (soft skills) of new employees;
- Ukrtransnafta developed and implemented an automated application in the ERP system to implement KPIs setting processes and evaluate the work of managers together with engineering and technical workers;
- Ukrtransgaz launched into industrial operation the business processes of personnel administration and organizational management, and integrated a grade remuneration scheme into SAP.

Personnel training and development

One of the priority areas is the development and training of personnel together with the improvement of the necessary professional qualifications of workers, which meets the needs of production that is constantly modernized and upgraded. By investing in the training and development of workers, company and group enterprises materially reduce risks and protect significant investments in modern equipment and advanced technologies through the reliable professional expertise. Almost 31% of the total number of managers, professionals and specialists, namely 20,906 persons employed in Naftogaz group enterprises, have completed higher education, incomplete higher and basic higher education.

Ukrgasyodobyvannya is successfully implementing unprecedented programs, both in HSE (occupational safety, security and environment) and professional development of employees (drilling, geology, management accounting, auditing, project management, etc.). The purpose of the HSE training program is to train the production staff of the company at all levels, from management to workers of job specialties, on the safe execution of their work. Thanks to the efforts of in-house coaches selected from among the best employees who were trained, passed examinations and received verification within the framework of the train the trainer program, 13,980 production workers were trained on “Risk assessment, safety in operation analysis and safe workplace” for workers of job specialties and “Leadership, safety behavior audit and risk assessment” for management. Practical examples and case studies have helped to better understand training and improve attitudes towards workplace safety. More than 1,500 employees have undergone practical daily training “Working at heights in support-free environment”; more than 750 employees of the company have mastered the first premedical care course, which is extremely important at an enterprise with increased levels of physical danger.
Interaction with educational organizations

To support transformation processes, Naftogaz group is implementing a long-term educational project for training high potential employees of group enterprises under the SOE MBA program of the Kyiv School of Economics. The program was launched by the Business School for public sector enterprises on the initiative of the Ministry of Economic Development and Trade of Ukraine and with support from the Western Motors Enterprise Fund.

This is a unique program. The mission is to introduce modern management standards, change the corporate culture, and transform public sector companies into efficient and competitive enterprises. Within the framework of the project, the training of two new groups of Naftogaz group employees (total 98 persons) began.

A project (unique in its essence and scale) of initial training of specialists in modern International Education Standards for the needs of Naftogaz group and the oil and gas industry as a whole has been launched.

This is a joint project of the company together with the Southern Alberta Institute of Technology (SAIT), Canada, with the participation of the Kyiv City Organization of Employers of the Oil and Gas Industry (Organization of Employers) and Ukrainian higher educational institutions Konstiantyn Pottava National Technical University and Beketov Kharkiv National University of Urban Economics.

The objective of the project is to form in Ukraine, with participation of Naftogaz group, high-quality modern Bachelor’s educational programs that will make it possible to provide high quality labor resources for the oil and gas industry.

Within this project, Naftogaz group in the person of the Organization of Employers carries out a forecast of the need for specialists, formulates requirements for graduates, provides upgrading of the material base with regard to laboratory equipment, and organizes on-the-job experience for students and employment of graduates.

SAIT is responsible for the program content, training of Ukrainian professors, and ensuring training of the first group under the program.

Universities provide a base for training while making provisions for accreditation and licensing of programs and professors in accordance with the requirements of Ukrainian legislation.

Within the framework of this project, new professional standards will also be formed, on which future employees of the oil and gas industry will be trained. Naftogaz group cooperates with educational institutions on other educational projects as well. In total, 17 higher education institutions and five secondary specialized educational institutions, leading business schools and training companies were involved in various forms of cooperation with group enterprises in 2018. Development of mutually beneficial relations with educational institutions that carry out training of specialists continued.

Priorities in cooperation with higher educational institutions (HEI) include:
- training and advanced training of employees;
- practical experience for HEI professors at enterprises;
- vocational guidance activities;
- development and modernization of educational bases;
- training of students in specialties relevant to group enterprises;
- implementation of dual education;
- involvement in innovation activities;
- practical training of students at group enterprises and employment of graduates.

### Naftogaz managerial staff breakdown by education level in 2018

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors of Sciences</td>
<td>11</td>
</tr>
<tr>
<td>Senior scientists</td>
<td>21</td>
</tr>
<tr>
<td>Associate professors</td>
<td>10</td>
</tr>
<tr>
<td>Professors</td>
<td>6</td>
</tr>
<tr>
<td>PhDs</td>
<td>52</td>
</tr>
<tr>
<td>PhD students</td>
<td>168</td>
</tr>
</tbody>
</table>

### Number of Naftogaz group employees who improved their skills in 2018, persons

<table>
<thead>
<tr>
<th>Group</th>
<th>Managers</th>
<th>Middle managers and specialists</th>
<th>Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naftogaz</td>
<td>174</td>
<td>208</td>
<td>4,680</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>70</td>
<td>6</td>
<td>1,673</td>
</tr>
<tr>
<td>Ukrtransnaft</td>
<td>876</td>
<td>78</td>
<td>274</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>342</td>
<td>314</td>
<td>12,000</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>13,980</td>
<td>36,616</td>
<td>personnel training and development</td>
</tr>
</tbody>
</table>

### Internship of Ukrainian students at Naftogaz group in 2018

<table>
<thead>
<tr>
<th>University</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivan Franko National Technical University of Oil and Gas</td>
<td>737</td>
</tr>
<tr>
<td>Dnipropetrovsk College of Oil and Gas</td>
<td>180</td>
</tr>
<tr>
<td>Kyiv National University of Taras Shevchenko</td>
<td>18</td>
</tr>
<tr>
<td>National University of Kyiv-Mohyla Academy</td>
<td>14</td>
</tr>
<tr>
<td>National University &quot;Kharkiv National University of Urban Economics&quot;</td>
<td>56</td>
</tr>
<tr>
<td>Kyiv Taras Shevchenko National University</td>
<td>13</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>921</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>315</td>
</tr>
</tbody>
</table>

### Plans for 2019

- Extension of group best practices on the automation of HR functions to other enterprises of the group. Implementation of the management project “ Talent Management System”.
- Completion of reform of the remuneration system and implementation of the grade remuneration system at all group enterprises.
- Transformation of group HR functions in line with the strategic controller model. Support for the transformation process.
- Creating an environment where the needs for recognition, communication, affiliation and recreation are realized through cultural activities within the group’s social policy.
- Realization of the subsequent stages of the project for the initial training of specialists for the oil and gas industry.
- Taking charge of the project for developing and concluding a redrafted sectoral agreement.
HEALTH AND SAFETY

The priority of workers’ lives and health, together with full responsibility of company managers for safe and healthy working conditions, are the key principles of Naftogaz’s policy in the field of health and safety.

In 2018, the enterprises of the group implemented completely renewed approaches to prevent occupational injuries and promote the latest technologies in occupational safety and health.

For the purposes of health and safety management at the enterprises of the group, a five-level control system is now in place, which includes production unit and workplace inspections. Issues related to health and safety are regularly considered at working meetings of group enterprises and general staff meetings.

Occupational safety trainings are regularly delivered to employees. Following these meetings and briefings, additional measures are identified to prevent occupational injuries and occupational diseases, and to improve the quality of occupational safety training.

Health and safety initiatives and their effects in 2018

During 2018, the Health and Safety Management System (HSM) was implemented in 15 departments of the company, while 24 information reports on significant accidents in the Naftogaz group were prepared, which were provided to the supervisory board.

In 2018, 24 inspections on occupational safety, environmental and industrial safety of the group’s enterprises and their affiliates were conducted. The audit committee Deloitte audited the production facilities of Ukrtransgaz, Ukrtransnafta and Ukrmnafta to inspect occupational and environmental safety issues.

During 2018, 1388 workplaces were certified at the enterprises of the group. Following certification, measures were developed and implemented aiming to improve working conditions.

In order to increase preparedness for emergencies and strengthen civil protection, 40 comprehensive trainings (1 270 persons were involved), 62 comprehensive training exercises (2 480 persons participated), 183 trainings for specialized services and civil protection units (3 313 persons participated), 1 231 fire training courses (15 393 persons participated), 1 967 emergency trainings (19 670 participants took part) were held within the company in 2018.

The enterprises of the group also implemented measures to ensure antiterrorist protection of important facilities. This includes equipment of facilities with technical and engineering means of protection, training of employees to counteract possible manifestations of terrorism, installation of means of surveillance at the facilities of the group, strengthening control over access of users to information and telecommunication systems, etc.

In 2018, a number of important documents were developed and implemented at the enterprises of Naftogaz group aiming to improve safety and prevention of injuries:

- The Occupational Health and Safety Plan for 2018 and the mandatory quarterly reporting on the implementation of the Plan.
- Objectives and tasks of NJSC Naftogaz of Ukraine in the field of occupational health and safety and measures for their achievement and implementation for 2018-2019.
- Guidelines on safe performance of works, assignments and provision of services by third parties at the facilities of Naftogaz of Ukraine.
- Order “On work safety at the enterprises of the National Joint Stock Company "Naftogaz of Ukraine”.
- Methodological recommendations to reduce the psychosocial risks (stress) in the workplaces of Naftogaz of Ukraine, which is a unique and unprecedented guide, as part of the implementation of the British standard PAS 1010: 2011 “Psychosocial Risk Management Guide at Work”.

Investments in health and safety

Investments in the group’s enterprises in health and safety in 2018 increased by 22% and amounted to UAH 264.3 million, compared to UAH 205.3 million in 2017.

Occupational injuries

In 2018, 34 accidents occurred at Naftogaz group enterprises (Ukrtransgaz, Ukrtransnafta, Naftogaz, Kirovogradgaz) (297 in 2017), including 2 group accidents (in 2017 – 4). As a result, 36 people were injured (in 2017 – 35), including 3 deaths (in 2017 – 3). Falling was the main cause of injury to workers (accounting for 36% of those injured).

In 2018, the accident frequency rate1 at the enterprises of the Naftogaz group was equal to 0.519 (in 2017 – 0.486), the severity rate2 amounted to 76.6 (in 2017 – 71.0). In 2018, the total loss of time at the enterprises of the group due to accidents related to the production process was 2 529 man-days (in 2017 – 2 272), including 1 500 man-days at Ukrtransgaz, 864 man-days at Ukrtransnafta, 114 man-days at Ukrtransgaz, and 51 man-days at Ukrtransnafta3.

1 The accident frequency rate (accidents resulted in death) is determined using the formula: Arb = N / Vt * 10 6 / Av, where N - the number of reported accidents at work in the reporting period, Vt - the total number of work days in the reporting period, Av - the average number of employees for the reporting period. The rate is calculated per 1000 registered employees.

2 The severity rate is calculated using the formula: Sr = Vd / Vt, where Vd - the number of working days of disability at all accidents, Vt - the total number of accidents.

3 To calculate time losses, only work days are taken into account.
Number of injured in accidents by cause in 2016-2018

<table>
<thead>
<tr>
<th>Cause</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic accident</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Fall of an injured person</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Injuries caused by moving objects</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Fall of equipment</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Intentional injury inflicted by other person</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Contact with animals (dog bite)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gas dynamic phenomena</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Injuries caused by objects reacting under pressure</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Due to the full implementation of road safety measures, the number of injuries from road accidents has decreased significantly.

Number of Naftogaz group companies’ employees injured as a result of road accidents

<table>
<thead>
<tr>
<th>Year</th>
<th>Ukrtransgaz</th>
<th>Ukrafta</th>
<th>Kirovogradgaz</th>
<th>Ukrtransnafta</th>
<th>Ukrgasvydobuvannya</th>
<th>Ukrgasvydobuvannya</th>
<th>Naftogaz</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2017</td>
<td>5</td>
<td>9</td>
<td>11</td>
<td>11</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2018</td>
<td>3</td>
<td>20</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The main causes of accidents:
- 25 accidents (76% of the total number of accidents), of which 2 group accidents, were due to organizational reasons (non-compliance with occupational safety requirements, failure to fulfill official duties, violation of technological process and traffic safety rules), resulting in injuries to 22 employees (78% of the total number of injured people), including 3 deaths;
- 5 accidents (15%) were caused by psychophysiological reasons (personal carelessness of the victim, unsatisfactory health and trauma due to illegal actions of other people), resulting in injuries of 5 employees (14%);
- 3 accidents (8%) were caused by technical reasons, resulting in injuries to 3 employees (9%).

Security of natural gas and oil supply

The gas transportation system (GTS) and the main oil pipelines system are critical infrastructure elements. The economic and national security of Ukraine depends on their smooth and continuous operations.

During the 12 months of 2018, Ukrtransgaz performed the following works:
- major and emergency repair of 135.1 km of the linear part of the main gas pipelines;
- repair of 16 gas compressor units at compressor stations;
- overhaul of 65 wells in underground gas storage facilities;
- geophysical studies of 180 wells.
During the 12 months of 2018, Ukrtransnafta performed the following repair works:

On the linear part of the main oil pipelines:
- major repairs of 2.7 km of the linear part of the main oil pipelines were carried out, including the repair of insulating coating (2.28 km);
- 39 incidents of malicious damage were eliminated on the linear part of the oil pipelines;
- 47 687 km of oil pipelines was cleaned due to repeated piston passes;
- 915 defects of trunk oil pipelines were found and repaired;
- external pipe diagnostics of 266 km of trunk oil pipelines was conducted.

On reconstruction, repair and upgrading of anti-corrosion protection facilities:
- 12 sets of anode grounding of cathode protection stations and 24 cathode protection stations and drainage installations were repaired;
- scheduled and preventive repairs of pump units were carried out: 32 pumps and 101 electric motors.

During 2018, the enterprises of the group spent a total of UAH 151.9 million on fire prevention measures, including:
- 85 incidents of damage (destruction) of technological equipment (pipelines electrochemical protection systems, fountain armatures of wells, crane knots, etc.).
- 57 thefts of inventory (cable and wire products, stubs, theft of light petroleum products from railway tanks, etc.).

Evidence of unlawful cuts to pipelines was detected and documented in 13 Ukrainian regions (Volyn – 1, Dnipropetrovsk – 4, Donetsk – 2, Zhytomyr – 7, Zakarpattya – 8, Ivano-Frankivsk – 4, Mykolayiv – 1, Poltava – 33, Rivne – 4, Sumy – 7, Kharkiv – 2, Khmelnytskyi – 2).

Almost 40% of all damage (destruction) of technological equipment of the main pipelines was registered in Dnipropetrovsk (19) and Kyiv (15) regions.

All evidence of illegal encroachment on the properties of Naftogaz group was reported to the law enforcement agencies that initiated the relevant criminal proceedings.

Security of oil and gas facilities

Damages or destruction of the main and industrial oil, gas and condensate pipelines in order to prepare and facilitate illegal taps and hydrocarbon raw material theft are significant threats to the functioning of the pipeline transport facilities of Naftogaz group companies.

The illegal actions of intruders lead both to direct material damage and technological process failures, equipment downtime, accidents and fires, and environmental pollution.

In 2018, 219 recorded acts of illegal encroachment on the property of the company’s enterprises included:
- 77 illegal cuts into main and industrial oil, gas, and condensate pipelines with the aim of stealing hydrocarbon raw materials;
- 85 incidents of damage (destruction) of technological equipment (pipelines electrochemical protection systems, fountain armature of wells, crane knots, etc.).

Key tasks in the field of health and safety at the enterprises of the group in 2019:

- further implementation of the international standard ISO 45001:2018 "Occupational Health and Safety Management Systems. Requirements* and best practices in health and safety management;
- review and update of the lists of potential threats that may arise in the course of labor activities of employees, by all professions and positions that exist at the company;
- improvement of methodologies to ensure continuous identification of hazards, risk assessment and implementation of necessary control instruments;
- introduction of material incentives for company management and personnel to encourage compliance with health and safety requirements;
- implementation of psychosocial risk preventive measures (stress in the workplace);
- introduction of work safety monitoring mechanisms in the structural units of the company (section, shop, base), where accidents with fatal and grave consequences occur;
- improvement of the quality of accident investigation and development of preventive measures;
- organization of training for the company managers and specialists of health and safety units and production and technical services on a risk-oriented approach in occupational safety management, including general risk assessment methods, establishing risk registers, and auditing of occupational health and safety management systems.
INTERACTION WITH LOCAL COMMUNITIES: MORE GAS FOR UKRAINE MEANS MORE FUNDS FOR COMMUNITIES

Naftogaz group companies are the key partners of local government and local communities wherever hydrocarbons are produced.

Group companies have developed and implemented a Stakeholder Engagement Procedure and Code of Corporate Ethics which establish uniform rules and approaches towards corporate social responsibility (CSR) and charity. The Procedure and the Code have been developed according to the relevant Ukrainian legislation and international standards ISO 26000:2010 Guidance on Social Responsibility, SA 8000. These documents are public and are available at the Naftogaz corporate website.

Naftogaz group companies are the key partners of local government and local communities wherever hydrocarbons are produced. This support involves free provision of materials, works and services. In 2018, Naftogaz group investments in social projects were UAH 40.1 million on infrastructure development in areas of operations, providing the local government with the necessary resources to address social problems and improve local living standards.

In 2018, a new project, Smart-Selo, was launched. As part of a pilot project, a video surveillance system with 30-day remote access to video recordings was installed by Kamyshnya local council. This will help to improve local security and monitor remotely the movement of the company’s technological vehicles.

In 2019, Ukrgasvydobuvannya plans to implement 10 similar projects in towns and villages where the company produces hydrocarbons.

### Key Ukrgasvydobuvannya social projects in 2018, UAH million

<table>
<thead>
<tr>
<th>Community</th>
<th>Projects</th>
<th>Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kharkiv region</td>
<td>Road repair</td>
<td>13.0</td>
</tr>
<tr>
<td>Donetsk village</td>
<td>Capital repairs of a school, a community center and a boiler facility</td>
<td>3.3</td>
</tr>
<tr>
<td>Krasnozavodsk local council</td>
<td>Capital repair of a school and a music school</td>
<td>0.6</td>
</tr>
<tr>
<td>Murat village</td>
<td>Capital repair of a community center</td>
<td>0.9</td>
</tr>
<tr>
<td>Lviv</td>
<td>Capital repair of a school and a bus depot</td>
<td>0.7</td>
</tr>
<tr>
<td>Kherson region</td>
<td>Capital repairs of schools, community centers and boiler facilities</td>
<td>0.02</td>
</tr>
<tr>
<td>Kamyshnya local council</td>
<td>Smart-Selo project: installation of a video surveillance system with 30-day remote access to video recordings</td>
<td>0.2</td>
</tr>
<tr>
<td>Rosobrody region</td>
<td>Freia Wi-Fi in the Pisochane secondary school named after L.M. Dudka</td>
<td>0.1</td>
</tr>
</tbody>
</table>

### New opportunities for children

As a socially responsible company, UGV pays considerable attention to the development of children. In two secondary schools in the Kharkiv region (in Donetsk village and the town of Krasnozavodsk), UGV has initiated robot technology classes for kids under the title BroBots. Children will learn robotic engineering, programming, CAD and 3D modeling. The educational course also aims to develop a system of air pollution monitoring. Each of the schools can teach up to 10 groups, with 16 kids aged 8-14 in each group. During the year, about 300 boys and girls will benefit from this new knowledge.

BroBots is a social non-profit project intended to train children in the areas of programming and robot technology. 12 schools already operate this project in Ukraine.
Rent payments for the needs of local communities

Ukrgasvydobuvannya

UAH 1.25 billion rent payments is the contribution that UGV made to local budgets in 2018. Total rent payments to the consolidated budget of Ukraine (local budgets and state budget) amounted to UAH 25 billion.

Depending on the production volumes of a particular territory, since the beginning of 2018 the budgets of many communities have enjoyed a 2- to 6-fold increase. For example, 2018 hydrocarbon production in Poltava region replenished the budgets of the local councils of Basylivka (UAH 5.5 million rent payments), Martynivka (UAH 6 million), Opishnya (UAH 4.6 million), and Sencha (UAH 58 million). The budget of the Koltomatskyi ATC changed from UAH 2 million in 2017 to UAH 12 million in 2018 with almost 80% coming from rent payments.

However, not all Ukrainian regions could fully benefit from the progressive changes in the country’s rent allocation laws. Since 2016, the regional council of Poltava has rejected UGV requests for approval of special permits for the use of subsoils and the extension of existing fields on more than 60 occasions, which may result in the company’s loss of at least 3.3 billion cubic meters of gas by 2020. In 2018 alone, Ukrgasvydobuvannya was unable to produce an additional 500 million cubic meters of gas due to this situation. This also decreased the potential proceeds going to the Poltava regional budget. Extra funds could significantly contribute to improvements in regional infrastructure such as hospitals, schools, roads etc.

Such actions by the Poltava regional council result in considerable losses to the Ukrainian economy and Poltava region. In particular, unpaid rents and taxes will result in UAH 4.9 billion in losses incurred by the State Budget of Ukraine, of which Poltava region loses UAH 135 million.

Depending on the production volumes of a particular territory, since the beginning of 2018 the budgets of many communities have enjoyed a 2- to 6-fold increase.

Uknafta

Another production company of the group, Uknafta, made rent payments to budgets of UAH 7.8 billion in 2018, which is 36.7% more than in 2017, with 3.6.7%.

Recreation tours to Artek summer camp for 500 children of Ukraine’s defenders

In June-July 2018, Naftogaz employees and their trade union provided charity funding to organize recreation tours to Artek-Bukovel Forest Camp for 500 children aged 8-18 whose parents had died or been wounded in action in the east of Ukraine.

Charity

Naftogaz group pays considerable attention to providing charitable aid to military units of the Armed Forces of Ukraine involved in the Joint Forces Operations on the territory of Donetsk and Luhansk regions, and to charitable aid for medical care institutions.

In 2018, the company allocated UAH 10.2 million for protection and medical care of soldiers who died or missed in action in the east of Ukraine, war veterans and their families.

The charity funding amounted to nearly UAH 7.5 million and covered two fourteen-day tours for children from Luhansk, Ivano-Frankivsk, Chernihiv, Kyiv, Mykolaiv and Rivne regions. To implement the charity project, Naftogaz involved Kryla Vosmoi Sotni (Wings of the 8th Company) NGO, which includes families of soldiers who died or missed in action in the east of Ukraine, war veterans and volunteers.

Supporting military units of Ukraine’s Armed Forces, UAH million

Naftogaz aid for 2014 - 2018 UAH 33.8 million

10.2 million collected in 2018

Support

UAH million

Clothing, military gear, spare parts

UAH million

Medicine, military hospitals

UAH million

Support to mobilized employees, other
INVESTMENTS IN ENERGY EFFICIENCY

Increasing energy efficiency and implementing energy efficiency technologies are of strategic importance for Naftogaz group. This is not only an issue of the efficient use of energy resources and savings, but also a matter of energy independence and national security.

Energy resources used by the group

In 2018, the group used 3.3 million tons of fuel and energy resources (FER) in oil equivalent for technological needs, including:

- 3.5 bcm natural gas
- 1.3 billion kWh electricity
- 710.7 thousand Gcal heat
- 104.7 thousand tons oil (gas condensate)
- 300.5 ktoe other types of FER (boiler and furnace fuel)

Use and savings of FER by Naftogaz group in 2010-2018

<table>
<thead>
<tr>
<th>FER consumption, Mtoe</th>
<th>Actual savings of FER, % (compared to the targets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>4.9</td>
</tr>
<tr>
<td>5.7</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Operational and technological consumption of FER in 2018, %

By group companies

- Uktransgaz: 47.1%
- Ugargasvydobuvannya: 35.2%
- Uknafta: 17.3%

By type of FER

- natural gas 85.0%
- electricity 31%
- heat 2.5%
- other types of FER 9.4%

Use and savings of FER by Naftogaz group in 2010-2018

FER consumption, Mtoe

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>4.9</td>
<td>3.6</td>
<td>3.8</td>
<td>3.3</td>
<td>3.2</td>
<td>2.6</td>
<td>3.2</td>
<td>3.3</td>
</tr>
<tr>
<td>5.7</td>
<td>6.1</td>
<td>7.0</td>
<td>5.3</td>
<td>5.3</td>
<td>5.3</td>
<td>7.6</td>
<td>6.9</td>
<td>5.8</td>
</tr>
</tbody>
</table>

Actual energy savings exceeded the target figure by 46.0 ktoe, including:

- 45.7 mcm natural gas
- 3.6 million kWh electricity
- 67.3 thousand Gcal heat
- 0.8 ktoe other types of fuel

Results of energy-saving policies

The total cost of fuel and energy resources saved in 2018 amounted to UAH 2.159 million (including VAT).

In 2018, the implementation of energy-saving measures under the NISC Naftogaz of Ukraine Energy Efficiency Program for 2015-2020, as well as the energy-saving programs of its subsidiaries, continued. As a result, saved fuel and energy resources (FER) amounted to 205.3 ktoe.

Natural gas savings amounted to 227.4 mcm, electricity – 32.6 million kWh, heat energy – 99.9 thousand Gcal.
Implementation of energy management system

In 2018, Ukrtransgaz implemented the energy management system (EMS) in accordance with the requirements of the International Standard ISO 50001 as part of the company’s integrated management system. The certification was carried out by the TÜV SÜD Management Service GmbH (Germany) and the company’s integrated management system was verified and the respective certificate 12 340 35484 TM was issued.

In 2018, Ukrtransgaz entered into a joint project with Ferrostaal and Deutsche Bank AG. The company engaged in gas supply from the gas pipeline via Shebelynka – Dykanka compressor unit and the gas supply to Ukrainian consumers. The investment of German companies amounted to EUR 26 million, of which EUR 14.71 million was provided by Deutsche Bank AG and about EUR 26 million comes from Ukrtransgaz’s own funds.

Modernization of individual heating systems

As part of the implementation of Naftogaz group’s corporate strategy to increase energy efficiency and reduce natural gas consumption in Chernihiv region, the Affordable Heat for Employees project has been launched. The project provides for the installation and modernization of individual heating systems at Naftogaz group employees’ homes and in the towns and villages where the group is operating.

Implementation of energy efficiency projects

Reconstruction of Yahotyn CS

In 2018, Ukrtransgaz entered into an agreement with the gas transmission system of Ukraine’s enterprise JSC Ukrtransgaz for the repair of three GPU-16 gas compressor units at Yahotyn CS including the replacement of DHN927 compressor engine with DNG922.1. In December 2018, Ukrtransgaz launched the first modernized unit. The replacement of gas turbine engines will enable to increase the economic and environmental performance of equipment to the level of modern European standards. New gas turbine engines consume fuel gas at a rate of 15% less than the old ones. Based on test results, the emissions of nitrogen oxides to the atmosphere amounted on average to 59 mg/cm (almost half the emission level of the old turbines), and emissions of carbon oxides amounted to 1.2 mg/cm (30 times less). This performance is in line with the provisions of Directive 2010/75/EC on industrial emissions.

Solar power station

In 2018, Ukrtransgaz’s Solar Power Station (SPS) produced 308 MWh of electricity. Since December 2017, Ukrgasvydobuvannya has sold all electricity produced by the station under “green tariff” conditions to the unified energy system of Ukraine, SE Energorynok. In 2018, Ukrtransgaz earned UAH 1.9 million on these transactions.

Key energy efficiency improvement tasks for 2019

1. Further implementation of the Energy Efficiency Program. In 2019, it is planned to save about 112.1 ktoe of FER, including 129.5 mcm of gas, 14.71 million kWh of electricity, and 27.9 thousand Gcal of heat energy.
2. Further implementation of energy efficiency and renewable energy projects targeting public institutions and household consumers.
3. Construction of a solar power station in Zhytomyr region for the generation of electricity from solar radiation. The station’s expected capacity is 30 MW.
4. Equipping gas turbines with a combustion products heat utilization system to generate additional electricity at the Lokachyns’kii DShO owned by Ukrgasvydobuvannya.
5. In 2019, Ukrtransgaz plans to implement 22 projects for the reconstruction, construction, and technical re-equipment of heat supply systems at Naftogaz group’s facilities.
ECOLOGY AND ENVIRONMENT PROTECTION

Environmental policy

Naftogaz group has in place an Environmental Policy aimed at ensuring the group’s effective functioning and development, mitigating environmental risks during production operations, harmonizing the group’s economic interests with public ecological and social interests, and implementing international environmental standards.

To implement this Environmental Policy, the company’s management has undertaken the following commitments:

• protect environment and minimize environmental impact;
• comply with applicable legal and other regulatory requirements regarding environmental protection;
• implement and improve the environmental management system under ISO 14001:2015;
• adhere to the principles of dynamic economic development with the most rational use of natural resources and environmental preservation;
• consider environmental factors when planning activities, buying technologies, materials and equipment as well as when performing works and services;
• improve production efficiency through application of the best available technologies;
• ensure goal-oriented planning to prevent and reduce environmental impact through a risk-oriented approach;
• building employees’ environmental culture and awareness of their role in environmental protection;
• ensure openness of information on environmental impact.

The company’s environmental policy is harmonized with the provisions of the Law of Ukraine “On the Main Principles (Strategy) of the National Environmental Policy”, the Law of Ukraine “On Environmental Protection”, and DSTU ISO 14001 “Environmental Management Systems—Requirements with Guidance for Use”.

Environmental goals

The commitments specified in the company’s Environmental Policy establish the following strategic goals:

• improve environmental management system;
• reduce water use;
• reduce waste.

Environmental actions

To accomplish its objectives, the company has developed and implemented:

• NSCU Naftogaz of Ukraine Comprehensive Environmental Action Plan for 2015-2020;
• NSCU Naftogaz of Ukraine Energy Efficiency Program for 2015-2020;
• Waste Management Program at the Companies of NSCU Naftogaz of Ukraine NSCU 2016-2020;
• Environmental Protection and Social Action Plan stipulated in the loan agreement with the International Bank of Reconstruction and Development (IBRD);
• Integrated research and development (R&D) plans;
• environmental plans for Naftogaz group companies.

Company bodies responsible for environmental issues:

• working group on implementation of integrated management system;
• working group on environmental activities;
• emergency committee.

Naftogaz group companies develop annual plans for comprehensive environmental measures. These include:

• water conservation, air protection, sustainable use of mineral resources and lands, waste management.

Naftogaz group’s environmental activities aim to comply with the Ukrainian environmental laws, improve the existing environmental management structure, obtain permits and licenses for business operations, prevent form excessive environmental pollution, minimize negative environmental impact caused by production operations of business entities controlled by the company.

Major environmental achievements in 2018

1) Timely and proper implementation of the Environmental Protection and Social Action Plan according to the IBRD loan documentation of 30 December 2016. This enabled the company to attract financial resources and confirm its reliable counterparty status. The Action Plan implementation brought the company’s operation standards closer in line with the environmental and social policies of international organizations such as the World Bank, the European Bank for Reconstruction and Development, OPIC and other world leading companies.

As part of the management system implementation, the company underwent an external audit and received ISO 14001: 2015, ISO 14001: 2015, OHSAS 18001: 2010 and ISO 50001: 2014 compliance certificates from the reputable international certification body TUV Süd Management Service GmbH. In addition, the company successfully passed a third-party audit on compliance with ISO 9001: 2015. The company built and operates an Integrated Management System in the areas of quality, environment, health and safety, and energy management.

2) In 2018, Naftogaz developed and implemented SOKI (corporate standard) “Environmental Protection. Elimination of Soil and Water Pollution with Oil and Oil Products. Rules”. This is the first regulatory document to rank emergencies by amount of spilled oil and petroleum products, provide stakeholder notification procedures, and specify soil contamination grading, which is currently unavailable in Ukraine. This standard will be widely used as an emergency elimination guide by Ukrainian oil and gas companies.

3) In 2018, Naftogaz group continued the World Bank’s pilot project to introduce a Monitoring, Reporting and Verification (MRV) system for greenhouse gas emissions. Project participants include Naftogaz, VERICO (Germany), Ulktranazg (Ukraine) and TMS (Ukraine). As part of the project, production processes, activities, sources of greenhouse gas emissions and material flows were reviewed; and a set of relevant documents, including GHG emission reports, was prepared and verified by an independent verifier, VERICO (Germany). Naftogaz group and Ulktranazg are ready to operate in the MRV system and the GHG emission trading system as soon as they are introduced in Ukraine (expected in 2019-2020). The experience of preparing a monitoring plan and GHG emission report will be disseminated throughout Naftogaz group.

4) The EBRD, the Ministry of Ecology and Natural Resources, and Naftogaz of Ukraine signed a Memorandum of Understanding on reduction of fugitive methane emissions in Ukraine’s gas supply chains.

5) New green procedures were introduced in the company:

• as part of the Green Office project, the company ensures separate waste collection;
• purchasing of goods, works and services which may produce an environmental impact involves assessment of supplier compliance with the environmental requirements of the law and the company;
• new employees are instructed on environmental and radiological safety.

In 2018, Naftogaz group started to publish annual environmental reports on its web site and internal portal to ensure access to its environmental information for all stakeholders. The company agrees all activities and projects involving significant impact on the environment and community life with the Ministry of Ecology and Natural Resources, and Naftogaz of Ukraine signed a Memorandum of Understanding on reduction of fugitive methane emissions in Ukraine’s gas supply chains.

Naftogaz environmental risks are related to the following activities:

• treatment and processing of hydrocarbons;
• natural and liquefied petroleum gas supply to industrial consumers and public utility sector;
• operation of LPG stations, etc.

Main aspects of Naftogaz environmental impact:

• pollutants and greenhouse gas emissions;
• water consumption;
• waste;
• accidental emissions or spills of pollutants.
Emissions of air pollutants by Naftogaz group, ktons:
- Emissions of carbon dioxide (CO₂) - 272
- Emissions of sulfur oxides (SOₓ) and other sulfur compounds - 0.3
- Emissions of nitrogen oxides (NOₓ) excluding N₂O - 174
- Emissions of non-methane volatile organic compounds - 22.0

Emissions of greenhouse gases, ktons, CO₂-eq.:
- Emissions of greenhouse gases - 7332.5

Emissions of air pollutants by Naftogaz group, thousand tons:
- Air pollution - 67.0

Water resources, tcm:
- Underground water - 1274.1
- Surface water - 3284.8
- Public water supply - 574.6
- Other - 5.7

Waste management, ktons:
- Disposed - 21.9
- Burnt - 0.06
- Removed - 1514
- Other - 47.7
Environmental impact minimization

Understanding the importance of environmental safety, sustainable use and rational use of natural resources, in 2018, Naftogaz group’s production companies were the first in the oil and gas sector to initiate strategic environmental assessment and obtain environmental impact statements (EIS).

In 2014, Ukraine signed an Association Agreement with the European Union and undertook to implement a national environmental law and adopt 29 EU environmental directives and regulations to achieve European environmental standards. Since 18 December 2017, EIS has been a mandatory document for the extraction industry according to the Law of Ukraine “On Environmental Impact Assessment”.

In 2018, Ukrtransgaz prepared 143 EIS procedures, issued 92 reports on planned activities, held 93 public hearings, and received 83 EISs (6 more statements on the admissibility of the company’s planned activities are expected from an authorized body). In April 2018, Ukrnafta received its first EIS related to its mining operations in the Pashchynianske, Dobushansko-Bytrovske, and Luhovynske fields. In 2018, the Company initiated hearings in communities where deposits were located and received 12 EISs.

EIS approval came following collection of the necessary materials on the general technical characteristics of the area, the capacity used, hydrocarbon production volume, etc., as well as public open presentations and discussions within the local community.

Expenditures on environmental protection measures

In 2018, Naftogaz group companies spent UAH 141.4 million on environmental protection, including UAH 3.2 million of capital investments (7% of environmental protection expenditures) and UAH 138.2 million of current expenditures (98%).

Capital investments breakdown: soil protection and rehabilitation – UAH 3.0 million, wastewater treatment – UAH 0.2 million.

Current expenditures on return water treatment amounted to UAH 50.4 million, waste management – UAH 32.0 million, protection and rehabilitation of soil, underground and surface water – UAH 31.5 million, air protection – UAH 6.3 million, other areas (including reduction of noise and vibrational impact, radiological safety, biodiversity, environmental protection research, etc.) – UAH 18.1 million.

UAH 60.4 million was spent on environmental protection services.

Proceeds from the sale of waste amounted to UAH 127.8 million, from environmental protection services (return water treatment) – UAH 0.1 million.

Naftogaz group paid UAH 61.3 million of environmental tax and UAH 0.059 million of penalties for environmental violations (compared to UAH 0.475 million in 2017).

97% of environmental tax is attributed to emissions of air pollutants.

Environmental protection services (return water treatment) – UAH 0.1 million.

Structure of current environmental protection expenditures in 2018 by areas of activity, UAH million

<table>
<thead>
<tr>
<th>Area of Activity</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return water treatment</td>
<td>50.4</td>
</tr>
<tr>
<td>Waste management</td>
<td>32.0</td>
</tr>
<tr>
<td>Protection and rehabilitation of soil</td>
<td>31.5</td>
</tr>
<tr>
<td>Air protection</td>
<td>6.3</td>
</tr>
<tr>
<td>Other environmental protection</td>
<td>18.1</td>
</tr>
</tbody>
</table>

61.3 UAH million

Ukrtransgaz - 51.5% 
Ukrtransgaz - 51.5%

Structure of environmental tax payment in 2018 by Naftogaz group companies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukrtransgaz</td>
<td>37079</td>
<td>30.2</td>
<td>0.2</td>
<td>4391.7</td>
</tr>
<tr>
<td>Ukrnafta</td>
<td>631.1</td>
<td>4.6</td>
<td>0.1</td>
<td>770.9</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>1752.6</td>
<td>20.3</td>
<td>0.03</td>
<td>2151.2</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>2.9</td>
<td>0.1</td>
<td>0.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Other companies</td>
<td>1.9</td>
<td>0.6</td>
<td>0.0</td>
<td>14.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6058.9</td>
<td>55.7</td>
<td>0.3</td>
<td>7332.5</td>
</tr>
</tbody>
</table>

Environmental protection

In 2018, Naftogaz group companies’ greenhouse gas emissions were as follows:

- CO2 emissions: 7.3 million tons in CO2 equivalent from 6.8 million tons in 2017. Ukrtransgaz (59.9%), Ukrtransgaz (29.3%) and Ukrnafta (10.5%) accounted for the largest shares in greenhouse gas emissions.
- CH4 emissions: Higher greenhouse gas emissions were due to an increase in production drilling and the significant increase in production enhancement operations by Ukrtransgaz.
- N2O emissions: No significant changes in N2O emissions were observed.

Structure of environmental tax payment in 2018 by Naftogaz group companies

<table>
<thead>
<tr>
<th></th>
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<td>55.7</td>
<td>0.3</td>
<td>7332.5</td>
</tr>
</tbody>
</table>
Every year Ukrnafta develops and implements measures to eliminate consequences of long-term oil and gas production as well as to reduce gas pollution in the town of Boryslav. More than UAH 35.3 million was spent on these activities in 2018, including the following:

- gas chemical control of the territory near well-heads, pit wells and control areas of the town within the boundaries of the mine allotment;
- repair and insulation works in the town of Boryslav at 33 operating wells, 4 previously abandoned wells, 10 pit-wells were discovered and arranged;
- special degassing wells were drilled;
- repair and maintenance of previously drilled special degassing wells, discovered and arranged pit-wells;
- gas pollution control at special degassing wells and pit-wells.

Ukrnafta initiated an independent environmental audit of the town of Boryslav. Members of the Boryslav Town Council, together with Ukrnafta and Naftogaz experts, developed a framework for Lamor company to conduct a comprehensive study of the environmental situation in the town of Boryslav. This included the preparation of organizational, technical, and social recommendations to reduce any manmade burden and social tension, improve sanitary conditions, and ensure the town’s environmental sustainability.

The Boryslavske field is developed according to the “Additional development and environmental improvement” designed to improve the environmental situation in the town.

### Waste management

#### Naftogaz group companies

Naftogaz group companies mostly generate drilling waste (drill cuttings, automobile tires; municipal solid waste; petroleum products and oil slime; scrap ferrous metals; worn out and damaged automobile tires; construction waste). In 2018, Naftogaz group generated 210.2 thousand tons of waste of which 77% was drilling slime. Ukrgasvydobuvannya accounted for the largest share of waste (79%).

#### Waste generated by Naftogaz group in 2018 by type

<table>
<thead>
<tr>
<th>Category</th>
<th>2018 (ktons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal solid waste</td>
<td>210.2</td>
</tr>
<tr>
<td>Scrap ferrous metals</td>
<td>12.6</td>
</tr>
<tr>
<td>Waste petroleum products and oil slime</td>
<td>5.3</td>
</tr>
<tr>
<td>Worn out and damaged automobile tires</td>
<td>4.2</td>
</tr>
<tr>
<td>Worn out</td>
<td>0.4</td>
</tr>
<tr>
<td>Other</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>210.2</strong></td>
</tr>
</tbody>
</table>

#### By group companies

<table>
<thead>
<tr>
<th>Company</th>
<th>2018 (ktons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukrtransgaz</td>
<td>15.1</td>
</tr>
<tr>
<td>Ukrtransnafta</td>
<td>0.4</td>
</tr>
<tr>
<td>Ukrnafta</td>
<td>17.8</td>
</tr>
<tr>
<td>Ukrgasvydobuvannya</td>
<td>79.2</td>
</tr>
</tbody>
</table>

#### Water resources

In 2018, the total water intake by Naftogaz group amounted to 5139.2 tcm (6 292.0 tcm in 2017), including 1 274.1 tcm of underground water, 3 284.8 tcm of surface water; 574.6 tcm from public water supply, and 5.7 tcm from other sources.

In 2018, Naftogaz group used 4 664.6 tcm of water (4 418.5 tcm in 2017), including 1 042.1 tcm for drinking, sanitary and hygienic needs (1 054.6 tcm in 2017) and 3 267.0 tcm for operating needs (3 122.0 tcm in 2017).

#### Water use by Naftogaz group companies, tcm

<table>
<thead>
<tr>
<th>Company</th>
<th>2017 (tcm)</th>
<th>2018 (tcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naftogaz</td>
<td>4408.5</td>
<td>4664.6</td>
</tr>
<tr>
<td>Ukrtransgaz</td>
<td>2650.0</td>
<td>2832.6</td>
</tr>
<tr>
<td>Ukrtransnafta</td>
<td>967.8</td>
<td>1050.5</td>
</tr>
<tr>
<td>Ukrgasvydobuvannya</td>
<td>6464.6</td>
<td>611.2</td>
</tr>
<tr>
<td>Ukrnafta</td>
<td>175.3</td>
<td>170.3</td>
</tr>
</tbody>
</table>

#### Water use by purpose

<table>
<thead>
<tr>
<th>Category</th>
<th>2017 (tcm)</th>
<th>2018 (tcm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating needs</td>
<td>2832.6</td>
<td>2832.6</td>
</tr>
<tr>
<td>Drinking, sanitary and hygienic needs</td>
<td>2650.0</td>
<td>2650.0</td>
</tr>
<tr>
<td>Other</td>
<td>175.3</td>
<td>170.3</td>
</tr>
</tbody>
</table>
Naftogaz group records its water consumption and discharge, using standard forms. Most water meters are equipped with metering devices. All water meters are duly checked and sealed. Naftogaz group used water resources within the set limits.

In 2018, a total of 1.547.6 tcm of return water was returned to wastewater treatment facilities, 416.3 tcm to sewerage system, 271.4 tcm to disposal fields, 32.4 tcm to cesspits, 101.3 tcm to wastewater treatment facilities.

In 2018, 377.0 tcm of associated and deposit water was used to maintain formation pressure. Associated and deposit water extracted together with hydrocarbons was returned to the Andriyashchevsko-Gudimovsky national hydrological reserve. The monitoring held in 2018 identified no negative impact of oil and gas production infrastructure on forest, meadow and wetland ecosystems.

To protect soils and lands, NJSC Naftogaz of Ukraine Integrated Environmental Protection Action Plan for 2015-2020 provides for response measures to eliminate oil and oil product spills, including elimination and reclamation of oil storage pits. In 2018, Naftogaz group reclaimed 464.6 hectares of lands affected by production operations (159.0 hectares in 2017).

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Environmental problems and risks

1) The Directive (EU) 2015/2193 (MCP Directive) regulates emissions of certain air pollutants from combustion plants with a heat output equal to or greater than 1 MW and less than 50 MW (“Medium Combustion Plants”). Although the MCP Directive is a supplement to Directive 2010/75/EC, it is not included in the list of directives Ukraine has committed to implement. GMK-10 and GMK-8 gas internal combustion compressors used by Naftogaz group are obsolete and worn out. They do not meet the EU’s NOx and CO emission standards. The implementation of GMK replacement programs and development of a National Emission Reduction Plan for medium combustion plants, including obsolete engines, are key to the problem.

2) A complicated and long (from three to six months) procedure to obtain emission permits for drilling rigs, especially for shallow wells drilled by mobile units within a year.

3) Shortage of environmental experts at some production facilities of Naftogaz group.

4) Leaks of hydrocarbons and deposit water due to worn-out equipment, especially pipelines, and unauthorized interference.

5) Waste. Business entities with waste generation rate exceeding 1000 kg/ha cannot obtain waste management permits as required by law due to a several-year delay in the development and implementation of the licensing procedure. The problem remains unsolved, as there is no regulation in place that would classify waste by hazard. Most oil and gas companies in Ukraine are operating without permits, being hostages of circumstance. The state authorities suspended SSR S 2.2.7.029-99 regulation classifying waste by hazard, while there is no National List of Waste compliant with international requirements.

6) Water consumption and special water use. Deficient regulatory and legal framework in terms of electronic reporting by water users on the amount of underground water extracted from artesian wells (Order #10 of the Ministry of Ecology and Natural Resources of Ukraine of 23 March 2016) and calculation procedure for water use and discharge (Art. 49 of the Water Code and Order #234 of the Ministry of Ecology and Natural Resources of Ukraine of 23 June 2017). The fulfillment of these requirements in the proposed format will require significant costs and other unreasonable expenses by industrial water users. In most cases, the result may not justify costs, which will exceed tax payments for special water use.

7) Inconsistency of bylaws with the Law of Ukraine “On Environmental Impact Assessment”, which became effective on 18 December 2017. For example, to obtain a license for a new field, an environmental impact assessment is needed, while business entities that just intend to participate in an auction for a license are not eligible to hold the impact assessment, as it can be done exclusively by an owner (user) of the field when preparing the development project.
PROCURMENT MANAGEMENT

The reform of the procurement system has been one of the first and most important reforms of Naftogaz group. For Naftogaz group, the main criterion for procurement effectiveness is the best quality at an economically advantageous price, subject to compliance with the principles of a transparent, non-discriminatory, competitive and open procurement process.

Legal, financial, commercial and corruption risks arise in the process of procurement. One of the Company’s core values is zero tolerance to any form of corruption, so when procuring, strict adherence to anti-corruption legislation is controlled.

Improvement of Procurement Procedures in 2018:
• the normative definition of the expected cost of procurement at the enterprises of Naftogaz group was finalized;
• the obligatory provision of security to be provided by participants in case of procurements of more than UAH 10 million was established in order to reduce the risk of participation of false companies in procurement procedures;
• the transition from “paper” to electronic procurement was made, ensuring compliance with transparency principles in procurement procedures;
• the procedure of strategic procurement with world-class suppliers was implemented allowing access to the most advanced technologies to ensure the prompt execution of works of increased complexity and timely execution of gas extraction programs;
• a procurement mechanism under framework agreements was introduced, which allows reductions in the number of procurement procedures and periods for concluding contracts;
• project financing was attracted at the expense of the European Investment Bank to cover the project costs of procurement procedures and which allows reductions in the number of procurement procedures and periods for concluding contracts; the project financing was intended to improve reliability and increase hydrocarbon production, which made it possible to receive additional financial resources on favorable terms and increase investment attractiveness;
• the possibility to make procurements under “turn-key” contracts was implemented, which places responsibility on the general contractor for the fulfillment of all obligations under the contract and allows minimization of customer risks.

Tasks for 2019:
• centralization of procurements by changing from fragmented regional model of Tender Committees to centralized procuring organization;
• creation of a training center for buyers of Naftogaz group (training, lectures by key leaders and professionals, exchange of experience and combination of best practices, analysis of procurement efficiency, analysis of AMCU practices);
• automation of key procurement processes to facilitate access to analytical and statistical information;
• pilot project to create VENDOR LIST for TOP-3 categories of goods.

Actual saving on procurements in 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Value (UAH mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukrtransodobuvannya</td>
<td>2 911</td>
</tr>
<tr>
<td>Naftogaz</td>
<td>1 818</td>
</tr>
<tr>
<td>Ukrtransnafta</td>
<td>1 810</td>
</tr>
<tr>
<td>Ukrtransgas</td>
<td>1 579</td>
</tr>
<tr>
<td>Other</td>
<td>1 139</td>
</tr>
</tbody>
</table>

Total quantity and value of announced procurements in 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukrtransodobuvannya</td>
<td>3,650</td>
</tr>
<tr>
<td>Naftogaz</td>
<td>3,647</td>
</tr>
<tr>
<td>Ukrtransnafta</td>
<td>3,647</td>
</tr>
<tr>
<td>Ukrtransgas</td>
<td>3,647</td>
</tr>
<tr>
<td>Other</td>
<td>1,147</td>
</tr>
</tbody>
</table>

TOP-7 external suppliers in 2018, UAH mn

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Value (UAH mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHLUMBERGER SERVICES UKRAINE</td>
<td>2,911</td>
</tr>
<tr>
<td>INTERPIPE UKRAINE</td>
<td>2,646</td>
</tr>
<tr>
<td>Solar Turbines International Company</td>
<td>1,818</td>
</tr>
<tr>
<td>TACROM SERVICES S.R.L.</td>
<td>1,810</td>
</tr>
<tr>
<td>Ukrainian natural gas producers</td>
<td>3,702</td>
</tr>
</tbody>
</table>

Procurements via ProZorro in 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>62,200</td>
</tr>
<tr>
<td>Non-residents</td>
<td>8,273</td>
</tr>
</tbody>
</table>
FINANCIAL STATEMENTS
2018 was the third consecutive year when Naftogaz group demonstrated a positive financial result. Operating income for the year amounted to UAH 26.4 billion, net profit was UAH 11.6 billion, and net cash flow from operating activities stood at UAH 71.6 billion.

The years 2017-2018 have been important for the group, since Naftogaz won the Stockholm Arbitration case against Gazprom, which has had a positive impact on the financial result of 2017, increasing the group’s profit by UAH 12.6 billion. However, the group has also had some tax consequences related to the part of the compensation payable according to the transit decision, which led to an increase in VAT obligations of UAH 4.8 billion in March 2018, which resulted in reduced net income in 2018.

As in previous years, the integrated gas business and natural gas transmission segments are leaders in terms of operating income. In 2018, they contributed UAH 35.2 billion and UAH 8.2 billion respectively to the operating income of the group. These segments are the main contributors to the group’s operating cash inflow: the integrated gas business segment earned almost UAH 33.3 billion, and the natural gas transmission segment reached UAH 26.8 billion.

In 2018, the group continued to generate a positive cash flow from its operating activities. Taxes and dividends paid to the budget for the year amounted to UAH 109.1 billion and UAH 29.5 billion respectively, maintaining the group’s position as the largest taxpayer in Ukraine. A stable positive cash flow from operating activities enabled significantly increased investment in development in 2018. Investment activity almost doubled from UAH 13.9 billion in 2017 to almost UAH 26 billion in 2018. This was mainly investment in drilling, the purchase of new drilling rigs, and other projects to ensure an increase in the production of Ukrainian gas as one of the group’s most important strategic priorities.

In addition, operating cash flow has become the main source for paying interest on the existing loan portfolio and reducing the credit burden by repaying loans, which reduced the value of the loan portfolio from UAH 59.3 billion as of December 31, 2017 to UAH 56.0 billion as of December 31, 2018.

Financing all long-term investments with their liquidity needs, the group attracts credit capital. At the same time, the shareholder withdraws part of his capital as a result of net profit distribution. According to the results of 2017, the shareholder distributed 75% of profits, which is UAH 29.5 billion, paid by the group to the budget in 2018. This is the money that is paid to the shareholder and cannot be used by the group in its activities. This is the reason why the group borrows funds. The current low net debt-to-equity ratio, in our opinion, allows us to attract external financing without a significant risk of deterioration in the financial situation. Therefore, attracting external financing remains our priority, which will enable the implementation of investment projects and funding for the gas purchase program. In 2019, the group plans to attract about UAH 60 billion due to the issuance of Eurobonds and new loans.

At the same time, the issue of entering capital markets and attracting external financing for Naftogaz group, which is a state-owned company, needs agreement from the Cabinet of Ministers of Ukraine and the Ministry of Finance. Based on prior experience, this will be a long process. The impossibility of timely attracting such funds puts at risk the implementation of the capital investment program and achievement of the strategic objectives of the group to increase production and maintain the necessary level of gas in the UGS to ensure reliable gas supply during the heating period.

From a financial point of view, we are ready to face the risk of zero transit revenues after unbundling. Our financial condition mainly depends on the further reform of the gas market in Ukraine and its impact on the results of the integrated gas business of the group. In 2020, even if no transit revenues are forthcoming, a free gas market will take shape according to government decisions and agreements with the IMF. We expect to be able to sell gas directly to the final consumer at market prices and keep the profitability of the group at relatively high levels.
KEY PERFORMANCE INDICATORS IN 2018

According to the results of 2018, the group recorded net income of UAH 256.3 billion, which is 12.7% higher than in 2017. This income growth is mostly in the integrated gas business segment, which is described below.

At the same time, the net profit of Naftogaz group only reached UAH 11.6 billion in 2018 compared to UAH 39.4 billion in 2017. This decrease is due to the financial effect of recognizing the decisions of the Arbitration Tribunal in the arbitration proceedings on natural gas sale and transit between Naftogaz and Gazprom. While the Arbitration Tribunal in the arbitration proceeding on sale and purchase of gas, in 2018, Naftogaz group recognized UAH 4.8 billion of non-reimbursed VAT on the amount to be paid to Naftogaz according to the ruling of the Arbitration Tribunal in the proceeding on gas transit. This decrease in net profits was also due to an increase in the cost of creating a debt reserve of UAH 7.0 billion, which relates to balancing activities in the domestic natural gas transmission segment, and to the impairment of receivables under the product-sharing agreement between Naftogaz and the Egyptian General Oil Corporation as part of other activities. Additionally, the amount of net profit was significantly affected by creation of a litigation reserve: following the court decision that was adopted in 2013 and its execution delayed till May 2019, the group should reserve more than 1.0 bcm of natural gas to cover shortages in the GTS underground gas storage facilities. The cost of creating this reserve amounted to over UAH 10.7 billion in 2018. At the same time, an increase in gross income has added UAH 7.2 billion to net profits in 2018 compared to 2017, mainly due to improvement of the result of the Integrated Gas Business segment.

Integrated gas business

In terms of performances, the integrated gas business is the largest business segment of the group, which combines production, imports, sale and supply of natural gas to various categories of consumers, as well as the sale of related raw materials. In the total structure of the group’s revenues, the integrated gas business contribution is 42.3%. Total sales of natural gas increased by 8.8% or by 1.5 bcm in 2018 due to colder weather in February-March 2018 compared to the same period in 2017. The household category was the only one to demonstrate a slight decrease in sales, dropping by 0.6 bcm. The result of the integrated gas business segment has improved in 2018 by UAH 1.6 billion.

Petroleum products transportation, refining and sale

The segment includes activities related to transportation, sale and supply of oil, gas condensate, petroleum products, and related products.

Trading of petroleum products

In 2018, petroleum product sales decreased by 7.5% or by 602 thousand tons, while liquefied gas sales remained almost unchanged. The decline in sales has worsened the segment’s result by UAH 0.6 billion. However, due to an increase in market prices for petroleum products in 2018, revenue improved by UAH 2.6 billion and reached UAH 0.3 billion.

Domestic oil transmission and transit

During 2018, the volume of oil transit decreased by 4.3% or by 602 thousand tons, due to a decrease in the transit of oil from Russia through Ukraine to EU countries, including in the direction of Hungarian refineries (-6.1%), Czech Republic (-1.4%) and Slovakia (-5.0%). The reduction of oil transit in the direction of Hungary and Slovakia (MOL company) was due to the decrease of orders for the purchase of Russian oil to be transmitted in 2018: the oil contained 1.8% sulphur which did not meet the customer’s requirements of 0.5%. So the financial result of the segment slightly decreased, by UAH 0.3 billion, or by 1.7%.

At the same time, the volume of domestic transmission remained at the level of 2017 and amounted to 2 101 thousand tons. The segment remained unprofitable in 2018, and its financial result amounted to UAH 0.9 billion.

Performance improvement factors for integrated gas business

<table>
<thead>
<tr>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling price growth</td>
<td>33.6</td>
</tr>
<tr>
<td>Sales volume growth</td>
<td>35.2</td>
</tr>
<tr>
<td>Decrease in import gas cost price</td>
<td>+10.5</td>
</tr>
<tr>
<td>Decrease in domestically produced gas cost price</td>
<td>-11.7</td>
</tr>
<tr>
<td>Increase in amortization</td>
<td>+15.6</td>
</tr>
<tr>
<td>Other changes</td>
<td>-9.3</td>
</tr>
<tr>
<td>+2.9</td>
<td>-0.6</td>
</tr>
</tbody>
</table>
Natural gas transit

About 40% of the natural gas supplied by the Russian Federation to European countries in 2018 and 2017 was transmitted via Ukrainian trunk gas pipelines. In 2018, the total volume of natural gas transmitted through the territory of Ukraine from Russia to the European countries and Moldova was 86.8 bcm, which is less than in 2017 by 6.7 bcm, or 7.2%. One of the main factors that reduced transit volumes through the Ukrainian GTS was the increase in the volume of Russian gas transit to Europe via the Nord Stream pipeline.

Domestic natural gas transmission

As in previous periods, revenues from natural gas transit account for a significant part in the group’s revenues, representing 28.2% of the group’s revenues for 2018. The financial result of the gas transit segment decreased from UAH 12.7 billion in 2017 to UAH 8.1 billion in 2018, mainly due to a decrease in transit.

Natural gas storage

The financial result of domestic natural gas transmission for 2018 decreased by UAH 2.3 billion. The main negative factor affecting the result was the increase in the debt reserve during this period, due to significant volumes of unpaid balancing services.

Financial result in domestic gas transmission

The financial result of domestic natural gas transmission for 2018 decreased by UAH 2.3 billion.

Taxes and payments to the budget

In 2018, Naftogaz group retained the largest taxpayer in Ukraine. During the year, the company paid UAH 138.6 billion in taxes and compulsory payments to the budget, which is 26% more than in 2017. In 2018, based on the results of its activities in 2017, Naftogaz, as a legal entity, paid UAH 29.5 billion dividends to the state budget. This growth was due to an increase in the CIT by UAH 1.1 billion, however the segment’s result deteriorated due to the recognition in 2018 of receivable impairment losses under the product sharing agreement of almost UAH 3.1 billion.

Taxes and compulsory payments paid by the group companies

Cash flow

The cash flow from operating activities for 2018 was UAH 71.6 billion, which is 1.5% higher than for 2017.

Capital investments

In 2018, the total capital investments of Naftogaz group increased by 80%, or by UAH 13.6 billion compared to 2017. Capital investments in natural gas production remain the priority for the group, with 81% of the total investment in 2018, and 80.5% in 2017. The amount of investment has almost doubled in 2018 compared to 2017 due to a steady build-up of exploration and operating drilling by Ukrgasvydobuvannya. Capital expenditures for these works in 2018 increased by more than UAH 5.5 billion, or by 93% compared to 2017. The amount of capital investment in natural gas transit, which is about 8.2% of the total investment, increased in 2018 by 47% compared to 2017.

Loans

Loan obligations as at 31 December 2018 amounted to UAH 56.0 billion compared to UAH 59.3 billion as at 31 December 2017. The major part of loans as of December 31, 2018 were UAH denominated, representing 44.3% of total group borrowing.
The independent auditor did not express any qualification relating to the Naftogaz financial position and financial performance for 2018.

*The only modification in the auditors’ report relates to comparability of the current year and the corresponding figures.

Management of the group, in cooperation with management of subsidiaries strived to minimise number of issues that may have an impact on the auditors’ report in respect of the consolidated financial statements.

<table>
<thead>
<tr>
<th>Auditor’s qualification (the qualification number in the auditor’s report indicated in brackets)</th>
<th>Effect on:</th>
<th>Management comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement of financial position as at 31 December 2018</td>
<td>Statement of profit or loss 2018</td>
<td></td>
</tr>
<tr>
<td>6 qualifications (16% of total assets value)</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>
| 3 qualifications (2% of total assets value) | After the Final Court decision on termination of the agreement is received, the Group will deconsolidate this investee.

Matters related to prior periods that affect comparability of the current year and the corresponding figures:

Investment in joint operation:
Use of different accounting policies by the group and the group’s associates and joint operations; lack of audited financial information of joint operation

After the Final Court decision on termination of the agreement is received, the Group will deconsolidate this investee.
INDEPENDENT AUDITOR’S REPORT

To the Shareholder of Joint Stock Company “National Joint Stock Company “Naftogaz of Ukraine”: 

Report on the Audit of the Consolidated Financial Statements 

Qualified Opinion

We have audited the consolidated financial statements of Joint Stock Company “National Joint Stock Company “Naftogaz of Ukraine” and its subsidiaries (the “Group”), which comprise the consolidated statement of financial position as at 31 December 2018, the consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of change in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, except for the effects on the corresponding figures of the matter described in the Basis for Qualified Opinion section of our report, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2018, and its consolidated financial performance and its consolidated financial position as at 31 December 2017, and related relationships on total comprehensive income for the year then ended. Our audit opinion on the consolidated financial statements for the year ended 31 December 2018 was modified accordingly. Our opinion on the current period’s consolidated financial statements is also modified because of the possible effects of these matters on the comparability of the current period’s figures and the corresponding figures.

We conducted our audit in accordance with International Standards on Auditing (“ISAs”). Our responsibilities under those standards are further described in the Auditor’s Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants’ Code of Ethics for Professional Accountants (the “IESBA Code”) together with the ethical requirements that are relevant to our audit of the consolidated financial statements in Ukraine, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified opinion.

Emphasis of Matters

Operating environment

We drew your attention to Note 2 to the consolidated financial statements, which describes that the impact of the continuing economic crisis and political turmoil in Ukraine and their final resolution are unpredictable and may adversely affect the Ukrainian economy and the operations of the Group. Our opinion is not modified in respect of this matter.

Disputes with JSC “Gazprom”

We also drew your attention to Note 22 to the consolidated financial statements, which describes material uncertainty regarding the final resolution of the Arbitration process between the Group and JSC “Gazprom”. Our opinion is not modified in respect of this matter.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. In addition to the matter described in the Basis for Qualified Opinion section, we have determined the matters described below to be the key audit matters to be communicated in our report.

Revenue recognition from balancing services

The Group implemented for the first period of application of IFRS 15 “Revenue from Contracts with Customers”. This standard requires as part of identification of the contract to assess whether it is probable to collect the consideration from customers. Taking to account that balancing services are not settled in a full amount, recognition of respective revenues requires to make significant estimates in respect of future cash flows and management judgement.

Based on the above we determined the revenue recognition from balancing services to be a key audit matter.

Refer to Note 3 “Segment information” and Note 27 “Critical accounting estimates and judgements” of the accompanying consolidated financial statements for further details.

Why the matter was determined to be a key audit matter

Impairment of property, plant and equipment

As discussed in Note 9 “Property, plant and equipment” to the consolidated financial statements during the year ended 31 December 2018 the Group recognised an impairment of its property, plant and equipment in the amount of $155 million. The Group determined the recoverable amount of the property, plant and equipment through preparation of value in use projections.

How the matter was addressed in the audit

We obtained, understood, and evaluated the Group’s policies, processes, methods and assumptions used to assess the recoverable amount of property, plant and equipment.

With the involvement of our valuation experts we performed the following procedures in respect of the recoverable amount assessment:

- evaluated the identification of the cash-generating units;
- evaluated whether the methodology applied and the model used is in line with the IFRS requirements;
- determined the recoverable amount requires management to make significant estimates concerning the future cash flows based on judgements and assumptions about future business prospects.

Based on the above we determined the assessment of the expected recoverable amount of property, plant and equipment to be a key audit matter.

Refer to Note 5 “Property, Plant and Equipment” as well as Note 27 “Critical accounting estimates and judgements” for further details.

We challenged the assumptions applied in the determination of the discount rate and accuracy of cash flows used in the model; assessed their consistency with plans approved by management and with our accumulated knowledge of the Group and the industry in which they operate; checked that the results were correctly recognised and presented in the consolidated financial statements; assessed the completeness and correctness of the information disclosed in the consolidated financial statements.

Based on the results of our tests, we have not identified any significant issues.

Trade accounts receivable

IFRS 9 “Financial Instruments” (“IFRS 9”) has been adopted by the Group for the first time and is effective from 1 January 2018. The application of IFRS 9 has significant impact on the expected credit losses on trade accounts receivable.

Estimate of provision for expected credit losses on trade accounts receivable involves application of complex methodology, use of management’s judgement and various assumptions.

Taking into account the significance of the trade accounts receivable balance and high level of subjectivity of judgements and assumptions we considered measurement of expected credit losses on trade accounts receivable to be a key audit matter.

Refer to the Note 9 “Trade account receivable” as well as Note 28 “Adoption of new or revised standards and interpretations” of the accompanying consolidated financial statements for further details.

We obtained understanding of the Group’s policy, processes and control procedures for measurement of expected credit losses on trade accounts receivable.

We assessed the Group’s methodology on the expected credit losses calculation on a collective basis and its consistency with the requirements of IFRS 9.

We tested the Group’s historical data based on a sample of trade accounts receivable and performed alternative recalculations of expected credit losses that are determined on a collective basis.

We also assessed the appropriateness of management’s judgment regarding assessment of risk of default, the historical period for which statistics can be used for calculating the probability of default and loss given default for the expected credit losses that are assessed on a collective basis.

We checked completeness and accuracy of the relevant disclosures in the consolidated financial statements.

Based on the results of our tests, we have not identified any significant issues.

We obtained an understanding of the revenue arrangements in place across the Group.

We reviewed the revenue recognition accounting policy, and checked whether it complies with IFRS 15 “Revenue from Contracts with Customers”.

We assessed the key judgements made in respect of the revenue recognition criteria per IFRS 15 “Revenue from Contracts with Customers” based on the prior experience of the Group and information available from the market.

We challenged the probability of collectability of consideration by analysing whether the Group historically collected consideration, to which it was entitled in exchange for the rendered services, as well as understanding the status of litigation over unsettled accounts receivable both for the portfolio of contracts with similar characteristics and in certain cases on individual basis.

We evaluated the completeness and accuracy of the disclosures included in the consolidated financial statements.

Based on the results of our tests, we have not identified any significant issues.
Other Information

Management is responsible for the other information. The other information comprises the information included in the management report, which also includes corporate governance report, but does not include the consolidated financial statements and our auditor’s report thereon, which we obtained prior to the date of this auditor’s report, the annual report, which is expected to be made available to us after that date.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed on the other information that we obtained prior to the date of this auditor’s report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs and Law on accounting and financial reporting, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group’s financial reporting process.

Auditor’s Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

• Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

• Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group’s internal control.

• Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

• Conclude on the appropriateness of management’s use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor’s report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to continue as a going concern.

• Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

• Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period, which constitute the key audit matters included herein. We describe these matters in our auditor’s report, except for the cases when a law or regulation prohibits a public disclosure of a specific matter or, in extremely adverse circumstances, we determine that such an matter should not be addressed in our report, as negative consequences from such a disclosure may predictably outweigh its usefulness for interests of the public.

Report on Other Legal Requirements

We have been appointed as auditor of the Group by the Supervisory Board on 22 December 2017. In view of the previous renewal and reappointments, we conducted audit from 12 September 2014 to the date of this report.

We confirm that the audit opinion is consistent with the additional report to the audit committee.

We confirm that the prohibited non-audited services referred to ISA or requirements of Article 6, paragraph 4 of Law of Ukraine «On Audit of Consolidated financial statements and Audit Activities» were not provided and that the audit engagement partner and audit firm remains independent of the Group in conducting the audit.

Basic information about audit firm

Name: PSC “Deloitte & Touche Ukrainian Services Company”.
Address of registration and location of audit firm: 48, 50a Zhylianska Str., Kyiv, 01033, Ukraine.
“Private Joint Stock Company “Deloitte & Touche Ukrainian Services Company” was enrolled to Sections of “Audit Entities”, “Audit Entities and Auditors That Have the Right to Conduct Statutory Audits of Consolidated financial statements”, and “Audit Entities and Auditors That Have the Right to Conduct Statutory Audits of Consolidated financial statements of Public Interest Entities” of the Register of Auditors and Auditing Entities of the Audit Chamber of Ukraine under #1973.”

Certified Auditor

Auditor’s Certificate Series А # 007492
Issued by the Audit Chamber of Ukraine on 27 December 2017
on the basis of Resolution of the Audit Chamber of Ukraine # 353/2, valid until 21 December 2022
19 April 2019
JOINT STOCK COMPANY "NATIONAL JOINT STOCK COMPANY "NAFTOGAZ OF UKRAINE"
CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF 31 DECEMBER 2018

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Note</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-current assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>5</td>
<td>434,370</td>
<td>491,482</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td>6</td>
<td>1,255</td>
<td>1,197</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>21</td>
<td>5,119</td>
<td>4,204</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>7</td>
<td>8,988</td>
<td>11,131</td>
</tr>
<tr>
<td><strong>Total non-current assets</strong></td>
<td></td>
<td>449,732</td>
<td>508,014</td>
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<tr>
<td>Current assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>8</td>
<td>65,571</td>
<td>60,175</td>
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<tr>
<td>Trade accounts receivable</td>
<td>9</td>
<td>65,942</td>
<td>58,988</td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>10</td>
<td>6,888</td>
<td>71,247</td>
</tr>
<tr>
<td>Prepaid corporate income tax</td>
<td>17</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Cash and bank balances</td>
<td>11</td>
<td>14,224</td>
<td>23,093</td>
</tr>
<tr>
<td>Restricted cash</td>
<td>1,338</td>
<td>1,591</td>
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<tr>
<td><strong>Total current assets</strong></td>
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<td>153,980</td>
<td>215,110</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td></td>
<td>603,712</td>
<td>723,124</td>
</tr>
<tr>
<td><strong>EQUITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share capital</td>
<td>12</td>
<td>194,307</td>
<td>194,307</td>
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<tr>
<td>Revaluation reserve</td>
<td></td>
<td>379,022</td>
<td>411,261</td>
</tr>
<tr>
<td>Foreign currency translation reserve</td>
<td>4</td>
<td>4,027</td>
<td>3,462</td>
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<tr>
<td>Accumulated deficit</td>
<td></td>
<td>(165,342)</td>
<td>(168,057)</td>
</tr>
<tr>
<td>Equity attributable to owners of the Parent</td>
<td></td>
<td>412,014</td>
<td>440,973</td>
</tr>
<tr>
<td>Non-controlling interest in equity</td>
<td></td>
<td>1,844</td>
<td>(454)</td>
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<tr>
<td><strong>TOTAL EQUITY</strong></td>
<td></td>
<td>413,858</td>
<td>440,519</td>
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<tr>
<td><strong>LIABILITIES</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Non-current liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrowings</td>
<td>13</td>
<td>11,299</td>
<td>14,736</td>
</tr>
<tr>
<td>Provisions</td>
<td>14</td>
<td>6,943</td>
<td>6,007</td>
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<tr>
<td>Deferred tax liabilities</td>
<td>21</td>
<td>50,544</td>
<td>67,304</td>
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<tr>
<td>Other long-term liabilities</td>
<td></td>
<td>221</td>
<td>12</td>
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<tr>
<td><strong>Total non-current liabilities</strong></td>
<td></td>
<td>69,007</td>
<td>88,059</td>
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<tr>
<td>Current liabilities</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Borrowings</td>
<td>13</td>
<td>44,700</td>
<td>44,579</td>
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<tr>
<td>Provisions</td>
<td>14</td>
<td>41,072</td>
<td>52,551</td>
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<tr>
<td>Trade accounts payable</td>
<td></td>
<td>5,500</td>
<td>8,137</td>
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<tr>
<td>Advances received and other current liabilities</td>
<td>15</td>
<td>23,269</td>
<td>78,608</td>
</tr>
<tr>
<td>Corporate income tax payable</td>
<td></td>
<td>6,306</td>
<td>10,671</td>
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<tr>
<td><strong>Total current liabilities</strong></td>
<td></td>
<td>120,847</td>
<td>194,546</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td></td>
<td>189,854</td>
<td>282,605</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES AND EQUITY</strong></td>
<td></td>
<td>603,712</td>
<td>723,124</td>
</tr>
</tbody>
</table>

These consolidated financial statements were authorised for issue on 15 April 2019.

Andriy Kobolyev,
Chairman of the Executive Board

Sergiy Konovets,
Deputy Chairman of the Executive Board

---

JOINT STOCK COMPANY "NATIONAL JOINT STOCK COMPANY "NAFTOGAZ OF UKRAINE"
CONSOLIDATED STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2018

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Note</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td>256,312</td>
<td>227,478</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>16</td>
<td>(178,829)</td>
<td>(157,147)</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td></td>
<td>77,483</td>
<td>70,331</td>
</tr>
<tr>
<td>Other operating income</td>
<td>17</td>
<td>4,641</td>
<td>5,092</td>
</tr>
<tr>
<td>Income recognised per results of Gas Transit Arbitration</td>
<td>22</td>
<td>-</td>
<td>57,125</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>18</td>
<td>(55,727)</td>
<td>(27,475)</td>
</tr>
<tr>
<td>Expense recognised per results of Gas Sales Arbitration</td>
<td>22</td>
<td>-</td>
<td>(44,528)</td>
</tr>
<tr>
<td><strong>Operating profit</strong></td>
<td></td>
<td>26,397</td>
<td>60,545</td>
</tr>
<tr>
<td><strong>Finance costs</strong></td>
<td>19</td>
<td>(6,201)</td>
<td>(8,102)</td>
</tr>
<tr>
<td><strong>Finance income</strong></td>
<td>20</td>
<td>2,128</td>
<td>1,598</td>
</tr>
<tr>
<td><strong>Share of after-tax results of associates and joint-ventures</strong></td>
<td>6</td>
<td>(1,336)</td>
<td>(47)</td>
</tr>
<tr>
<td><strong>Net foreign exchange loss</strong></td>
<td></td>
<td>(471)</td>
<td>(1,043)</td>
</tr>
<tr>
<td><strong>Profit before income tax</strong></td>
<td></td>
<td>20,537</td>
<td>52,751</td>
</tr>
<tr>
<td>Income tax expenses</td>
<td>21</td>
<td>(8,970)</td>
<td>(13,302)</td>
</tr>
<tr>
<td><strong>Net profit for the year</strong></td>
<td></td>
<td>11,567</td>
<td>39,449</td>
</tr>
<tr>
<td><strong>Net profit/(loss) is attributable to:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity attributable to owners of the Company</td>
<td></td>
<td>8,696</td>
<td>39,644</td>
</tr>
<tr>
<td>Non-controlling interest</td>
<td></td>
<td>2,871</td>
<td>(195)</td>
</tr>
<tr>
<td><strong>Net profit for the year</strong></td>
<td></td>
<td>11,567</td>
<td>39,449</td>
</tr>
</tbody>
</table>
### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2018

<table>
<thead>
<tr>
<th>Note</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net profit for the year</td>
<td>11,567</td>
</tr>
<tr>
<td></td>
<td>Other comprehensive (loss)/income</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Items that will not be reclassified subsequently to profit or loss, net of income tax:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Share of other comprehensive income of associates (net of income tax effect of nil (2017: nil))</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Remeasurement of defined benefit obligation (net of income tax effect of UAH 2 million (2017: UAH 24 million))</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Remeasurement of decommissioning liability (net of income tax effect of UAH 2 million (2017: UAH 24 million))</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Items that may be reclassified subsequently to profit or loss, net of income tax:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foreign currency translation reserve</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>Other comprehensive loss for the year</td>
<td>(30,422)</td>
</tr>
<tr>
<td></td>
<td>Total comprehensive (loss)/income for the year</td>
<td>(18,855)</td>
</tr>
</tbody>
</table>

### CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2018

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Share capital</td>
<td>164,607</td>
<td>437,510</td>
</tr>
<tr>
<td></td>
<td>Foreign currency translation reserve</td>
<td>(178,214)</td>
<td>456,767</td>
</tr>
<tr>
<td></td>
<td>Total comprehensive (loss)/income for the year</td>
<td>(26,032)</td>
<td>298</td>
</tr>
<tr>
<td></td>
<td>Transfer of revaluation reserve</td>
<td>-</td>
<td>(217)</td>
</tr>
<tr>
<td></td>
<td>Change in investments in joint operations</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Provision for dividends payable to the State Budget (Note 14)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Registration of shares</td>
<td>29,700</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Total comprehensive (loss)/income for the year</td>
<td>-</td>
<td>(3,666)</td>
</tr>
<tr>
<td></td>
<td>Effect of implementation of new standard (Note 28)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Balance at 1 January 2018</td>
<td>194,307</td>
<td>411,261</td>
</tr>
<tr>
<td></td>
<td>Profit for the year</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Other comprehensive (loss)/income for the year</td>
<td>(31,988)</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>Total comprehensive (loss)/income for the year</td>
<td>(31,988)</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>Transfer of revaluation reserve</td>
<td>-</td>
<td>(251)</td>
</tr>
<tr>
<td></td>
<td>Change in investments in joint operations</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Provision for dividends payable to the State Budget (Notes 12 and 14)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Profit share paid to the State Budget (Note 12)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Balance at 31 December 2018</td>
<td>194,307</td>
<td>379,022</td>
</tr>
</tbody>
</table>
### Joint Stock Company “National Joint Stock Company “Naftogaz of Ukraine”

**Consolidated Statement of Cash Flows for the Year Ended 31 December 2018**

<table>
<thead>
<tr>
<th>Note</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In millions of Ukrainian hryvnias</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CASH FLOWS FROM OPERATING ACTIVITIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit before income tax</td>
<td>20,537</td>
<td>52,751</td>
</tr>
<tr>
<td>Adjustments for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation of property, plant and equipment and amortisation of intangible assets</td>
<td>44,160</td>
<td>39,824</td>
</tr>
<tr>
<td>Loss on disposal of property, plant and equipment</td>
<td>325</td>
<td>132</td>
</tr>
<tr>
<td>Impairment of property, plant and equipment and intangible assets</td>
<td>18</td>
<td>1,466</td>
</tr>
<tr>
<td>Write down of inventories</td>
<td>8</td>
<td>5,781</td>
</tr>
<tr>
<td>Net movement in provision for trade accounts receivable, prepayments made and other assets</td>
<td>18</td>
<td>19,361</td>
</tr>
<tr>
<td>Net result of Gas Sales and Gas Transit Arbitrations</td>
<td>-</td>
<td>(12,597)</td>
</tr>
<tr>
<td>Change in provisions</td>
<td>14</td>
<td>18,188</td>
</tr>
<tr>
<td>Write off of accounts payable and other current liabilities</td>
<td>(46)</td>
<td>(48)</td>
</tr>
<tr>
<td>Share of after-tax results of associates and joint-ventures</td>
<td>6</td>
<td>1,336</td>
</tr>
<tr>
<td>Net foreign exchange loss</td>
<td>471</td>
<td>1,043</td>
</tr>
<tr>
<td>Finance costs, net</td>
<td>4,073</td>
<td>6,704</td>
</tr>
<tr>
<td>Operating cash flows before working capital changes</td>
<td>115,632</td>
<td>104,937</td>
</tr>
<tr>
<td>Decrease/(increase) in other non-current assets</td>
<td>281</td>
<td>(338)</td>
</tr>
<tr>
<td>Increase in inventories</td>
<td>(12,408)</td>
<td>(10,749)</td>
</tr>
<tr>
<td>Increase in trade accounts receivable</td>
<td>(27,162)</td>
<td>(24,981)</td>
</tr>
<tr>
<td>Decrease in prepayments made and other current assets</td>
<td>7,217</td>
<td>2,277</td>
</tr>
<tr>
<td>Increase in other long-term liabilities</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Provisions paid or used</td>
<td>14</td>
<td>(4,134)</td>
</tr>
<tr>
<td>Increase in trade accounts payable</td>
<td>14,993</td>
<td>18,702</td>
</tr>
<tr>
<td>Decrease in advances received and other current liabilities</td>
<td>(563)</td>
<td>(5,199)</td>
</tr>
<tr>
<td>Cash generated from operations</td>
<td>93,871</td>
<td>83,076</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(23,901)</td>
<td>(12,613)</td>
</tr>
<tr>
<td>Interest received</td>
<td>1,673</td>
<td>1,244</td>
</tr>
<tr>
<td>Net cash generated by operating activities</td>
<td>71,643</td>
<td>70,601</td>
</tr>
<tr>
<td><strong>CASH FLOWS FROM INVESTING ACTIVITIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of property, plant and equipment and intangible assets</td>
<td>(24,904)</td>
<td>(14,438)</td>
</tr>
<tr>
<td>Proceeds from sale of property, plant and equipment</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Proceeds from the sale of the State treasury bonds and other financial investments</td>
<td>145</td>
<td>-</td>
</tr>
<tr>
<td>Dividends received</td>
<td>-</td>
<td>84</td>
</tr>
<tr>
<td>Net cash used in investing activities</td>
<td>(25,941)</td>
<td>(13,857)</td>
</tr>
</tbody>
</table>

**CASH FLOWS FROM FINANCING ACTIVITIES**

<table>
<thead>
<tr>
<th>Note</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proceeds from borrowings</td>
<td>14,304</td>
<td>12,941</td>
</tr>
<tr>
<td>Repayment of borrowings</td>
<td>(35,192)</td>
<td>(49,469)</td>
</tr>
<tr>
<td>Interest paid</td>
<td>(5,163)</td>
<td>(7,378)</td>
</tr>
<tr>
<td>Profit share and dividends paid</td>
<td>12, 14</td>
<td>(19,336)</td>
</tr>
<tr>
<td>Net cash used in financing activities</td>
<td>(55,587)</td>
<td>(57,170)</td>
</tr>
<tr>
<td>Net decrease in cash and cash equivalents</td>
<td>(9,885)</td>
<td>(426)</td>
</tr>
<tr>
<td><strong>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>23,093</td>
<td>21,853</td>
</tr>
<tr>
<td><strong>CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12,759</td>
<td>23,093</td>
</tr>
</tbody>
</table>

**SIGNIFICANT NON-CASH TRANSACTIONS**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment for the natural gas purchase by a lending bank</td>
<td>17,699</td>
<td>21,850</td>
</tr>
<tr>
<td>Dividends set off with accounts receivable</td>
<td>-</td>
<td>3,424</td>
</tr>
</tbody>
</table>
Joint Stock Company “Naftogaz of Ukraine” (“Naftogaz”), the “Parent” or the “Company”) was founded in 1998 in accordance with the Resolution of the Cabinet of Ministers of Ukraine #747 dated 25 May 1998. According to the Resolution of the Cabinet of Ministers of Ukraine dated 6 March 2019 the Company was changed from Public to Private Joint Stock Company. "Naftogaz" is a vertically integrated oil and gas company engaged in the full cycle of operations in gas and oil field exploration and development, exploratory drilling and production, gas and oil transmission and storage, sales and supply of natural gas and petroleum products to customers.

The Company holds stakes in various entities that form the national system of production, refinery, distribution, transportation, and storage of natural gas, gas condensate and oil. The Company is registered at 6 B. Khmelnytskoho Street, Kyiv, Ukraine. The Group conducts its business and holds its production facilities mainly in Ukraine. The principal subsidiaries and joint operations are presented as follows:

### Name/Type of activity

<table>
<thead>
<tr>
<th>Name/Type of activity</th>
<th>% Interest held as at 31 December 2018</th>
<th>% Interest held as at 31 December 2017</th>
<th>Subsidiary/ Joint operations</th>
<th>Country of registration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production of gas, oil and refinery products</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukrigasvydobuvannya, JSC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrnafta, PJSC</td>
<td>50.00 + 1 share</td>
<td>50.00 + 1 share</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Petrotransman, Company Joint operations with the Arab Republic of Egypt and Egyptian General Petroleum Corporation</td>
<td>50.00</td>
<td>50.00</td>
<td>Joint operations</td>
<td>Egypt</td>
</tr>
<tr>
<td>Zakodonaftogaz, Subsidiary Enterprise</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Karpatyagaz, LLC, Joint operations with Misen Enterprises AB (Note 22)</td>
<td>49.99</td>
<td>49.99</td>
<td>Joint operations</td>
<td>Ukraine</td>
</tr>
<tr>
<td><strong>Oil and gas transportation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukrtransnafta, JSC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrnafta, JSC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrneftegaztrans, JSC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td><strong>Wholesale and retail distribution of oil, gas and refinery products</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gaz Ukraina, Subsidiary Enterprise</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Gas supply company Naftogaz of Ukraine, LLC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Gas supply company Naftogaz Teplo, LLC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Gas supply company Naftogaz Trading, LLC</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Naftogaz Trading Europe AG</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Risowogradz, Open JSC</td>
<td>51.00</td>
<td>51.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrvetroz, Subsidiary Enterprise</td>
<td>100.00</td>
<td>100.00</td>
<td>Subsidiary</td>
<td>Ukraine</td>
</tr>
</tbody>
</table>

**2. OPERATING ENVIRONMENT**

The Ukrainian economy is showing signs of stabilisation after years of political and economic tensions. The year over year inflation rate in Ukraine has decreased to 9.8% during 2018 (as compared to 13.7% in 2017) while GDP continued to grow at 3.4% (after 2% growth in 2017).

The National Bank of Ukraine (“NBU”) continued its inflation targeting policy and periodically raised its key policy rate from 12.5% in May 2017 to 18% in September 2018. This has helped restrain inflation below 10%, although the cost of domestic funding has increased significantly. NBU adhered to floating hryvnia exchange rate and it finished the year of 2018 at UAH 27.69 per USD, compared to UAH 28.07 per USD as at 31 December 2017. Among the key stabilising factors for the hryvnia were the successful unlocking of the IMF programme, strong revenues of agri exporters, tight UAH liquidity and growth in remittances from labor migrants.

As part of foreign currency transaction regulations, the NBU continued its policy of reducing the currency restrictions and decreased share of mandatory sale of foreign currency from 50% down to 30% with effect from March 2019. Increased foreign currency denominated exports/imports transactions settlement period from 180 up to 365 days, and increased the limit for dividends payment from USD 2 million to EUR 7 million for the year 2018.

In December 2018, the IMF Board of Directors approved the stand-by assistance (“SBA”) 14-month programme for Ukraine in amount of USD 9.3 billion. In December, Ukraine has already received USD 2 billion from the IMF and the EU, as well as USD 750 million guarantee from the World Bank. IMF program’s approval significantly increases the chance of Ukraine to meet foreign currency obligations in 2019, and thus will support the financial and macroeconomic stability of the country.

The IMF will decide on further tranches in May and November 2019, depending on Ukraine’s success in fulfilling the terms of the Memorandum on Economic and Financial Policies, which Ukraine plans to follow during the SBA programme’s implementation.

In 2019-2020, Ukraine faces major public debt repayments, which will require mobilizing substantial domestic and external financing in an increasingly challenging financing environment for emerging markets. Also, Ukraine faces presidential elections at the end of April 2019, and then parliamentary elections in October 2019. Amid double-digit degree of uncertainty in 2019 will remain very high. Despite certain improvements in 2018, the local resolution and ongoing effects of the political and economic situation are difficult to predict but they may have further severe effects on the Ukrainian economy and the Group’s business.

Gas market reform in Ukraine started with adoption of the Law of Ukraine “On Natural Gas Market” #129-VI dated 9 April 2015 (“the Law on Gas Market”) that became effective on 3 October 2015. Starting from this date, the wholesale and retail natural gas markets introduced the principle of free pricing and freedom of choice regarding sources of the natural gas supplies, except for the cases when the Cabinet of Ministers of Ukraine imposes specific obligations on the natural gas market participants.

The Government of Ukraine and the Group are undertaking active measures in the open European natural gas market development that is required by the Memorandum on Economic and Financial Policy agreed with the IMF, provisions of the Coalition Agreement, the “Ukraine-2020” Sustainable Development Strategy, the Corporate Governance Action Plan, and the Plan for Implementation of the Gas Sector Reform approved by the Resolution of the Cabinet of Ministers of Ukraine #375-р. These measures introduce conceptual changes to the legal framework and functioning of the natural gas market, to certain aspects of operations of the Company and also will have significant impact on the performance of the Company and the Group as a whole.

**State regulation of gas market in Ukraine**

The Law on Gas Market has defined the work of natural gas market on the principles of free, fair competition and state non-interference with the operations of the natural gas market, except when it is necessary to eliminate market constraints or to insure public interest, and taking that actions by the State are carried out at a minimum sufficient level.

Prices for a natural gas supply should be defined between the supplier and the customer on an arm’s length, except for the certain cases, as prescribed by the para 12, part 2, of the Law. In particular, such cases include imposing public service obligations (“public service obligations” or “PSOs”) on the Company according to the CMU Resolutions, in particular:

- by the Resolution #758 dated 1 October 2015 “On Approval of the Provisions for Imposing Special Obligations on the Natural Gas Market Participants for Ensuring Public Interests in the Natural Gas Market Functioning” effective from 1 October 2015 to 31 March 2017 (“Resolution #758”).
- by the Resolution #1187 dated 22 March 2017 “On Approval of the Provisions for Imposing Special Obligations on the Natural Gas Market Participants for Ensuring Public Interests in the Natural Gas Market Functioning” effective from 1 April 2017 to 31 October 2018 (“Resolution #1187”).
- by the Resolution #1677 dated 19 October 2018 “On Approval of the Provisions for Imposing Special Obligations on the Natural Gas Market Participants for Ensuring Public Interests in the Natural Gas Market Functioning” effective from 1 November 2018 to 1 May 2020 (“Resolution #1677”).
- by the Resolution #187 and #867 set the following in particular:
  - conditions for buying natural gas by the Company from “Ukrigasvydobuvannya” JSC and “Chornomornaftogaz” JSC to create sufficient gas stocks when performing public service obligations;
  - conditions for selling / supplying natural gas by the Company when performing the public service obligations, including setting gas selling prices.

Certain provisions of the Resolution #867 differ significantly from the Resolution #187, in particular:

- Resolution #867 provides a formula for the gas selling price determination by the Company as an arithmetic mean value of the gas selling price set by the Company for industrial customers for supplies made on a prepayment basis during July-September 2018, adjusted for the multiplier (so-called “discount”). This multiplier amounts to 0.6943 from 1 November 2018, and 0.8 starting from 1 May 2019.

- Resolution #867 provides that starting from 1 January 2020, the Company will sell / supply natural gas within the public service obligations at prices defined between the supplier and the customer on an arm’s length, but not higher than 164
The following tariffs and prices were set:

<table>
<thead>
<tr>
<th>Natural gas price for sale to the regional gas supply companies for the needs of households, excluding VAT and tariffs for gas transmission and distribution and trade mark up.</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH 6,235.51</td>
<td>UAH 6,235.51</td>
<td></td>
</tr>
<tr>
<td>1,000 cubic meters</td>
<td>1,000 cubic meters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural gas price for sale to the municipal heating generating entities for the needs of households, excluding VAT and tariffs for gas transmission and distribution.</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH 7,907</td>
<td>UAH 2,471</td>
<td></td>
</tr>
<tr>
<td>1,000 cubic meters</td>
<td>1,000 cubic meters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural gas price for sale to the municipal gas supply companies for the needs of religious organisations (excluding volumes used in commercial activities), excluding VAT and tariffs for gas transmission and distribution.</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH 9,294 to UAH 10,150</td>
<td>UAH 7,516 to UAH 8,265</td>
<td></td>
</tr>
<tr>
<td>per 1,000 cubic meters</td>
<td>per 1,000 cubic meters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tariff for entry points of Ukrainian gas transmission network located at the state border of Ukraine, excluding VAT.</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH 732.7</td>
<td>UAH 46.20</td>
<td></td>
</tr>
<tr>
<td>per 1,000 cubic meters</td>
<td>per 1,000 cubic meters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas storage tariff, excluding VAT.</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH 32.90</td>
<td>UAH 32.90</td>
<td></td>
</tr>
<tr>
<td>per 1,000 cubic meters</td>
<td>per 1,000 cubic meters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas withdrawal tariff, excluding VAT.</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH 67.30</td>
<td>UAH 67.30</td>
<td></td>
</tr>
<tr>
<td>per 1,000 cubic meters</td>
<td>per 1,000 cubic meters</td>
<td></td>
</tr>
</tbody>
</table>

Households settle their debts on natural gas consumed via special purpose accounts opened in banks that were authorised by the Cabinet of Ministers of Ukraine for such purpose. According to the current procedure, gas suppliers with public service obligations open special purpose bank accounts to receive payments for the natural gas consumed. Amounts accumulated on the special purpose bank accounts are then allocated to current accounts of the transmission system operator, distribution system operators and gas suppliers with public service obligations according to the ratios calculated by the gas suppliers with specific obligations and approved by the National Commission for Regulation of Energy and Utilities ("NCREU”). Balances on the special purpose accounts cannot be arrested or blocked.

Municipal heating generating entities also open special purpose banks accounts for the settlement of debts for heat supplied. Cash received by municipal heating generating entities on their special purpose bank accounts is then allocated, among others, to current bank accounts of the gas suppliers with public service obligations according to the ratios approved by the NCREU monthly. The special purpose bank accounts of municipal heating generating entities also cannot be blocked or arrested.

In November 2016 the Law of Ukraine “On measures to settle the debts for the natural gas consumed by municipal heating generating entities and distribution and water supply companies” #1730 was adopted. The settling principles for municipal heating generating entities and distribution and water supply companies payables for gas are set in this Law. Among other, the Law assumes waiving off penalties and fines imposed for overdue debts for gas supplied, and restructuring of payables to the Company for gas consumed. The list of companies entitled for debt settling procedures is approved by the central body of the government executive authorities responsible for pursing the State policy in housing and utilities.

The fulfillment of gas debt restructuring agreements is guaranteed by municipal executive government bodies representing particular territorial community as set by the separate guarantee agreement. According to the terms of gas debt restructuring agreements, the Company has a right to terminate them in case of late payments by counterparty. There were no such agreements terminated up to the date of these consolidated financial statements.

As at 31 December 2018 outstanding nominal amount of such restructured agreements is UAH 1,665 million (31 December 2017: UAH 400 million) (Note 23).

Compensation for performing public service obligations

In accordance with Para 7, Article 11 of the Law of Ukraine “On Natural Gas Market”, a gas market player with public service obligations is eligible for compensation of economically justified expenditures incurred by such player less any income obtained in the course of fulfilling such obligations plus adequate profit margin. The level of profit margin should be calculated following the relevant resolution approved by the Cabinet of Ministers of Ukraine.

In July 2017, Kyiv county administrative court supported the Company’s claim against the Cabinet of Ministers of Ukraine, and admitted the failure of the latter to identify formula and sources of financing the compensation for performing public service obligations when approving the PSO Resolution. The court decision became effective in October 2017. Further, the Cabinet of Ministers of Ukraine has appealed to this decision, however, it was rejected by the Kyiv Court of Appeal in October 2017. Then the Cabinet of Ministers of Ukraine filed a cassational appeal that is under review as at the date of these consolidated financial statements. As at the date of these consolidated financial statements such resolution has not been adopted.

Further, in October 2018 the Company initiated a claim to request a compensation of the damages incurred by the Company during performing public service obligation in the fourth quarter of 2015. The amount claimed by the Company states at UAH 6.6 billion. In March 2019 the Kyiv Commercial Court has rejected the Naftogaz claim. The Company has appealed this decision in respective court instance.

Taking the significant uncertainty in respect of receiving the compensation for performing public service obligations as at the date of these consolidated financial statements, the Company did not recognise any incomes in this respect during 2017 and 2018, and did not receive any compensation as a gas market player with public service obligations during these periods.

The Company estimates the amount of compensation for performing public service obligations up to 31 December 2018 at the level of UAH 27.1 billion (unaudited) (31 December 2017: UAH 36.2 billion, unaudited). This amount does not include compensation attributable to other gas market players with public service obligations, inter alia “Ukrayngazvydobuvannya” JSC. Total amount of compensation to all gas market players named as public service obligations, inter alia “Ukrayngazvydobuvannya” JSC, is not audited and unaudited at the end of 2018.

Gas transmission unbundling process

As at 31 December 2018 and 2017, the Company executed control over transmission system operator “Ukrtransgaz” JSC.

Unbundling plan was approved by the Resolution of the Cabinet of Ministers of Ukraine #496 dated 1 July 2016, which envisages transfer of gas transmission activities to “Mahistrayin gazovoprovody Ukrainy” JSC ("MGU"), and gas storage activities to the Governmental body for Regulation of Energy and Utilities ("NCREU"). The financial obligations of the transmission system operator, distribution system operators and gas suppliers with public service obligations are then allocated to current accounts of the transmission system operator, distribution system operators and gas suppliers with public service obligations according to the ratios approved by the NCREU monthly. The special purpose bank accounts of municipal heating generating entities also cannot be blocked or arrested.

Under the Gas Transit Contract with “Gasprom” PSC (“Gazprom”), Naftogaz is responsible for reliable and uninterrupted functioning of the Ukrainian gas transmission system. Technical realisation of such obligations is performed by “Ukrtransgaz” JSC. The rights and obligations in respect of the Gas Transit Contract cannot be designated to a third party (e.g. “Mahistrayin gazovoprovody Ukrainy” PSC) without Gazprom consent. Gazprom initiated a claim to request a compensation of the damages incurred by the Company during performing public service obligation in the fourth quarter of 2015. The amount claimed by the Company states at UAH 6.6 billion. In March 2019 the Kyiv Commercial Court has rejected the Naftogaz claim. The Company has appealed this decision in respective court instance.

Therefore, management believes that legal separation of transit and domestic transmission is unlikely to be completed until the Gas Transit Contract expires on 1 January 2020.
other byproducts sales. Management identified four main groups of customers in respect of gas sales and supply:
- Gas production, imports and sales to the regional gas supply companies (“RSC”) for the needs of households,
- Gas production, imports and supply to the municipal heat generating entities (“MHE”) for the needs of households,
- Gas production, imports and supply to the other customers under PSO,
- Gas imports and supply to the other customers outside PSO and byproducts sales.
Each group of customers has its own selling price setting procedure and its own economic characteristics, such as products delivered to the end customers, their credit risks etc.
Selling price setting for gas sales to RSC, MHE for the needs of households and to the other customers under PSO is performed within the current PSG Resolution (Note 2). Gas supply for other groups of customers is performed at prices established independently by Naftogaz.

The Group controls about 75% of all natural gas production in Ukraine. As described in Note 2, “Ukrvysvydobuvannya” JSC and “Chornomornaftogaz” JSC are obliged to sell gas to Naftogaz for the needs of households, religious organisations, municipal heat generating entities and distribution and water supply companies for households and religious organisations. Therefore, management views performance from gas production up to its sale to one of the groups of customers named above as a single reporting segment. Demand in gas for other customers outside PSO is satisfied from gas import.
Byproducts sales include production of oil and gas condensate by “Ukrvysvydobuvannya” JSC which is consumed by Oil midstream and downstream segment at intra-group prices.
Oil midstream and downstream. This segment includes activities related to transportation, sale and supply of oil, gas condensate, petroleum products, and related services.
The Group sells purchased and domestically refined petroleum products through filling stations network throughout Ukraine. Domestic refinery of petroleum products is performed at oil and gas refineries controlled by the Group. Oil transit and transmission operations are presented by oil transmission pipelines and 11 oil reservoirs operated by the Group.
Gas domestic transmission and gas transit. These segments are presented by the gas transmission pipelines operated by the Group. Management considers gas transit and gas transmission as separate business segments as gas transit is mainly represented by a contract with a single counterparty and is being assessed separately.
Ukrainian gas transmission system is one of the largest in the world in terms of its transportation capacities. The total length of gas transmission pipelines in Ukraine is 38.5 thousand km. Over 40% of natural gas supplies from the Russian Federation to European countries were delivered through Ukrainian gas transmission system in 2018 and 2017.
Gas domestic transmission segment also includes result of market-based gas balancing operations introduced by the Code of the Gas Transmission System. Market-based gas balancing operations is an activity to balance gas volumes entered the gas transmission system at entry point and volumes taken out at exit point. Gas balancing services are provided to consumers of gas transmission services. Currently this type of activities is performed by “Ukrtransgaz” JSC.

Gas storage. Ukrainian gas transportation system includes 12 underground gas storage facilities located in mainland Ukraine. The total capacity of the underground gas storage system located in mainland Ukraine is 31 billion cubic meters of gas.

“Ukrnafta” PSC. “Ukrnafta” PSC is the biggest oil producing company in Ukraine. “Ukrnafta” PSC is composed of several production and maintenance units, which are currently in the process of corporate restructuring, including six oil and gas production units, one well drilling division and three gas processing plants.

“Ukrnafta” PSC also owns one of the largest filling stations network in Ukraine located in different regions of Ukraine.
Segment information for the reportable business segments of the Group for the year ended 31 December 2018 is as follows:

<table>
<thead>
<tr>
<th>Segment Information</th>
<th>Integrated Gas</th>
<th>Oil midstream and downstream</th>
<th>Gas transit</th>
<th>Gas/steam</th>
<th>Gas storage</th>
<th>Ukrnafta</th>
<th>Other</th>
<th>Elimination</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales – external</td>
<td>108,534</td>
<td>12,950</td>
<td>72,347</td>
<td>24,815</td>
<td>259</td>
<td>36,029</td>
<td>1,378</td>
<td>-</td>
<td>256,312</td>
</tr>
<tr>
<td>Sales to other segments</td>
<td>29,291</td>
<td>30</td>
<td>-</td>
<td>2,353</td>
<td>1,537</td>
<td>84</td>
<td>-</td>
<td>(33,295)</td>
<td></td>
</tr>
<tr>
<td>Total revenue</td>
<td>137,825</td>
<td>12,980</td>
<td>72,347</td>
<td>27,168</td>
<td>1,376</td>
<td>36,113</td>
<td>1,378</td>
<td>(33,295)</td>
<td>256,312</td>
</tr>
<tr>
<td>Segment result</td>
<td>35,214</td>
<td>1,103</td>
<td>8,150</td>
<td>(1,194)</td>
<td>(1,264)</td>
<td>11,384</td>
<td>(2,695)</td>
<td>-</td>
<td>48,698</td>
</tr>
</tbody>
</table>

Non-refundable VAT recognised according to the Gas Transit Arbitration (4,751)
Change in provisions for litigations and other provisions (14,530)
Impairment of property, plant and equipment and intangible assets (1,466)
Finance costs, net (4,073)
Share of after-tax results of associates and joint-ventures (1,316)
Unallocated income/(expense), net (2,025)

Profit before income tax 20,537

Net segment cash flows from operating activities 33,291 1,175 26,803 (3,307) 186 3,145 (1,947) 59,346
Payments for natural gas made directly by lending bank to suppliers 17,699
Unallocated cash flows from operating activities (5,402)
Net cash flows from operating activities 71,643

Material non-cash items included in segment results:
Depreciation, depletion and amortisation 8,515 1,359 29,912 1,378 1,234 1,539 223  - 44,160
Net movement in provision for trade and other receivables and prepayments made and other current assets 2,421 4 - 13,344 86 219 3,287  - 19,361
Change in provisions 60 - - - 45 17 - - - 122
Net foreign exchange loss 128 - 73 - - - - - 209
Capital expenditure 24,749 545 2,492 340 242 1,530 697  - 30,595
Property, plant and equipment 115,772 11,993 80,389 9,413 199,596 13,726 3,481  - 434,370
Other segment assets 94,739 2,869 15,960 8,914 178 16,243 5,071  - 143,974
Investments in associates and joint ventures 1,255
Cash and bank balances 24,224
Unallocated assets 9,889

Total assets 603,712

Segment liabilities 15,281 1,456 5,884 1,277 1,852 6,782 765  - 33,297
Borrowings 55,999
Portion of net profit attributable to the State Budget of Ukraine 4,084
Deferred tax liabilities 50,544
Provisions for litigations 15,254
Unallocated liabilities 30,676

Total liabilities 189,854

Net working capital 77,679 1,416 9,075 7,506 (1,675) 9,462 837  - 104,300
### Segment Information for the Reportable Business Segments of the Group for the Year Ended 31 December 2017

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Integrated gas</th>
<th>Oil midstream and downstream</th>
<th>Gas transit</th>
<th>Gas domestic transmission</th>
<th>Gas storage</th>
<th>Ukrnafta</th>
<th>Other</th>
<th>Elimination</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales – external</td>
<td>89,089</td>
<td>11,302</td>
<td>73,937</td>
<td>24,747</td>
<td>184</td>
<td>26,858</td>
<td>1,361</td>
<td>-</td>
<td>227,478</td>
</tr>
<tr>
<td>Sales to other segments</td>
<td>29,358</td>
<td>28</td>
<td>2,874</td>
<td>774</td>
<td>49</td>
<td>-</td>
<td>(33,083)</td>
<td>-</td>
<td>227,478</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td><strong>118,447</strong></td>
<td><strong>11,330</strong></td>
<td><strong>76,811</strong></td>
<td><strong>32,621</strong></td>
<td><strong>958</strong></td>
<td><strong>33,907</strong></td>
<td><strong>1,361</strong></td>
<td>(33,083)</td>
<td><strong>227,478</strong></td>
</tr>
<tr>
<td>Segment result</td>
<td>33,590</td>
<td>2,243</td>
<td>12,721</td>
<td>(881)</td>
<td>(2,361)</td>
<td>4,939</td>
<td>748</td>
<td>-</td>
<td>50,999</td>
</tr>
<tr>
<td>Income recognised per results of Gas Transit Arbitration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57,125</td>
</tr>
<tr>
<td>Expense recognised per results of Gas Sales Arbitration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(44,528)</td>
</tr>
<tr>
<td>Change in provisions for litigations and other provisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,783</td>
</tr>
<tr>
<td>Impairment of property, plant and equipment and intangible assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3,399)</td>
</tr>
<tr>
<td>Finance costs, net</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(6,704)</td>
</tr>
<tr>
<td>Share of after-tax results of associates and joint-ventures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(47)</td>
</tr>
<tr>
<td>Net foreign exchange loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(764)</td>
</tr>
<tr>
<td>Unallocated income/(expense), net</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2,718)</td>
</tr>
<tr>
<td><strong>Profit before income tax</strong></td>
<td><strong>27,544</strong></td>
<td><strong>1,839</strong></td>
<td><strong>10,431</strong></td>
<td>(881)</td>
<td>(2,361)</td>
<td><strong>4,050</strong></td>
<td><strong>613</strong></td>
<td>-</td>
<td><strong>41,235</strong></td>
</tr>
<tr>
<td>Net segment cash flows from operating activities</td>
<td>19,752</td>
<td>1,341</td>
<td>36,039</td>
<td>(6,039)</td>
<td>(325)</td>
<td>6,874</td>
<td>475</td>
<td>-</td>
<td>(12,597)</td>
</tr>
<tr>
<td>Payments for natural gas made directly by lending bank to suppliers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21,850</td>
</tr>
<tr>
<td>Net result of Gas Sales and Gas Transit Arbitrations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(12,597)</td>
</tr>
<tr>
<td>Unallocated cash flows from operating activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3,231</td>
</tr>
<tr>
<td><strong>Net cash flows from operating activities</strong></td>
<td><strong>70,601</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>491,482</strong></td>
</tr>
<tr>
<td>Material non-cash items included in segment results:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>491,482</td>
</tr>
<tr>
<td>Depreciation, depletion and amortisation</td>
<td>5,632</td>
<td>887</td>
<td>27,997</td>
<td>1,570</td>
<td>1,992</td>
<td>1,596</td>
<td>150</td>
<td>-</td>
<td>39,824</td>
</tr>
<tr>
<td>Net movement in provision for trade and other receivables and prepayments made and other current assets</td>
<td>1,591</td>
<td>(58)</td>
<td>-</td>
<td>11,173</td>
<td>(345)</td>
<td>68</td>
<td>(76)</td>
<td>-</td>
<td>12,333</td>
</tr>
<tr>
<td>Change in provisions</td>
<td>266</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>128</td>
<td>88</td>
<td>-</td>
<td>-</td>
<td>482</td>
</tr>
<tr>
<td>Net foreign exchange loss/(gain)</td>
<td>(74)</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(204)</td>
<td>-</td>
<td>(279)</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>13,661</td>
<td>381</td>
<td>1,695</td>
<td>145</td>
<td>86</td>
<td>987</td>
<td>40</td>
<td>-</td>
<td>16,999</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>93,083</td>
<td>27,684</td>
<td>174,092</td>
<td>18,342</td>
<td>162,062</td>
<td>14,309</td>
<td>2,110</td>
<td>-</td>
<td>491,482</td>
</tr>
<tr>
<td>Other segment assets</td>
<td>95,550</td>
<td>2,524</td>
<td>15,560</td>
<td>10,491</td>
<td>51</td>
<td>7,490</td>
<td>8,826</td>
<td>-</td>
<td>140,492</td>
</tr>
<tr>
<td>Indebtedness under the Gas Transit Arbitration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57,125</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,197</td>
</tr>
<tr>
<td>Cash and bank balances</td>
<td>23,093</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23,093</td>
</tr>
<tr>
<td>Unallocated assets</td>
<td>9,735</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9,735</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>723,124</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>723,124</strong></td>
</tr>
<tr>
<td>Segment liabilities</td>
<td>11,147</td>
<td>1,028</td>
<td>3,130</td>
<td>1,019</td>
<td>1,413</td>
<td>4,986</td>
<td>1,271</td>
<td>-</td>
<td>23,994</td>
</tr>
<tr>
<td>Borrowings</td>
<td>59,315</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>59,315</td>
</tr>
<tr>
<td>Portion of net profit attributable to the State Budget of Ukraine</td>
<td>29,498</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29,498</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>67,304</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>67,304</td>
</tr>
<tr>
<td>Indebtedness under the Gas Transit Arbitration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57,125</td>
</tr>
<tr>
<td>Unallocated liabilities</td>
<td>45,369</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45,369</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>282,605</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>282,605</strong></td>
</tr>
<tr>
<td>Net working capital</td>
<td>79,477</td>
<td>1,313</td>
<td>6,618</td>
<td>9,183</td>
<td>(1,389)</td>
<td>1,716</td>
<td>1,013</td>
<td></td>
<td>97,931</td>
</tr>
</tbody>
</table>
Transactions with related parties are performed on terms that would not necessarily be available to unrelated parties.

Transactions with state-controlled entities and institutions. The Group performs significant transactions with entities and institutions controlled, jointly controlled or significantly influenced by the Government of Ukraine. These entities and institutions include State Savings Bank of Ukraine, Ukreimonbank, Uergedbank, tax authorities, municipal heat generating entities, regional gas distribution entities and other entities.

For the year ended 31 December 2018, about 26% of the Group’s revenue (2017: 30%) was earned from transactions with the entities controlled, jointly controlled or influenced by the Government of Ukraine. Outstanding trade accounts receivable related to these transactions as at 31 December 2018 and 2017 were about 43% and 45%, respectively, of the total trade accounts receivable balance.

Outstanding accounts payable, advances and other current liabilities with related parties as at 31 December 2018 and 2017 were about 58% and 25%, respectively, of the total balance of these liabilities.

Provisions in respect of the entities controlled by the Government of Ukraine as at 31 December 2018 and 2017 were about 37% and 30%, respectively, of the total provisions. Additionally, the Group recognised provision in respect of the portion of net profit attributable to the State Budget of Ukraine (Note 12, 14).

As at 31 December 2018 and 2017, about 96% and 98%, respectively, of cash and bank balances were placed in the banks controlled, jointly controlled or influenced by the Government of Ukraine and about 76% of borrowings were provided by these banks (31 December 2017: 69%). About 75% of finance income for the year ended 31 December 2018 related to balances in these banks (2017: 55%) and about 97% of finance costs for the year ended 31 December 2018 (2017: 70%) related to borrowings from these banks.

Guarantees. Amount of guarantees, provided by the Government of Ukraine, as at 31 December 2018 and 2017, equalled to UAH 15,443 million and UAH 22,023 million, respectively (Note 13).

Transactions with the State are further disclosed in Note 12.

Key management remuneration. During 2018 and 2017, key management personnel consisted on average of 6 Executive Board members and 9 directors. Compensation to the key management personnel included into other operating expenses consists of salary and additional current bonuses and comprises UAH 717 million in 2018 (2017: UAH 214 million). During 2018 the Company also incurred UAH 53 million of expenses for the year as at 31 December 2018 related to balances in these banks.

4. BALANCES AND TRANSACTIONS WITH RELATED PARTIES

Parties are generally considered to be related if one party has the ability to control the other party, is under common control, or can exercise significant influence or joint control over the other party in making financial and operational decisions. In considering each possible related party relationship, attention is directed to the substance of the relationship, not merely the legal form.

As described in the Note 1, the Group is ultimately controlled by the Government of Ukraine, and therefore, all state-controlled entities and institutions are considered as related parties under common control.

5. PROPERTY, PLANT AND EQUIPMENT

Movements in the carrying amount of property, plant and equipment were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net book value at 31 December 2016</td>
<td>2,705</td>
<td>63,936</td>
</tr>
<tr>
<td>Cost or valuation</td>
<td>3,354</td>
<td>71,576</td>
</tr>
<tr>
<td>Accumulated depreciation and impairment</td>
<td>(649)</td>
<td>(7,640)</td>
</tr>
<tr>
<td>Additions and transfers</td>
<td>620</td>
<td>1,571</td>
</tr>
<tr>
<td>Revaluation</td>
<td>852</td>
<td>32,597</td>
</tr>
<tr>
<td>Disposals</td>
<td>(20)</td>
<td>(37)</td>
</tr>
<tr>
<td>Depreciation charge</td>
<td>(743)</td>
<td>(7,687)</td>
</tr>
<tr>
<td>Impairment</td>
<td>(85)</td>
<td>(33)</td>
</tr>
<tr>
<td>Net book value at 31 December 2017</td>
<td>3,329</td>
<td>94,487</td>
</tr>
<tr>
<td>Cost or valuation</td>
<td>3,329</td>
<td>68,354</td>
</tr>
<tr>
<td>Accumulated depreciation and impairment</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additions and transfers</td>
<td>1,921</td>
<td>12,249</td>
</tr>
<tr>
<td>Revaluation</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Disposals</td>
<td>(101)</td>
<td>(47)</td>
</tr>
<tr>
<td>Depreciation charge</td>
<td>(908)</td>
<td>(10,731)</td>
</tr>
<tr>
<td>Impairment</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Net book value at 31 December 2018</td>
<td>4,241</td>
<td>95,021</td>
</tr>
<tr>
<td>Cost or valuation</td>
<td>5,014</td>
<td>106,649</td>
</tr>
<tr>
<td>Accumulated depreciation and impairment</td>
<td>(773)</td>
<td>(11,628)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Movements in the carrying amount of property, plant and equipment</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net book value at 31 December 2016</td>
<td>2,705</td>
<td>63,936</td>
</tr>
<tr>
<td>Cost or valuation</td>
<td>3,354</td>
<td>71,576</td>
</tr>
<tr>
<td>Accumulated depreciation and impairment</td>
<td>(649)</td>
<td>(7,640)</td>
</tr>
<tr>
<td>Additions and transfers</td>
<td>620</td>
<td>1,571</td>
</tr>
<tr>
<td>Revaluation</td>
<td>852</td>
<td>32,597</td>
</tr>
<tr>
<td>Disposals</td>
<td>(20)</td>
<td>(37)</td>
</tr>
<tr>
<td>Depreciation charge</td>
<td>(743)</td>
<td>(7,687)</td>
</tr>
<tr>
<td>Impairment</td>
<td>(85)</td>
<td>(33)</td>
</tr>
<tr>
<td>Net book value at 31 December 2017</td>
<td>3,329</td>
<td>94,487</td>
</tr>
<tr>
<td>Cost or valuation</td>
<td>3,329</td>
<td>68,354</td>
</tr>
<tr>
<td>Accumulated depreciation and impairment</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Additions and transfers</td>
<td>1,921</td>
<td>12,249</td>
</tr>
<tr>
<td>Revaluation</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Disposals</td>
<td>(101)</td>
<td>(47)</td>
</tr>
<tr>
<td>Depreciation charge</td>
<td>(908)</td>
<td>(10,731)</td>
</tr>
<tr>
<td>Impairment</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Net book value at 31 December 2018</td>
<td>4,241</td>
<td>95,021</td>
</tr>
<tr>
<td>Cost or valuation</td>
<td>5,014</td>
<td>106,649</td>
</tr>
<tr>
<td>Accumulated depreciation and impairment</td>
<td>(773)</td>
<td>(11,628)</td>
</tr>
</tbody>
</table>
As at 31 December 2018, the Group has changed presentation of its property, plant and equipment from grouping by technical criteria to grouping by functions based on cash generated units. Management of the Group believes that such presentation provides more relevant and useful information for the users of the consolidated financial statements, as it presents additional information to the user about Group’s business structure and investment flows. Comparative information as at and for the year ended 31 December 2017 was restated to reflect the changes in presentation.

The Group engaged independent appraisers to determine the fair value of its major groups of property, plant and equipment as at 31 December 2017. The fair value was determined in accordance with International Valuation Standards. Taking into account the nature of the Group’s property, plant and equipment, fair value was determined using depreciated replacement cost for specialised assets, and using market-based evidence for non-specialised assets. The fair value of main producing properties and equipment was primarily determined using depreciated replacement cost. This method considers the cost to reproduce or replace the property, plant and equipment, adjusted for physical, functional and economic depreciation, and obsolescence. The depreciated replacement cost was estimated based on internal sources and analysis of available market information for similar property, plant and equipment (published information, catalogues, statistical data etc.), and information from industry experts and suppliers.

As at 31 December 2018, the Group has performed impairment test for certain cash generating units, using discounted cash flow method. Expected cash flows have been determined on the basis of forecasts and assumptions as of the date of these consolidated financial statements. Forecasts and assumptions were based on market information, historical data, macroeconomic expectations, forecasts for the subsequent activity of the cash generating units (Note 27).

As a result of this assessment, the management came to the conclusion that the recoverable value of “Gas transmission system” and “Oil transmission system” was lower than their carrying amount and, accordingly, recognised impairment of property, plant and equipment in amount of UAH 1,082 million in other operating expenses and in amount of UAH 74,931 million in other comprehensive loss.

Additionally, the Group recognised impairment loss in amount of UAH 371 million for other cash generating units, taking total impairment loss of property, plant and equipment in other operating expenses to UAH 1,453 million.

In 2018, the depreciation and depletion expenses of UAH 43,417 million (2017: UAH 49,144 million) was included in cost of sales, UAH 569 million (2017: UAH 604 million) in other operating expenses, UAH 955 million (2017: UAH 775 million) were capitalised in the cost of property, plant and equipment, and UAH 875 million were capitalised in cost of inventories (2017: UAH 1,085 million).

As at 31 December 2018 and 2017, the Group has pledged its property, plant and equipment in amount of UAH 1,239 million and UAH 2,682 million, respectively, to secure its borrowings (2017: UAH 1,085 million).

In 2018, the depreciation and depletion expenses of UAH 43,417 million (2017: UAH 49,144 million) was included in cost of sales, UAH 569 million (2017: UAH 604 million) in other operating expenses, UAH 955 million (2017: UAH 775 million) were capitalised in the cost of property, plant and equipment, and UAH 875 million were capitalised in cost of inventories (2017: UAH 1,085 million).

As at 31 December 2018, the Group has engaged independent appraisers to determine the fair value of its major groups of property, plant and equipment as at 31 December 2017. The fair value was determined in accordance with International Valuation Standards. Taking into account the nature of the Group’s property, plant and equipment, fair value was determined using depreciated replacement cost for specialised assets, and using market-based evidence for non-specialised assets. The fair value of main producing properties and equipment was primarily determined using depreciated replacement cost. This method considers the cost to reproduce or replace the property, plant and equipment, adjusted for physical, functional and economic depreciation, and obsolescence. The depreciated replacement cost was estimated based on internal sources and analysis of available market information for similar property, plant and equipment (published information, catalogues, statistical data etc.), and information from industry experts and suppliers.

As at 31 December 2018, the Group has performed impairment test for certain cash generating units, using discounted cash flow method. Expected cash flows have been determined on the basis of forecasts and assumptions as of the date of these consolidated financial statements. Forecasts and assumptions were based on market information, historical data, macroeconomic expectations, forecasts for the subsequent activity of the cash generating units (Note 27).

As a result of this assessment, the management came to the conclusion that the recoverable value of “Gas transmission system” and “Oil transmission system” was lower than their carrying amount and, accordingly, recognised impairment of property, plant and equipment in amount of UAH 1,082 million in other operating expenses and in amount of UAH 74,931 million in other comprehensive loss.

6. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES
Details of each of the Group’s associates and joint ventures as at 31 December 2018 are as follows:

<table>
<thead>
<tr>
<th>Name of associate/ joint ventures</th>
<th>Principal activity</th>
<th>Country</th>
<th>Place of incorporation and principal place of business</th>
<th>Proportion of ownership interest</th>
<th>Share of loss</th>
<th>Share of other income (loss)</th>
<th>Share of dividends received from the associate</th>
<th>Carrying amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Gaztransit” PJSC</td>
<td>Construction works</td>
<td>Ukraine</td>
<td></td>
<td>40.2%</td>
<td>(10)</td>
<td>(32)</td>
<td>895</td>
<td></td>
</tr>
<tr>
<td>“Ukrtransnafta” PJSC</td>
<td>Oil refinery</td>
<td>Ukraine</td>
<td></td>
<td>43.05%</td>
<td>(1,090)</td>
<td>1,431</td>
<td>341</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Miscellaneous</td>
<td>Ukraine</td>
<td></td>
<td></td>
<td>4 (216)</td>
<td>-</td>
<td>(29)</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1,316)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,399</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(29)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,255</td>
</tr>
</tbody>
</table>

Details of each of the Group’s associates and joint ventures as at 31 December 2017 are as follows:

<table>
<thead>
<tr>
<th>Name of associate/ joint ventures</th>
<th>Principal activity</th>
<th>Country</th>
<th>Place of incorporation and principal place of business</th>
<th>Proportion of ownership interest</th>
<th>Share of loss</th>
<th>Share of other income (loss)</th>
<th>Share of dividends received from the associate</th>
<th>Carrying amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Gaztransit” PJSC</td>
<td>Construction works</td>
<td>Ukraine</td>
<td></td>
<td>40.2%</td>
<td>(1)</td>
<td>(84)</td>
<td>937</td>
<td></td>
</tr>
<tr>
<td>“Ukrtransnafta” PJSC</td>
<td>Oil refinery</td>
<td>Ukraine</td>
<td></td>
<td>43.05%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Miscellaneous</td>
<td>Ukraine</td>
<td></td>
<td></td>
<td>(46)</td>
<td>-</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(47)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(84)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,197</td>
</tr>
</tbody>
</table>

All of the above associates are accounted for using the equity method in these consolidated financial statements.

The Group’s investments in associates and joint ventures were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments in associates</td>
<td>1,236</td>
<td>937</td>
</tr>
<tr>
<td>Investments in joint ventures</td>
<td>19</td>
<td>260</td>
</tr>
<tr>
<td>Total</td>
<td>1,255</td>
<td>1,197</td>
</tr>
</tbody>
</table>

7. OTHER NON-CURRENT ASSETS

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts receivable on product sharing agreement</td>
<td>4,793</td>
<td>4,866</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>2,751</td>
<td>2,318</td>
</tr>
<tr>
<td>Restructured accounts receivable of gas consumers</td>
<td>1,645</td>
<td>1,242</td>
</tr>
<tr>
<td>Other</td>
<td>3,545</td>
<td>3,463</td>
</tr>
<tr>
<td>Less: provision for impairment</td>
<td>(3,746)</td>
<td>(758)</td>
</tr>
<tr>
<td>Total</td>
<td>8,988</td>
<td>11,131</td>
</tr>
</tbody>
</table>
Accounts receivable on product sharing agreement. The Company entered into a concession agreement for hydrocarbon exploration and development with the Arab Republic of Egypt and Egyptian General Petroleum Corporation ("EGPC") on 13 December 2006. Under the terms of the concession agreement the Company has the right to recover all exploration and development costs incurred in connection with the concession agreement (Note 26). The amount presented in the table above represents such costs claimed by the Group for recovery, and which are expected to be refunded after one year since the reporting date.

As at 31 December 2018 the Company recognised an impairment loss in respect of accounts receivable on product sharing agreement and other non-current assets in other operating expenses amounting to UAH 3,069 million (Note 18).

Intangible assets. As at 31 December 2018 and 2017, included in intangible assets are licenses for exploration and extraction of oil and natural gas amounting to UAH 1,826 million and UAH 1,641 million, respectively.

Restructured accounts receivable of gas consumers. In May 2011, the Law of Ukraine "On certain matters on indebtedness for natural gas and electricity consumed" #3319-VI was approved. According to this Law, accounts receivable due from entities supplying natural gas under the regulated tariff that were originated in 2010, were restructured for the period from 1 to 20 years and are stated at amortised cost using effective interest rate which at the restructuring dates varied from 15% to 24% per annum.

In November 2016 the Law of Ukraine "On measures to settle the debts for the natural gas consumed by municipal heat generating entities and distribution and water supplying companies" #1730 was adopted (Note 2). According to this Law, accounts receivable due from municipal heat generating entities and distribution were restructured for 5 years and are stated at amortised cost using effective interest rate which at the restructuring dates varied from 13.5% to 16.4% per annum.

Other. As at 31 December 2018 and 2017, included in other non-current assets are research and development expenditures amounting to UAH 1,277 million and UAH 1,171 million, respectively, that were incurred within the concession agreement for oil exploration and development with the EGPC on 13 December 2006, but not yet claimed for recovery (Note 26).

Movements in provision for impairment of non-current accounts receivable were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1 January</td>
<td>758</td>
<td>714</td>
</tr>
<tr>
<td>Provision for impairment recognised during the year</td>
<td>3,069</td>
<td>25</td>
</tr>
<tr>
<td>Other movements</td>
<td>(81)</td>
<td>19</td>
</tr>
<tr>
<td>Balance at 31 December</td>
<td>3,746</td>
<td>758</td>
</tr>
</tbody>
</table>

Other movements in provision for impairment of non-current accounts receivable relate to reclassification of provision between current and non-current accounts receivable.

8. INVENTORIES

The Group’s inventories were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas</td>
<td>52,461</td>
<td>48,472</td>
</tr>
<tr>
<td>Crude oil and petroleum products</td>
<td>6,039</td>
<td>4,299</td>
</tr>
<tr>
<td>Spare parts</td>
<td>1,976</td>
<td>2,829</td>
</tr>
<tr>
<td>Oil for industrial and technological needs</td>
<td>1,829</td>
<td>1,954</td>
</tr>
<tr>
<td>Raw materials</td>
<td>1,627</td>
<td>1,500</td>
</tr>
<tr>
<td>Other</td>
<td>1,639</td>
<td>1,121</td>
</tr>
<tr>
<td>Total</td>
<td>65,571</td>
<td>60,175</td>
</tr>
</tbody>
</table>

Management estimates the necessity of write-down of inventories to their net realisable value taking into consideration indicators of economical and physical obsolescence. In 2018 write-down adjustment amounted to UAH 5,717 million was included in cost of sales and UAH 64 million was included in other operating expenses (2017: UAH 1,452 million included in cost of sales and UAH 451 million included in other operating expenses). Amount included in cost of sales represents write down adjustment to imported gas subsequently sold for households needs at regulated prices. As at 31 December 2018 and 2017, inventories with carrying amount of UAH 43,287 million and UAH 38,208 million, respectively, were pledged as collateral for borrowings (Note 13).

9. TRADE ACCOUNTS RECEIVABLE

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts receivable for natural gas</td>
<td>74,683</td>
<td>66,265</td>
</tr>
<tr>
<td>Accounts receivable for gas balancing services</td>
<td>34,009</td>
<td>20,033</td>
</tr>
<tr>
<td>Accounts receivable for crude oil</td>
<td>13,693</td>
<td>8,427</td>
</tr>
<tr>
<td>Accounts receivable for gas transportation services</td>
<td>9,036</td>
<td>9,360</td>
</tr>
<tr>
<td>Other accounts receivable</td>
<td>4,296</td>
<td>4,822</td>
</tr>
<tr>
<td>Less: provision for impairment</td>
<td>(69,775)</td>
<td>(49,919)</td>
</tr>
<tr>
<td>Total</td>
<td>65,942</td>
<td>58,988</td>
</tr>
</tbody>
</table>

Movements in provision for impairment of trade accounts receivable were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1 January</td>
<td>49,919</td>
<td>37,229</td>
</tr>
<tr>
<td>Effect of adoption of new standard (Note 28)</td>
<td>3,666</td>
<td>-</td>
</tr>
<tr>
<td>Provision for impairment recognised during the year</td>
<td>39,751</td>
<td>15,053</td>
</tr>
<tr>
<td>Reversal of provision for impairment</td>
<td>(23,469)</td>
<td>(2,480)</td>
</tr>
<tr>
<td>Amounts written off during the year as uncollectible</td>
<td>(138)</td>
<td>(11)</td>
</tr>
<tr>
<td>Other movements</td>
<td>46</td>
<td>128</td>
</tr>
<tr>
<td>Balance at 31 December</td>
<td>69,775</td>
<td>49,919</td>
</tr>
</tbody>
</table>

Increase in provision for impairment charged and reversed during the year ended 31 December 2018 is a result of Interantional Financial Reporting Standard 9 "Financial Instruments" adoption by the Group (Note 28).

Other movements in provision for impairment of trade accounts receivable relate to reclassification of provision between current and non-current accounts receivable and to difference in proportion of assets and profits consolidation related to joint ventures of one of the Group’s subsidiaries, recognised in equity movement.

Analysis of credit quality of trade accounts receivable is as follows:

<table>
<thead>
<tr>
<th>31 December 2018</th>
<th>In millions of Ukrainian hryvnias</th>
<th>Trade accounts receivable - days past due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not past due</td>
<td>1 - 90</td>
</tr>
<tr>
<td>Gross carrying amount</td>
<td>38,830</td>
<td>20,443</td>
</tr>
<tr>
<td>Provision for impairment</td>
<td>(3,226)</td>
<td>(3,377)</td>
</tr>
<tr>
<td>Expected credit loss rate, %</td>
<td>8%</td>
<td>17%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>31 December 2017</th>
<th>In millions of Ukrainian hryvnias</th>
<th>Trade accounts receivable - days past due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not past due</td>
<td>1 - 90</td>
</tr>
<tr>
<td>Gross carrying amount</td>
<td>27,333</td>
<td>22,527</td>
</tr>
<tr>
<td>Provision for impairment</td>
<td>(49,919)</td>
<td>-</td>
</tr>
</tbody>
</table>
10. PREPAYMENTS MADE AND OTHER CURRENT ASSETS
The Group’s prepayments made and other current assets were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepayments to suppliers for materials, works and services</td>
<td>10,549</td>
<td>10,834</td>
</tr>
<tr>
<td>VAT recoverable</td>
<td>1,950</td>
<td>2,175</td>
</tr>
<tr>
<td>Receivables under assignment agreements in respect of natural gas sales</td>
<td>1,618</td>
<td>1,637</td>
</tr>
<tr>
<td>Promissory notes receivable</td>
<td>1,436</td>
<td>1,468</td>
</tr>
<tr>
<td>Prepayments for pipelines construction</td>
<td>1,346</td>
<td>1,348</td>
</tr>
<tr>
<td>Taxes prepaid, other than income tax</td>
<td>876</td>
<td>8,935</td>
</tr>
<tr>
<td>Prepayments to suppliers for natural gas</td>
<td>109</td>
<td>649</td>
</tr>
<tr>
<td>Indebtedness under the Gas Transit Arbitration</td>
<td>-</td>
<td>57,125</td>
</tr>
<tr>
<td>Other</td>
<td>7,289</td>
<td>5,385</td>
</tr>
<tr>
<td>Less: provision for impairment</td>
<td>(18,285)</td>
<td>(18,109)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,888</strong></td>
<td><strong>71,247</strong></td>
</tr>
</tbody>
</table>

On 28 February 2018, the Arbitral Tribunal rendered the Final Award in the Gas Transit Arbitration, where, amongst other, supported respective request of the Company to receive a legal right to set off the amounts owing between the parties pursuant to the Gas Sales Arbitration and Gas Transit Arbitration. As a result, the Company has reflected such set-off at this date. Movements in the provision for impairment of prepayments made and other current assets were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1 January</td>
<td>18,309</td>
<td>18,962</td>
</tr>
<tr>
<td>Provision for impairment recognised during the year</td>
<td>179</td>
<td>116</td>
</tr>
<tr>
<td>Reversal of provision for impairment</td>
<td>(176)</td>
<td>(317)</td>
</tr>
<tr>
<td>Amounts written off during the year as uncollectible</td>
<td>(118)</td>
<td>(129)</td>
</tr>
<tr>
<td>Other movements</td>
<td>91</td>
<td>323</td>
</tr>
<tr>
<td><strong>Balance at 31 December</strong></td>
<td><strong>18,285</strong></td>
<td><strong>18,309</strong></td>
</tr>
</tbody>
</table>

Other movements in provision for impairment of prepayments made and other current assets relate to recalcification of provision between current and non-current accounts receivable and to difference in proportion of assets and profits consolidation related to joint ventures of one of the Group’s subsidiaries, recognised in equity movement.

11. CASH AND BANK BALANCES

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash in banks</td>
<td>12,421</td>
<td>22,895</td>
</tr>
<tr>
<td>Term deposits</td>
<td>1,465</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>338</td>
<td>198</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14,224</strong></td>
<td><strong>23,093</strong></td>
</tr>
</tbody>
</table>

As at 31 December 2018, included in term deposits are bank deposits amounting to UAH 1,145 million with original maturity of more than three months and less than one year, which are excluded from cash and cash equivalents for the purpose of cash flow statement.

As at 31 December 2018, the Group has pledged its term deposits with carrying amount of UAH 1,457 million to secure its borrowings (Note 13).

12. SHARE CAPITAL
As at 31 December 2018 and 2017, nominal amount of registered, issued and fully paid share capital of the Company was UAH 390,150 million, comprising 190,150,481 ordinary shares, with a par value of UAH 1,000 per share.

Also, as at 31 December 2018 and 2017, share capital of the Company has been adjusted for the effect of hyperinflation in accordance with IAS 29 “Financial Reporting in Hyperinflationary Economies” by UAH 4,157 million. Therefore the total amount of share capital of the Company as at 31 December 2018 and 2017 was UAH 194,307 million.

**Distribution of profits**
Profit available for distribution to the shareholders for each reporting period is determined by reference to the stand alone financial statements of the Company prepared in accordance with International Financial Reporting Standards. Under Ukrainian legislation, the amount of dividends is limited to net profit of the reporting period or other distributable reserves but not more than retained earnings as per the stand alone financial statements prepared in accordance with International Financial Reporting Standards.

According to the Resolutions of the Cabinet of Ministers of Ukraine #384-p dated 25 April 2018 and #535-p dated 26 July 2018, 75% of the net profit of the Company for 2017 amounting to UAH 29,498 million was paid as dividends due to the State Budget of Ukraine.

Additionally, certain subsidiaries paid UAH 38 million as profit share payable to the State Budget of Ukraine during 2018.

According to the Law of Ukraine “On Management of State Property Objects” #185-V dated 21 September 2006, entities where the State holds stakes should distribute at least 30% of their net profits as dividends attributable to the State Budget of Ukraine by 1 May of the year following the reporting year. The Company has accrued a provision in amount of UAH 4,084 million in respect of the portion of net profit attributable to the State Budget of Ukraine in current provisions (Note 14). According to the Ukrainian legislation, the Company has to make a decision in respect of profit distribution up to 30 April, and make payment to the State Budget of Ukraine up to 30 June of the year following the reporting year.

13. BORROWINGS
The Group’s borrowings were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-current</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank borrowings</td>
<td>11,425</td>
<td>14,927</td>
</tr>
<tr>
<td>Unamortised discount</td>
<td>(126)</td>
<td>(191)</td>
</tr>
<tr>
<td><strong>Total non-current portion</strong></td>
<td><strong>11,299</strong></td>
<td><strong>14,736</strong></td>
</tr>
<tr>
<td><strong>Current</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank borrowings</td>
<td>44,153</td>
<td>43,993</td>
</tr>
<tr>
<td>Interest accrued</td>
<td>547</td>
<td>586</td>
</tr>
<tr>
<td><strong>Total current portion</strong></td>
<td><strong>44,700</strong></td>
<td><strong>44,579</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55,999</strong></td>
<td><strong>59,315</strong></td>
</tr>
</tbody>
</table>

In 2018 the Group has concluded additional agreements with state-owned banks in respect of interest rates change and changes to the borrowings repayment schedules prolonging their maturities up to 2019. International Bank for Reconstruction and Development waived that the Company makes a payment that is due in December 2018 of EUR 79 million on 31 March 2019. The management has analysed impact of these changes and concluded that they do not represent significant changes to the financial liabilities.

The effective interest rates and currency denomination of borrowings were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Balance</strong></td>
<td><strong>% per annum</strong></td>
<td><strong>Balance</strong></td>
</tr>
<tr>
<td>UAH</td>
<td>24,815</td>
<td>20%</td>
</tr>
<tr>
<td>USD</td>
<td>17,829</td>
<td>8%</td>
</tr>
<tr>
<td>EUR</td>
<td>12,335</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55,999</strong></td>
<td><strong>59,315</strong></td>
</tr>
</tbody>
</table>
Pledges

All the Group’s borrowings were secured as at 31 December 2018 and 2017.

The Group’s borrowings were secured by the following pledges:

<table>
<thead>
<tr>
<th>Pledges</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proceeds from future sales</td>
<td>28,229</td>
<td>43,393</td>
</tr>
<tr>
<td>Inventories (Note 8)</td>
<td>43,287</td>
<td>38,208</td>
</tr>
<tr>
<td>Cash and bank balances (Note 11)</td>
<td>1,457</td>
<td>-</td>
</tr>
<tr>
<td>Property, plant and equipment (Note 5)</td>
<td>1,239</td>
<td>2,682</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>74,212</td>
<td>84,283</td>
</tr>
</tbody>
</table>

Guarantees. As at 31 December 2018, the Group’s borrowings in the amount of UAH 15,443 million were guaranteed by the State (31 December 2017: UAH 22,023 million).

Reconciliation of financial liabilities from financing activities

In millions of Ukrainian hryvnias

<table>
<thead>
<tr>
<th></th>
<th>1 January 2017</th>
<th>Net cash flows from financing activities</th>
<th>Non-cash transactions</th>
<th>Interest expense (Note 19)</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank borrowings</td>
<td>66,044</td>
<td>(38,627)</td>
<td>25,069</td>
<td>6,829</td>
<td>59,315</td>
</tr>
<tr>
<td>Bonds</td>
<td>4,800</td>
<td>(5,279)</td>
<td>-</td>
<td>479</td>
<td>59,315</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70,844</td>
<td>(43,906)</td>
<td>25,069</td>
<td>7,308</td>
<td>59,315</td>
</tr>
</tbody>
</table>

Non-cash transactions relate to payment for the natural gas acquired by a lending bank and foreign exchange differences.

14. PROVISIONS

Movements in provisions for the years ended 31 December 2018 and 2017 were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>In millions of Ukrainian hryvnias</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provisions for Litigations</td>
<td>11,844</td>
<td>4,510</td>
</tr>
<tr>
<td>Employee benefit obligations</td>
<td>1,771</td>
<td>1,154</td>
</tr>
<tr>
<td>Decommissioning provisions</td>
<td>-</td>
<td>29,264</td>
</tr>
<tr>
<td>Provision for fines and penalties</td>
<td>-</td>
<td>13,264</td>
</tr>
<tr>
<td>Portion of net profit attributable to the State Budget (Note 32)</td>
<td>-</td>
<td>989</td>
</tr>
<tr>
<td>Other provisions</td>
<td>-</td>
<td>43,320</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15,254</td>
<td>48,015</td>
</tr>
</tbody>
</table>

Provisions for Litigations

The Group is involved into a number of litigations both as a plaintiff and as a defendant. Provision for litigations represents management assessment of the probable outflow of the Group’s resources arising from an adverse outcome of the court and arbitration procedures.

In 2017 provision for litigations amounting to UAH 7,300 million was reversed after the court decision was received in favour of the Company.

Employee Benefit Obligations

The Group companies have certain obligations to its employees according to the collective agreements.

Current provisions for employee benefits include provision for performance bonuses and provision for employees’ unused vacations. Non-current provisions for employee benefits include lump sum benefits payable upon retirement and post-retirement benefit programs. These benefits plans are not funded, and there are no plan assets.

The principal actuarial assumptions used were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal discount rate, %</td>
<td>14.0-14.4</td>
<td>14.5-14.6</td>
</tr>
<tr>
<td>Long-term inflation, %</td>
<td>6.5</td>
<td>6.7</td>
</tr>
<tr>
<td>Nominal salary increase rate, %</td>
<td>10.0-20.6</td>
<td>10.0-16.0</td>
</tr>
<tr>
<td>Staff turnover ratio, %</td>
<td>1.4-6.7</td>
<td>1.5-5.3</td>
</tr>
</tbody>
</table>

The sensitivity of the non-current employee benefit obligations to changes in the principal assumptions is as follows:
The sensitivity analysis presented above may not be representative of the actual change in the non-current employee benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

Furthermore, in presenting the above sensitivity analysis, the present value of the employee benefit obligations has been calculated using the projected unit credit method at the end of the reporting period, which is the same as that applied in calculating the obligation recognised in the consolidated statement of financial position.

There were no changes in the methods and assumptions used in preparing the sensitivity analysis from prior years.

Provision for fines and penalties

In accordance with the legislation requirements, the Group is obliged to restore the lands that underwent changes in the relief structure, environmental state of soils and parent rocks, as well as hydrological regime due to drilling, geological survey, constructing and other works. The decommissioning provision represents present value of decommissioning costs relating to oil and gas properties.

Decommissioning Provision

In accordance with the legislation requirements, the Group is obliged to restore the lands that underwent changes in the relief structure, environmental state of soils and parent rocks, as well as hydrological regime due to drilling, geological survey, constructing and other works. The decommissioning provision represents present value of decommissioning costs relating to oil and gas properties.

15. ADVANCES RECEIVED AND OTHER CURRENT LIABILITIES

The Group's advances received and other current liabilities were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advances for natural gas</td>
<td>1,560</td>
<td>1,461</td>
</tr>
<tr>
<td>Advances for natural gas transportation</td>
<td>338</td>
<td>448</td>
</tr>
<tr>
<td>Advances for oil transportation</td>
<td>302</td>
<td>301</td>
</tr>
<tr>
<td>Advances received for geophysical surveys</td>
<td>213</td>
<td>237</td>
</tr>
<tr>
<td>Advances for petroleum products</td>
<td>206</td>
<td>149</td>
</tr>
<tr>
<td>Other advances received</td>
<td>136</td>
<td>85</td>
</tr>
<tr>
<td>Total advances received</td>
<td>2,755</td>
<td>2,681</td>
</tr>
<tr>
<td>Taxes payable other than income tax</td>
<td>10,900</td>
<td>10,347</td>
</tr>
<tr>
<td>Liabilities for purchase of property, plant and equipment</td>
<td>4,178</td>
<td>2,002</td>
</tr>
<tr>
<td>VAT payable</td>
<td>2,350</td>
<td>4,138</td>
</tr>
<tr>
<td>Wages, salaries and related social charges payable</td>
<td>726</td>
<td>348</td>
</tr>
<tr>
<td>Dividends payable to non-controlling shareholders of “Ukrnafta” PSC</td>
<td>431</td>
<td>475</td>
</tr>
<tr>
<td>Recognised liabilities for litigations</td>
<td>57</td>
<td>47</td>
</tr>
<tr>
<td>Indebtedness according to the Gas Sales Arbitration</td>
<td>57,125</td>
<td>57,125</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>1,872</td>
<td>1,445</td>
</tr>
<tr>
<td>Total other current liabilities</td>
<td>20,514</td>
<td>75,927</td>
</tr>
<tr>
<td>Total</td>
<td>23,269</td>
<td>78,608</td>
</tr>
</tbody>
</table>

As at 31 December 2018, taxes payable other than income tax included UAH 10,629 million of subsoil royalty payable (31 December 2017: UAH 10,128 million).

16. COST OF SALES

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of gas supplied</td>
<td>61,172</td>
<td>52,527</td>
</tr>
<tr>
<td>Depreciation, depletion and amortisation</td>
<td>43,519</td>
<td>39,191</td>
</tr>
<tr>
<td>Subsoil royalty and other taxes other than on income</td>
<td>32,354</td>
<td>24,999</td>
</tr>
<tr>
<td>Non-refundable VAT on gas transit via Ukraine in customs regime</td>
<td>14,644</td>
<td>14,788</td>
</tr>
<tr>
<td>Cost of purchased oil and petroleum products</td>
<td>9,006</td>
<td>8,782</td>
</tr>
<tr>
<td>Staff costs and related social charges</td>
<td>7,238</td>
<td>7,781</td>
</tr>
<tr>
<td>Repair and maintenance costs</td>
<td>1,249</td>
<td>851</td>
</tr>
<tr>
<td>Oil and gas transportation costs</td>
<td>185</td>
<td>407</td>
</tr>
<tr>
<td>Other</td>
<td>9,462</td>
<td>7,811</td>
</tr>
<tr>
<td>Total</td>
<td>178,829</td>
<td>157,147</td>
</tr>
</tbody>
</table>

Subsoil royalty and rent tax are calculated with reference to the volume of crude oil, gas condensate or natural gas produced, and volume of crude oil transportation.

17. OTHER OPERATING INCOME

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fines and penalties received</td>
<td>1,454</td>
<td>259</td>
</tr>
<tr>
<td>Income from sale of inventories and other current assets</td>
<td>1,279</td>
<td>1,594</td>
</tr>
<tr>
<td>Change in provisions for litigations and other provisions (Note 14)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>1,908</td>
<td>452</td>
</tr>
<tr>
<td>Total</td>
<td>4,641</td>
<td>5,092</td>
</tr>
</tbody>
</table>

18. OTHER OPERATING EXPENSES

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net movement in provision for trade accounts receivable, prepayments made and other assets and direct write-offs</td>
<td>19,361</td>
<td>12,353</td>
</tr>
<tr>
<td>Change in provisions for litigations and other provisions (Note 14)</td>
<td>14,530</td>
<td>-</td>
</tr>
<tr>
<td>Staff costs and related social charges</td>
<td>7,865</td>
<td>5,227</td>
</tr>
<tr>
<td>Non-refundable VAT recognised according to the Gas Transit Arbitration (Note 22)</td>
<td>4,751</td>
<td>-</td>
</tr>
<tr>
<td>Impairment of property, plant and equipment and intangible assets</td>
<td>1,466</td>
<td>3,399</td>
</tr>
<tr>
<td>Professional fees</td>
<td>1,284</td>
<td>716</td>
</tr>
<tr>
<td>Fines and penalties</td>
<td>1,052</td>
<td>1,356</td>
</tr>
<tr>
<td>Research, development and exploration costs</td>
<td>942</td>
<td>387</td>
</tr>
<tr>
<td>Depreciation and amortisation</td>
<td>641</td>
<td>633</td>
</tr>
<tr>
<td>Transportation costs</td>
<td>331</td>
<td>449</td>
</tr>
<tr>
<td>Write down of inventories to net realisable value</td>
<td>64</td>
<td>451</td>
</tr>
<tr>
<td>Other</td>
<td>3,440</td>
<td>2,504</td>
</tr>
<tr>
<td>Total</td>
<td>55,727</td>
<td>27,475</td>
</tr>
</tbody>
</table>

Additionally to the audit fees related to the compulsory audit as included to the professional fees, are other audit fees for 2018 amounting to UAH 15 million.
Reconciliation between the expected and the actual taxation charge is provided below:

The Group is subject to taxation in Ukraine. In 2018 and 2017, Ukrainian corporate income tax was levied on taxable income less

FINANCE INCOME

19. FINANCE COSTS

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest expense on bank borrowings (Note 13)</td>
<td>5,016</td>
<td>7,308</td>
</tr>
<tr>
<td>Unwinding of discount on employee benefit obligations (Note 14)</td>
<td>597</td>
<td>521</td>
</tr>
<tr>
<td>Unwinding of discount of decommissioning provision (Note 14)</td>
<td>224</td>
<td>152</td>
</tr>
<tr>
<td>Other</td>
<td>364</td>
<td>321</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,201</strong></td>
<td><strong>8,302</strong></td>
</tr>
</tbody>
</table>

20. FINANCE INCOME

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest income on bank deposits and bank balances</td>
<td>1,691</td>
<td>1,244</td>
</tr>
<tr>
<td>Unwinding of discount on long-term accounts receivable</td>
<td>192</td>
<td>213</td>
</tr>
<tr>
<td>Other</td>
<td>245</td>
<td>141</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,128</strong></td>
<td><strong>1,598</strong></td>
</tr>
</tbody>
</table>

21. INCOME TAX

The components of income tax expense for the years ended 31 December were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current tax expense</td>
<td>19,535</td>
<td>22,426</td>
</tr>
<tr>
<td>Deferred tax benefit</td>
<td>(10,565)</td>
<td>(9,124)</td>
</tr>
<tr>
<td><strong>Income tax expenses</strong></td>
<td><strong>8,970</strong></td>
<td><strong>13,302</strong></td>
</tr>
</tbody>
</table>

The Group is subject to taxation in Ukraine. In 2018 and 2017, Ukrainian corporate income tax was levied on taxable income less allowable expenses at the rate of 18%.

Reconciliation between the expected and the actual taxation charge is provided below:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit before income tax</td>
<td>20,537</td>
<td>52,751</td>
</tr>
<tr>
<td>Income tax at statutory rate of 18%</td>
<td>3,697</td>
<td>9,495</td>
</tr>
</tbody>
</table>
| Tax effect of items not deductible or taxable for taxation purposes:  
  - Non-deductible expenses         | 5,375      | 2,964      |
  - Non-taxable income              | (188)      | (1,895)    |
| Change in unrecognised deferred tax asset | 86        | 2,738      |
| **Income tax expenses**           | **8,970**  | **13,302** |

The Parent and its subsidiaries are separate tax payers and, therefore, their deferred tax assets and liabilities are presented on an individual basis. The deferred tax liabilities and assets reflected in the consolidated statement of financial position after appropriate set off are as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred tax assets</td>
<td>5,119</td>
<td>4,204</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>(50,544)</td>
<td>(67,304)</td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td><strong>(45,425)</strong></td>
<td><strong>(63,100)</strong></td>
</tr>
</tbody>
</table>

Net deferred tax liabilities as at 31 December 2018 related to the following:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2017</th>
<th>Recognised in profit or loss</th>
<th>Recognised in other comprehensive income</th>
<th>31 December 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>(70,334)</td>
<td>7,704</td>
<td>7,110 (55,520)</td>
<td></td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>364</td>
<td>22</td>
<td>386</td>
<td></td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>57</td>
<td>28</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Provisions</td>
<td>4,613</td>
<td>1,587</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>1,675</td>
<td>185</td>
<td>1,860</td>
<td></td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>526</td>
<td>38</td>
<td>564</td>
<td></td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>(1)</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td><strong>(63,100)</strong></td>
<td><strong>10,565</strong></td>
<td>7,110 (45,425)</td>
<td></td>
</tr>
</tbody>
</table>

Net deferred tax liabilities as at 31 December 2017 related to the following:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>Recognised in profit or loss</th>
<th>Recognised in other comprehensive income</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>(84,890)</td>
<td>9,068</td>
<td>5,488 (70,334)</td>
<td></td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>300</td>
<td>64</td>
<td>364</td>
<td></td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>-</td>
<td>57</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Provisions</td>
<td>3,588</td>
<td>933</td>
<td>92 4,613</td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>125</td>
<td>1,950</td>
<td>1,675</td>
<td></td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>418</td>
<td>108</td>
<td>526</td>
<td></td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>27</td>
<td>(27)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>(2)</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Unused tax losses</td>
<td>2,630</td>
<td>(2,630)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td><strong>(77,804)</strong></td>
<td><strong>9,124</strong></td>
<td>5,580 (63,100)</td>
<td></td>
</tr>
</tbody>
</table>

As at 31 December 2018 and 2017, unrecognised deductible temporary differences and unused tax losses are as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisions</td>
<td>45,529</td>
<td>45,529</td>
</tr>
<tr>
<td>Trade accounts receivable, prepayments made and other current assets</td>
<td>14,387</td>
<td>14,387</td>
</tr>
<tr>
<td>Inventories</td>
<td>5,327</td>
<td>5,327</td>
</tr>
<tr>
<td>Tax losses carried forward</td>
<td>1,204</td>
<td>628</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>72,347</strong></td>
<td><strong>69,771</strong></td>
</tr>
</tbody>
</table>

22. CONTINGENCIES, COMMITMENTS AND OPERATING RISKS

Tax legislation. Ukraine’s tax environment is characterised by complexity in tax administering, arbitrary interpretation by tax authorities of tax laws and regulations that, inter alia, can increase fiscal pressure on tax payers. Inconsistent application, interpretation, and enforcement of tax laws can lead to litigation which, as a consequence, may result in the imposition of additional taxes, penalties, and interest, and these amounts could be material.

Management believes that the Group has been in compliance with all requirements of the effective tax legislation. In the ordinary course of business the Group is engaged in transactions that may be interpreted differently by the Group and tax authorities. Where the risk of outflow of financial resources associated with this is deemed to be probable and the amount is measured with sufficient reliability, the Group provides for those liabilities. Where management of the Group estimates the risk of financial resources outflow as possible, the Group makes a disclosure of these contingent liabilities.

As at 31 December 2018, management estimated possible tax exposures in total amount of UAH 13,516 million (31 December 2017: UAH 6,374 million).

Management believes that it is not likely that any significant settlement will arise from the above cases and, therefore, the Group’s consolidated financial statements do not include any
of gas transit (underdeliveries) during 2018. As a result, the Tribunal awarded USD 4,674 million to be paid in favour of Naftogaz by Gazprom as a compensation of losses in this respect. Further, the Tribunal performed a set-off in respect of amounts owing between the parties pursuant to the Gas Sales Arbitration and Gas Transit Arbitration, supporting a respective Naftogaz request. Consequently, the Tribunal ordered a single amount of USD 2,560 million payable by Gazprom in favour of Naftogaz. This amount also bears a late payment interest. At 31 December 2018, amount due from Gazprom after the set-off comprises USD 2,721 million including interest.

There was no settlement of this amount performed by the date of these consolidated financial statements. Taking that Gazprom has appealed the final award in the Gas Transit Arbitration, and the fact that the amount was not settled by the date of these consolidated financial statements, management follows a prudent approach and does not recognise the amount owed by Gazprom after the set-off, as decided by the Tribunal, as receivable as at 31 December 2018 and 2017.

Despite the fact that the Tribunal has rejected Naftogaz’s claim on reimbursement of VAT payable on compensation of losses for under deliveries after 1 January 2016 in the Gas Transit Arbitration, Naftogaz treats the amount awarded as a contractual service price adjustment that is subject to VAT under the Tax Code of Ukraine. As a result, Naftogaz has recognised respective VAT liabilities amounting to UAH 4,751 million in March 2018, which were paid by 30 April 2018.

Additionally, according to the Final Award of the Tribunal in the Gas Transit Arbitration rendered on 22 December 2017, Gazprom is obliged to resume gas supplies to Naftogaz according to the effective Gas Sales Contract for 2009-2019 as amended by the Final Award. Following the Final Award in this case, in February 2018 Naftogaz made a prepayment of USD 128 million for gas deliveries to be made in March 2018. However, Gazprom returned this payment and refused to make gas supplies in March 2018. There were no gas supplies during 2018 from Gazprom to the Company up to the date of these consolidated financial statements. Such actions from Gazprom currently prevent Naftogaz from fulfilling the Final Award requirements in respect of off-setting minimum annual quantities according to Gas Sales Contract in 2018. As stated above, after both Final Awards were rendered, Gazprom repudiated the agreements and refused to resume the deliveries to Ukraine as ordered by the Tribunal in the Gas Sales Arbitration. Additionally, Gazprom refused to confirm its intention to settle outstanding amount as decided by the Tribunal in the Gas Transit Arbitration. Instead, on 20 April 2018 Gazprom filed a Request for Arbitration to the Arbitration Institute of the Stockholm Chamber of Commerce seeking revision or, alternatively, setting aside of the specific provisions of the Gas Transit and Gas Sales Contracts effective for 2009-2019 because of alleged imbalance between the parties’ obligations under the Contract following Final Awards in both Gas Transit and Gas Sales Arbitration.

Naftogaz rejected Gazprom’s claims and presented its counterclaims, the monetary value of which should be specified later. Naftogaz is also taking measures to enforce the Final Award in the Gas Transit Arbitration.

Naftogaz has also brought a challenge against the separate award on reimbursement of losses for gas supplies during 2018 from Gazprom in the Gas Sales Arbitration and the Final Award in Gas Transit Arbitration. Based on the final awards and in view of the Gazprom’s failure to comply with the awards, Naftogaz has filed a claim to the Permanent Court of Arbitration in The Hague to settle the difference between Gazprom’s assets in several jurisdictions, including the shares of Naftogaz’s subsidiaries or Nord Stream AG and Nord Stream 2 AG in Switzerland.

Additionally, on 6 July 2018, Naftogaz submitted a Request for Arbitration to the Arbitration Institute of the Stockholm Chamber of Commerce seeking for tariff revision in the Gas Transit Contract for the period 2009-2019. Preliminary monetary claim is estimated at USD 11,580 million. Gazprom has submitted its answer on 14 August 2018, rejecting Naftogaz’s claim. Upon request from Gazprom, on 6 September 2018 the Stockholm Chamber of Commerce Board made a decision to consider the case both in arbitral and administrative arbitration case. According to the agreed procedural schedule, the final award in the case shall be rendered by 1 November 2021.

Claim to the Russian Federation regarding assets in Crimea. In October 2016, Naftogaz and its subsidiaries initiated arbitral proceedings against the Russian Federation seeking for reimbursement of losses caused by unlawful expropriation of Group’s assets in Crimea by the Russian Federation. This arbitral proceeding was initiated under the Agreement between the Government of Ukraine and the Government of the Russian Federation on mutual encouragement and protection of investments. On 15 September 2017, Naftogaz and its subsidiaries submitted the Statement of Claim to the Tribunal under the auspices of the Permanent Court of Arbitration in The Hague to settle the difference between Gazprom and Naftogaz on compensation of losses in this respect.

On 22 February 2019, the Tribunal issued Final Award on jurisdiction and responsibility in favour of the Group. The Tribunal acknowledged its jurisdiction over the claims and ruled that the Russian Federation is responsible for violation of the particular articles of the Agreement between the Cabinet of Ministers of Ukraine and the Government of the Russian Federation on mutual encouragement and protection of investments, including article on prohibition of expropriation.

Legal proceedings. In the normal course of business, the Group is subject to claims. Where the risk of outflow of financial resources associated with such claims is considered to be significant, a respective liability is recognised as a component of provision for litigations (Note 14). Where such risk cannot be measured reliably, no provision is recognised, and respective amount is disclosed in the consolidated financial statements. Management believes that it has provided for all material losses in these consolidated financial statements. Joint operations with Misen Enterprises AB and “Karpoytgas” LLC. As a part of determining the validity of the joint arrangement, in July 2016, the Group initiated legal proceedings in the Stockholm Arbitration on termination or recognition as invalid of this agreement. In July 2018, the Arbitration Institute of the Stockholm Chamber of Commerce has issued the Final Award on property termination of the joint arrangement agreement. The Arbitral Tribunal found that the Final Award agreement had been violated by both Misen Enterprises AB and “Karpoytgas” LLC and is therefore terminated due to the change in circumstances and impossibility to continue the joint operation arrangement.

Dispute with the non-controlling shareholders of “Ukrnafta” PSC (“Ukrnafta”) signified a shareholders agreement dispute that included, among other, the setting procedure of electing the Chairman of the Board, appointment of the Executive board and the Supervisory board members. Under the shareholders agreement the Chairman of the Board is to be selected from among the candidates nominated by the non-controlling shareholders, 6 of 11 Ukrnafta Supervisory board members, including Chairman, are to be nominated by Naftogaz, and remaining 5 members by the non-controlling shareholders. Under the shareholders agreement, any dispute arising in connection with it is to be resolved exclusively by the London Court of International Arbitration and the shareholders agreement is governed by the English law.

In April 2018 Tribunal rendered the Partial Final Award by which it (i) acknowledged its jurisdiction over the class of claims that included, among other, specific provisions of the shareholders agreement are unenforceable as a matter of law, (ii) makes a provisional ruling that estimates the risk of outflow of financial resources associated with such claims as possible but such outflow cannot be measured reliably, no provision is recognised, and respective amount is disclosed in the consolidated financial statements. Management believes that it has provided for all material losses in these consolidated financial statements.

Uncertainty as to the ability of “Ukrnafta” PSC to continue as a going concern. Following adoption of the State Budget of Ukraine 2018 (31 December 2017: UAH 28,553 million) as at 31 December 2018 (31 December 2017: UAH 26,920 million), limited ability to collect accounts receivable and recover prepayments made to suppliers with gross amount of UAH 29,374 million as at 31 December 2018 (31 December 2017: UAH 22,525 million), Ukrnafta had insufficient funds to settle its tax payments as they fall due. Consequently, as at 31 December 2018 and 2017 Ukrnafta had insufficient funds to meet its tax liabilities and settle its tax payments as they fall due. If Ukrnafta fails to restructure or otherwise ensure settlement of overdue accounts receivable, prepayments made, extend production licenses and perform other measures to minimise amount of net current liabilities, Ukrnafta will be unable to meet its obligations and face insufficiencies to settle accumulated tax liabilities in the short run, and this will lead to a change in classification of the Group in the key assumption concern, including negotiations in respect of export operations or partial sale of assets.

Despite the material uncertainties described above, the Group estimates amount Ukrnafta’s positive financial results for the years 2018 and 2017 and management actions taken in improving its liquidity, production and sales activities, management of the Group believes that application of the going concern assumption is appropriate for the purpose of these consolidated financial statements.

Possible transfer of the Company’s equity interest in the subsidiaries to the State. In 1998, upon creation of the Company, the Government of Ukraine contributed shares of joint stock companies to the share capital of the Company, including “Long-Distance Pipelines “Druzhba” JSC and “Ukrnafta” PSC (hereinafter “Ukrnafta” PSC). (that were subsequently contributed to “Ukrtransnafta” JSC share capital). “Ukrnafta” PSC, “Chornomornaftogaz” SE, “Ukrnafta” OSIC and fifty four regional gas distribution companies of Ukraine may decide to transfer shares (stakes) or ownership or control over all or part of the Company’s equity interest in those joint stock companies and/ or companies, and those actions could have a material adverse effect on the Company’s operations.

State property not subject to privatisation. In 1998, the Company entered into an agreement “On use of the State property not subject to privatization” (“Agreement”) with the State Property Fund of Ukraine, and received oil and gas transportation system into the operational control. The Agreement was signed for one year, and its term is to be renewed yearly for one year, unless terminated by notice from either party, and is binding on the legal successors. According to the Agreement, the state property not subject to privatization forms an essential part of the Group’s business, the future operation of which is essential for the Group. The Group’s management believes that the Group will
continue to operate with this property in the foreseeable future.

Pursuant to the Agreement, the Company is required, inter alia, to handle oil and gas transmission and distribution pipelines owned by the State of Ukraine, keep the state property in adequate operational condition, and transfer 50% share of profits received from using those assets to the State. The amount of such transfer could be reduced by the amount of capital investments in those assets. The Agreement does not provide a mechanism of such calculations, and historically there were no payments from the Company to the State in respect of using such

### 23. FINANCIAL RISK MANAGEMENT

The Group is exposed to a variety of financial risks: market risk (including currency risk and interest rate risk), concentration risk (Note 3), credit risk and liquidity risk. According to its risk management policy the Group identifies, assessed and develops actions to minimise the potential adverse effects on the Group's financial performance for those risks.

#### Market risk

The Group is exposed to market risks. Market risks arise from the Group's foreign currency positions, and include:

- (a) foreign currencies,
- (b) interest bearing assets and liabilities,
- (c) assets and liabilities that are open positions in foreign currencies.

The Group does not currently hold any collateral as a security for its credit risks related to financial assets, except for guarantees received in respect of restructured accounts receivable of gas consumers within the scope of the Law of Ukraine.

#### Currency risk

The Group operates within Ukraine and its exposure to foreign currency risk is determined mainly by purchases of natural gas from foreign suppliers, which are denominated in USD. The Group also receives borrowings in foreign currencies. The Group does not hedge its foreign currency positions.

The Group's exposure to foreign currency risk is as follows, based on carrying amounts of respective currency assets and liabilities:

#### Credit risk

The Group is exposed to credit risk, which is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. Exposure to credit risk arises as a result of the Group's sales of products on credit terms and other transactions with counterparties giving rise to financial assets. The Group's policy is that the customers that wish to pay on credit terms are subject to the solvency check. Significant outstanding balances are also reviewed on an ongoing basis. At the same time, the Group must follow the state regulations within public service obligations in respect of gas sales to certain gas market participants (respective of whether they are delinquent or not).

The Group makes a provision for impairment that represents its estimate of incurred losses in respect of trade accounts receivable. The maximum exposure to credit risk as at 31 December 2018 is UAH 87,287 million (31 December 2017: UAH 91,321 million).

The following table presents credit quality analysis for cash and cash equivalents and short-term financial assets.

#### Interest rate risk

The Group determines other price risk as risk of possible future losses as a result of price volatility during purchase and sale transactions. Both volatility in gas prices at the European gas hubs that impacts gas purchase prices, and gas sale and supply to customers at prices set by the NCREU within PSD imposed on the Company (Note 2) expose the Group to the price risk. To manage this risk and offset its negative impact on the Group's financial position, the Group, amongst other measures, is actively taking part in gas market reform in Ukraine and introduce the principle of free pricing for all groups of customers. In gas supply for groups of customers at prices established independently by Naftogaz on a monthly basis price risk is not considered to be significant.

Credit risk. The Group is exposed to credit risk, which is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. Exposure to credit risk arises as a result of the Group’s sales of products on...
The maturity analysis of financial liabilities as at 31 December 2017 was as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Up to 6 months</th>
<th>6-12 months</th>
<th>1-2 years</th>
<th>2-5 years</th>
<th>Over 5 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowings</td>
<td>31,432</td>
<td>19,792</td>
<td>8,627</td>
<td>230</td>
<td>-</td>
<td>60,081</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>5,498</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5,500</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>5,420</td>
<td>21</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,441</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>2</td>
<td>21</td>
<td>271</td>
<td>-</td>
<td>-</td>
<td>295</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42,352</strong></td>
<td><strong>19,813</strong></td>
<td><strong>8,648</strong></td>
<td><strong>502</strong></td>
<td><strong>2</strong></td>
<td><strong>71,317</strong></td>
</tr>
</tbody>
</table>

The maturity analysis of financial liabilities as at 31 December 2017 was as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Up to 6 months</th>
<th>6-12 months</th>
<th>1-2 years</th>
<th>2-5 years</th>
<th>Over 5 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowings</td>
<td>25,759</td>
<td>23,067</td>
<td>6,321</td>
<td>11,918</td>
<td>159</td>
<td>67,224</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>8,131</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8,137</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>3,303</td>
<td>78</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,381</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>2</td>
<td>21</td>
<td>271</td>
<td>-</td>
<td>-</td>
<td>295</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37,193</strong></td>
<td><strong>23,151</strong></td>
<td><strong>6,321</strong></td>
<td><strong>11,918</strong></td>
<td><strong>159</strong></td>
<td><strong>78,742</strong></td>
</tr>
</tbody>
</table>

Gearing ratio. Consistent with others in the industry, the Group monitors capital on the basis of gearing ratio. This ratio is calculated as net debt divided by total capital under management. Net debt is calculated as total borrowings (current and non-current as shown in the consolidated statement of financial position) less cash and cash equivalents. Total capital under management equals total equity as shown in the consolidated statement of financial position.

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total borrowings (Note 13)</td>
<td>55,999</td>
<td>59,315</td>
</tr>
<tr>
<td>Less: cash and cash equivalents (Note 11)</td>
<td>(12,759)</td>
<td>(23,093)</td>
</tr>
<tr>
<td><strong>Total Net Debt</strong></td>
<td><strong>43,240</strong></td>
<td><strong>36,222</strong></td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td><strong>431,858</strong></td>
<td><strong>440,519</strong></td>
</tr>
<tr>
<td><strong>Gearing ratio</strong></td>
<td><strong>0.10</strong></td>
<td><strong>0.08</strong></td>
</tr>
</tbody>
</table>

24. FAIR VALUE

International Financial Reporting Standards require that the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The estimated fair values have been determined by the Group using available market information, where it exists, and appropriate valuation methodologies. However, judgement is necessarily required to interpret market data to determine the estimated fair value.

The estimated values of these assets are determined (in particular, the valuation techniques and inputs used):

<table>
<thead>
<tr>
<th>Assets</th>
<th>Fair value hierarchy</th>
<th>Valuation techniques and key inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>3</td>
<td>The Group engages professional independent appraisers to determine the fair value of its property, plant and equipment by using a replacement cost method for the majority of groups. The fair value is determined as the cost of construction of these items at current prices less the economic obsolescence and physical tear and wear to date. The main parameter used in this valuation technique are current prices on construction. For items for which there are market analogues (mainly buildings), the sales comparison method is used, the prices of market-based sales of comparable properties in the immediate proximity are adjusted with reference to differences in main parameters (such as floor space of the property). The main parameter used in this valuation technique is the price per square meter of a property.</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>2</td>
<td>The fair value of cushion gas is determined by application of the market price of gas at the end of the reporting date to the volume of cushion gas. The main parameter used in this valuation technique is market price for gas at the end of the reporting period. The market value of the cushion gas equals to the market price of gas less costs of its pumping and transportation to the point of sale.</td>
</tr>
</tbody>
</table>

The maturity analysis of financial liabilities as at 31 December 2018 was as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Up to 6 months</th>
<th>6-12 months</th>
<th>1-2 years</th>
<th>2-5 years</th>
<th>Over 5 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowings</td>
<td>31,432</td>
<td>19,792</td>
<td>8,627</td>
<td>230</td>
<td>-</td>
<td>60,081</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>5,498</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5,500</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>5,420</td>
<td>21</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,441</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>2</td>
<td>21</td>
<td>271</td>
<td>-</td>
<td>-</td>
<td>295</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42,352</strong></td>
<td><strong>19,813</strong></td>
<td><strong>8,648</strong></td>
<td><strong>502</strong></td>
<td><strong>2</strong></td>
<td><strong>71,317</strong></td>
</tr>
</tbody>
</table>

The estimated fair values have been determined by the Group using available market information, where it exists, and appropriate valuation methodologies. However, judgement is necessarily required to interpret market data to determine the estimated fair value. Management used all available market information in estimating the fair value.
The following table summarises property, plant and equipment recognised at fair value after initial recognition using a fair value hierarchy:

### 31 December 2018

<table>
<thead>
<tr>
<th>Description</th>
<th>Group of assets</th>
<th>Valuation technique</th>
<th>Unobservable inputs</th>
<th>Range of unobservable inputs</th>
<th>Interrelationship between key unobservable inputs and fair value measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gas transmission system</strong></td>
<td></td>
<td>Depreciated replacement cost method using the income approach for economic obsolescence determination</td>
<td>Period when transit revenues are received</td>
<td>2018-2019</td>
<td>The longer the period of income generation from transit, the higher the fair value</td>
</tr>
<tr>
<td><strong>Gas transmission system</strong></td>
<td></td>
<td>Depreciated replacement cost method using the income approach for economic obsolescence determination</td>
<td>Applicable transit volumes</td>
<td>110 bcm p.a. (based on minimal contract volumes from transit contract with Gazprom)</td>
<td>If Gazprom refuses to transit not less than 110 bcm p.a. in 2018-2019, Naftogaz will have the right to claim damages from Gazprom for underdeliveries. The longer the period of potential arbitration regarding such claims, the lower both the discounted value of such underdeliveries and the fair value.</td>
</tr>
<tr>
<td>Underground gas storage equipment</td>
<td></td>
<td>Date of implementation of incentive tariff regulation system</td>
<td>The RBA-based (Regulatory Asset Base) tariffs are valid for transportation services for cross-border gas pipelines from 2016, but they are not recognised by Gazprom. Domestic entry tariffs for local gas producers are currently put on hold by a court decision, but will be launched starting from 2019. The RBA-based tariffs for storage are expected from 2021</td>
<td>The later the introduction of incentive tariff / entry point fees, the lower the fair value</td>
<td></td>
</tr>
<tr>
<td><strong>Cushion gas</strong></td>
<td></td>
<td>Remaining period for natural gas extraction, years (based on proved and probable reserves determined by an independent expert)</td>
<td>Natural gas selling price</td>
<td>0.50</td>
<td>The shorter the period, the lower the fair value due to lower remaining periods of the use of extraction assets</td>
</tr>
<tr>
<td><strong>Gas extraction assets</strong></td>
<td>Gas and oil upstream</td>
<td>Depreciated replacement cost method using the income approach for economic obsolescence determination</td>
<td>Long-term forecast of royalty rates (estimated for selling price)</td>
<td>0.38-0.79</td>
<td>The higher the selling price, the higher the fair value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Natural gas selling price</td>
<td>Natural gas and crude oil deposits at depths up to 5000 m – 29%, over 5000 m – 14%</td>
<td>The higher the rate, the lower the fair value</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oil and gas condensate deposits at depths up to 5000 m – 45%, over 5000 m – 21%</td>
<td>Nominal weighted average cost of capital for UAH denominated cash flows</td>
<td>18.70%</td>
<td>The higher the weighted average cost of capital, the lower the fair value</td>
</tr>
<tr>
<td><strong>Oil transmission system</strong></td>
<td>Oil transmission system</td>
<td>Depreciated replacement cost method using the income approach for economic obsolescence determination</td>
<td>Cumulative factor of physical and functional depreciations</td>
<td>0.38-0.79</td>
<td>The higher the factor, the lower the fair value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nominal WACC for UAH-denominated cash flows</td>
<td>Nominal WACC for UAH-denominated cash flows</td>
<td>17.38%</td>
<td>The higher the weighted average cost of capital, the lower the fair value</td>
</tr>
</tbody>
</table>

### 31 December 2017

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Property, plant and equipment</strong></td>
<td></td>
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<td>Period when transit revenues are received</td>
<td>2018-2019</td>
<td>The longer the period of income generation from transit, the higher the fair value</td>
</tr>
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<td></td>
<td>Date of implementation of incentive tariff regulation system</td>
<td>The RBA-based (Regulatory Asset Base) tariffs are valid for transportation services for cross-border gas pipelines from 2016, but they are not recognised by Gazprom. Domestic entry tariffs for local gas producers are currently put on hold by a court decision, but will be launched starting from 2019. The RBA-based tariffs for storage are expected from 2021</td>
<td>The later the introduction of incentive tariff / entry point fees, the lower the fair value</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remaining period for natural gas extraction, years (based on proved and probable reserves determined by an independent expert)</td>
<td>Natural gas selling price</td>
<td>0.50</td>
<td>The shorter the period, the lower the fair value due to lower remaining periods of the use of extraction assets</td>
</tr>
<tr>
<td></td>
<td>Gas and oil upstream</td>
<td>Long-term forecast of royalty rates (estimated for selling price)</td>
<td>Natural gas and crude oil deposits at depths up to 5000 m – 29%, over 5000 m – 14%</td>
<td>The higher the rate, the lower the fair value</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oil and gas condensate deposits at depths up to 5000 m – 45%, over 5000 m – 21%</td>
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</tr>
<tr>
<td></td>
<td></td>
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<td>17.38%</td>
<td>The higher the weighted average cost of capital, the lower the fair value</td>
</tr>
</tbody>
</table>
Functional and presentation currency. Items included in the financial statements of each of the Group’s entities are measured using the currency of the primary economic environment in which the Group operates (“the functional currency”). The consolidated financial statements are presented in Ukrainian hryvnia ("UAH"), which is the Company’s functional and the Group’s presentation currency. All amounts presented in the consolidated financial statements are presented in UAH, rounded to the nearest million, if not otherwise stated.

Subsidiaries are consolidated from the date on which control is transferred to the Group (acquisition date) and are deconsolidated from the date that control ceases.

25. SUBSEQUENT EVENTS

Decision of the Permanent Court of Arbitration in the claim against the Russian Federation in respect of assets located in Crimea. In February 2019 the Permanent Court of Arbitration in The Hague found in favour of Naftogaz and concluded that according to the bilateral investment treaty between Ukraine and Russia, the Russian Federation responsible for the unlawful seizure of assets owned by Naftogaz and its subsidiaries in Crimea (Note 22).


26. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Statement of compliance. These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs").

Basis of preparation of consolidated financial statements. This consolidated financial statement has been prepared on the historical cost basis except for property, plant and equipment that are measured in terms of amounts at the end of each reporting period, as explained in the accounting policies below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received in exchange for an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique.

These policies have been consistently applied to all periods presented, unless otherwise stated.

During 2018 and 2017 in Ukraine there were certain restriction in respect of transactions with foreign currency, imposed by the National Bank of Ukraine (Note 2). Foreign currency can be easily converted in a ratio at the close of the National Bank of Ukraine rate. At present, UAH is not freely convertible outside Ukraine.

Basis for consolidation. Subsidiaries are those companies over which the Group has control. The Group controls an entity when the Group has power over the investee, and has the ability to use its power to affect its returns.

Note: This text does not provide a full representation of the financial statements as it is an excerpt and does not include all the necessary financial data and details. For a complete understanding, the full financial statements must be consulted.
comprehensive income are reclassified to profit or loss.

If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to profit or loss where appropriate.

**Investments in associates.** Associates are entities over which the Group has significant influence but not control. Investments in associates are accounted for using the equity method of accounting. The Group’s investment in an associate is initially measured on acquisition, net of any accumulated impairment loss.

The Group’s share of its associates’ post-acquisition profits or losses is recognised in the consolidated statement of profit or loss, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group’s share of losses in an associate equals or exceeds its interest in assets held by the associate, or when any other unsecured receivables, the Group does not recognise further losses, unless the Group provides guarantees or makes payments on behalf of the associate. Unrealised gains on transactions between the Group and its associates are eliminated.

Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

Dilution of gains and losses arising on unrealised interassociations are recognised in the consolidated statement of profit or loss.

**Interest in joint ventures.** A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The Group recognises its interest in the joint venture using the equity method applied as described above in the paragraph investments in associates.

**Interests in joint operations.** A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a group entity undertakes its activities under joint operations, the Group as a joint operator recognises in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the IFRS applicable to the particular assets, liabilities, revenues and expenses.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a sale or contribution of assets), the Group is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognised in the Group’s consolidated financial statements only to the extent of the other parties’ interests in the joint operation.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a purchase of assets), the Group does not recognise its share of the gains and losses until it resells those assets to a third party.

**Concession agreement (product sharing agreement).** The Group entered into a concession agreement for oil exploration and development (“Concession Agreement”) with the Arab Republic of Egypt and the Egyptian General Petroleum Corporation (“EGPC”) on 13 December 2006. The Concession Agreement includes the following conditions:

- Subject to the above mentioned provisions under the Concession Agreement, the Company shall recover on a quarterly basis all exploratory and development costs to the extent and out of 25% of all petroleum produced and saved from all production areas and related to the Concession Agreement in oil and gas (“Cost Recovery”).
- Remaining 75% of petroleum produced is shared by the Company and EGPC depending on the volume of production and the type of crude oil or gas and LPG. EGPC’s share varies from 15% to 39%.
- EGPC shall become the owner of all the Company’s assets acquired and owned within the Concession Agreement, which were charged to Cost Recovery by the Company in connection with the operations carried out by the Company: land shall become the property of EGPC as soon as it is purchased and all movable assets shall be transferred automatically and gradually from the Company to EGPC when they become subject to the Cost Recovery.

The development period under the Concession Agreement is limited to maximum 25 years from the date of commercial oil discovery or from the date of first gas deliveries, started in 2010.

**Segment reporting.** Operating segments are reported in a manner consistent with the internal reporting provided to the Group’s chief operating decision maker. Segments whose revenue, results or assets are ten percent or more of the total are disclosed separately. Segments falling below this threshold can be reported separately at management decision.

**Property, plant and equipment.** The Group uses the revaluation model to determine the carrying amount of qualifying assets. The cost of revalued assets includes the cost of materials, direct labor and an appropriate proportion of overheads. Cost of acquired and self-constructed qualifying assets includes borrowing costs.

Any increase in the carrying amounts resulting from revaluations are credited to revaluation reserve in equity through other comprehensive income. Decrease in the carrying amount of revalued assets recognised in other comprehensive income, all other decreases are charged to the consolidated statement of profit or loss. To the extent that an impairment loss on the same revalued asset was previously recognised in the consolidated statement of profit or loss, a reversal of that impairment loss is also recognised in the consolidated statement of profit or loss.

Expenditure incurred to replace a component of property, plant and equipment that is accounted for separately, is capitalised with the cost of the replaced component being derecognised. Subsequent costs are included in the asset’s carrying amount as a separate asset, as appropriate, only when it is probable that future economic benefits of the component will flow to the Group and the cost of the item can be measured reliably.

All development assets, which will be charged to the consolidated statement of profit or loss during the financial period in which they are incurred, are accounted for as an intangible asset.

**Hydrocarbon resources.** Hydrocarbon resources are reported using the lower of cost or fair value.

**Petrochemical (Cushion gas) storage.** Cushion gas is a gas intended for maintaining pressure in underground storage facilities of the Group and protecting them from flooding. Cushion gas is considered to be fully recoverable based on past production analysis, and at any time that the storage facility is closed will be available for sale or other use. Coclassified is reserved when there is an indication that its carrying amount as of the reporting date is materially different from its fair value.

Construction in progress includes also prepayment for property, plant and equipment.

**Exploration expenses.** Exploration expenses comprise the costs associated with improved reserves. These include geological and geophysical costs for the identification and investigation of areas with possible oil and gas reserves and administrative, legal and consulting costs in connection with exploration. They also include all impairments on exploration wells where no proved reserves could be demonstrated.

**Research and development expenses.** Research and development (“R&D”) expenses include all direct and indirect costs incurred by the Group in connection with the development of new technology and significant improvements in products, services and processes and in connection with research activities. The amount recognised in the income statement for the period in which the expenditure is incurred is equal to the R&D expenses. Research and development activities is shown as R&D expenses in the period in which they are incurred. Development costs are written off at the date of the recognition criteria according to IAS 38 “Intangible Assets” are fulfilled.

**Exploration and evaluation assets.** Oil and gas exploration and evaluation assets are accounted for using the successful efforts method of accounting.

Expenditures at the exploration stage of hydrocarbon reserves’ exploration and evaluation, including the economic and technical feasibility studies for exploratory field development and advisory services, are recognised as expenses of the period when incurred.

**Depreciation and depletion.** Depreciation is charged to the consolidated statement of profit or loss on a straight-line basis to allocate the costs of individual assets except their residual value over their useful lives.

Depreciation commences on the date of acquisition or, in respect of self-constructed assets, from the time an asset is completed and ready for use.

**Hydrocarbon extraction wells.** Hydrocarbon extraction wells are depleted using a unit-of-production method over the life of proved and probable hydrocarbon reserves. Specialised drilling tools and other fixed assets used to perform any work on the wells are depleted using a unit-of-production method based on relevant output standard established by the Group.

**Other property, plant and equipment.** Other property, plant and equipment are impaired according to a straight-line basis over their expected useful lives. The useful lives of the Group’s other property, plant and equipment are as follows:

- Provisions arising at the stage of field development, including costs of drilling and trenching, lease and depreciation of property, plant, and equipment, are capitalised in construction in progress as exploration and evaluation assets.
- The assets created are reviewed for impairment on an annual basis. In case the exploratory drilling does not give a result or it is probable that the expenses incurred will not generate revenue, the asset is partially or fully written off against expenses of the period.

In the event a decision is taken on further development of the field and from the date of putting into operation of the first producing well, the Group classifies the capitalised exploration and evaluation costs related to this well as oil and gas extraction assets within property, plant, and equipment in the statement of financial position.

**Intangible Assets.** Special rights. Subsequently, the relevant special rights. Subsequently, the relevant
Construction in progress and cushion gas are not depreciated.

Intangible assets. Intangible assets have definite useful lives and primarily include licenses for exploration and extraction and capitalised computer software. Acquired computer software is capitalised on the basis of the costs incurred to acquire and bring it to use. Intangible assets are carried at cost less accumulated amortisation and impairment losses. When an impairment loss is recognised, the carrying amount of intangible assets is written down to the higher of value in use and fair value less costs to sell.

Leases. Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessee) are charged to the consolidated statement of profit or loss at a straight-line basis over the period of the lease. Finance leases are capitalised at the lease commencement date and are depreciated over the lease term using the effective interest method.

Decommissioning liabilities. The Group’s assessment of the decommissioning liabilities is based on the estimated future costs expected to be incurred in respect of the decommissioning and site restoration, adjusted for the effect of the projected inflation for the upcoming periods and discounted using interest rates applicable to the provision. Estimated costs of dismantling and removing an item of property, plant and equipment are measured at the fair value of the asset being disposed of. The Group has decommissioning liabilities in respect of the assets classified as property, plant and equipment, which are measured at amortised cost using interest rates applicable to the individual items. Estimated costs of dismantling and removing an item of property, plant and equipment are measured at fair value at the end of subsequent accounting periods.

Using the effective interest method and, for financial assets, it is determined net of any impairment losses. Premiums and discounts, including initial transaction costs, are included in the carrying amount of the related financial instrument and amortised over the expected life of the instrument.

Financial instruments. The Group has adopted IFRS 9 from 1 January 2018. In accordance with the transitional provisions of IFRS 9, comparative figures were not restated.

Initial recognition of financial instruments. Financial assets and financial liabilities are initially measured at fair value.

Impairment of non-financial assets. Assets are reviewed for impairment when events and changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds their recoverable amount. The recoverable amount is the higher of fair value less cost to sell and value in use. For purposes of assessing impairment, assets are grouped to the lowest levels for which there are separately identifiable cash flows (cash generating unit). Non-financial assets that have incurred impairment are reviewed for possible reversal of the impairment at each reporting date.

An impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

When an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) prior to the impairment loss. A reversal of an impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

Impairment losses are recognised in profit or loss for the amount by which the carrying amount of the asset is less than the recoverable amount. Impairment losses recognised in profit or loss are not reversed through the profit or loss statement of the period in which the impairment was recognised, nor are the related assets restored to their previous state.

Fair value. The use of fair value measurements and the recording of gains and losses on the changes in fair values are permitted under IFRS 9. Where fair value is used in the measurement of financial assets or financial liabilities, the Group uses the market approach, with the guideline being the most recent observable transactions, unless a market for the asset or liability is not readily available. In such cases, the Group uses the income approach, with the guideline being the expected future cash flows discounted using an appropriate discount rate.

Fair values of financial assets and financial liabilities are separately determined for each type of instrument under IFRS 9. The Group uses the expected cash flow approach to determine fair values for financial assets, which involve the estimation of future cash inflows and outflows. The estimated cash flows are discounted using an appropriate discount rate. The discount rate is a function of the expected risk profile of the financial asset or liability and is based on data about market yields for the financial asset or liability or for another instrument that has a substantially the same risk profile.

Discount rates. The discount rates used in the measurement of financial assets and financial liabilities are determined by considering a number of factors, including the Group’s incremental cost of capital, credit spreads on similar financial instruments, market interest rates, and estimates of the probability of default and the expected future cash flows of the financial assets or liabilities.

Classification and subsequent measurement of financial instruments. Financial assets are subsequently measured at amortised cost or fair value. Financial liabilities are subsequently measured at fair value through profit or loss.

Valuation. The Group values financial instruments at amortised cost using the effective interest method and, for financial assets, it is determined net of any impairment losses. The amortised cost of a financial asset is recognised in the consolidated statement of profit or loss on a time basis using the effective interest method. The carrying amount of the financial asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) prior to the impairment loss. A reversal of an impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

Impairment losses are recognised in profit or loss for the amount by which the carrying amount of the asset is less than the recoverable amount. Impairment losses recognised in profit or loss are not reversed through the profit or loss statement of the period in which the impairment was recognised, nor are the related assets restored to their previous state.

Disclosures. The Group discloses the carrying amounts of financial assets and financial liabilities at amortised cost and the amounts of any impairment losses recognised. The Group also discloses the nature of the financial assets and financial liabilities, including the methods used to determine fair values and the methods used to calculate expected cash flows.

Financial instruments. The Group recognises financial instruments at fair value through profit or loss.
within the individual companies of the Group. Deferred tax assets for deductible temporary differences arising from those carried forwards are recorded only to the extent that it is probable that future taxable transactions will be sufficient to utilise such carry forwards.

Inventories. Inventories are recorded at the lower of cost and net realisable value. The cost of inventories includes expenditures for acquiring the inventories, production or conversion costs and other costs incurred in bringing the inventories to their present location and condition. Cost of manufactured inventories includes an appropriate share of overheads based on normal operating capacity. The cost of inventories is determined on the first in first out basis for all inventories except for natural gas, oil and petroleum products. Weighted average cost formula is used for natural gas, oil and petroleum products. Net realisable value is the estimated selling price in the ordinary course of business, less the cost of completion and selling expenses.

Trade accounts receivable. Trade and other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment.

Prepayments made and other current assets. Prepayments are carried at cost excluding the cost of impairment. A prepayment is classified as non-current when the goods or services are expected to be obtained after one year, or when the prepayment relates to an asset that will be in use for more than one non-current period upon initial recognition.

If there is an indication that the assets, goods or services relating to a prepayment will not be received, the Group recognises provision for impairment in respect of such prepayment made and a corresponding impairment loss is recognised in the consolidated statement of profit or loss.

Promissory notes. Some purchases may be settled by promissory notes or bills of exchange, which are negotiable debt instruments. Interest on the note secured by promissory notes are recognised in the income statement on recognition of the note as an asset.

Cash and cash equivalents. Cash and cash equivalents include cash on hand, deposits held at banks with, and other short-term highly liquid investments with original maturities of three months or less. Cash and cash equivalents are carried at amortised cost using the effective interest rate method. Restricted balances are excluded from cash and cash equivalents for the purposes of the statement of cash flows. Balances restricted from being exchanged or used to settle a liability for the period from three to twelve months after the reporting date are included in other current assets. Balances restricted from being exchanged or used to settle a liability for at least twelve months after the reporting date are included in other non-current assets.

Share capital. Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds.

Dividends and mandatory budget contribution of profit share. Dividends and mandatory budget contribution of profit share are recognised as a liability and deducted from equity at the reporting date only if they are declared before or on the reporting date. Dividends are disclosed when they are proposed before the reporting date, the announcement date or declared after the reporting date but before the consolidated financial statements are authorised for issue.

Value added tax (‘VAT’). In Ukraine VAT is levied at two rates: 20% on sales and imports of goods, works and services within the country, and 0% on the export of goods and limited list of services (e.g. international transportation). A taxpayer’s VAT liability equals the total amount of VAT accrued within a reporting period, and arises on the earlier of the date of shipping goods or rendering services to a customer or the date of receipt of payment from the customer. A VAT input is the amount that a taxpayer is entitled to offset against his VAT liability in a reporting period. Rights to VAT input arise when a VAT invoice is received, which is issued on the earlier of the date of payment to the supplier or the date goods are received or services are rendered. VAT related to sales and purchases is recognised in the consolidated statement of financial position on a gross basis and disclosed separately as an asset and liability. Where provision has been made for impairment of receivables, the impairment loss is recorded for the gross amount of the other receivable, including provision for impairment of prepayments made.

Borrowings. Borrowings include bank borrowings and bonds.

Borrowing costs. Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that will take a substantial period of time to get ready for their intended use or sale, are recognised as a cost of those assets, until such time as the assets are substantially ready for their intended use or sale. All other borrowing costs are recognised in consolidated profit or loss in the period in which they are incurred.

Borrowings are initially recognised at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost using the effective interest method. Bank overdrafts are included into borrowings line item in the consolidated statement of financial position.

Trade accounts payable. Trade accounts payable are recognised and subsequently measured at cost excluding any provision for impairments.

Receivables. Receivables are recognised at the invoiced amount and subsequently measured at amortised cost using the effective interest method. Amortised cost is calculated by taking into account any transaction costs and any discount or premium on settlement.

Advances received. Advances received are carried at amounts originally received excluding VAT. Amounts of advances and any interest received are realised through the revenue received from usual activities of the Group.

Provisions. Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Where the Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain.

The expense on any provision is presented in the consolidated statement of profit and loss net of any reimbursement. If the effect of time value of money is material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. When discounted, the increase in provision due to the passage of time is recognised as a finance cost.

Other liabilities. Other financial liabilities are recognised initially at fair value, net of transaction costs, and are subsequently stated at amortised cost using the effective interest method. Other non-financial liabilities are measured at amortised cost.

Contingent assets and liabilities. A contingent asset is an asset relating to the consolidated financial statements but disclosed when an inflow of economic benefits is probable. A contingent liability is not recognised in the consolidated financial statements unless it is probable that an outflow of economic resources will be required to settle the obligation and it can be reasonably estimated. Contingent liabilities are disclosed unless the possibility of an outflow of resources embodying economic benefits is remote.

Revenue recognition. The Group has adopted the IFRS standards in respect of the Group’s financial statements for the year ended 31 December 2018, with the reclassification of certain items between financial liabilities and financial assets.

Revenue is recognised when: (a) the Group transfers control over a good or service to the customer; (b) the consideration payable from the customer (or other party on whose behalf the Group provides the service) is fixed or determinable; and (c) the group is able to measure the Group’s right to consideration with reasonable accuracy. Revenue is measured initially at the transaction price and subsequently measured using the effective interest method.

Revenue is measured at the transaction price net of any discounts and taxes and minus the costs directly attributable to the sale. Revenue is measured with reference to the terms of the contract with the customer. Revenue is measured using the output method unless the output measure is not credible. Any revenue or cost that is not directly attributable to the sale of goods or services is accounted for as an expense when incurred.

Revenue is initially recognised as a finance cost.

Revenue is measured initially at the transaction price net of any discounts and taxes and minus the costs directly attributable to the sale. Revenue is measured with reference to the terms of the contract with the customer. Revenue is measured using the output method unless the output measure is not credible. Any revenue or cost that is not directly attributable to the sale of goods or services is accounted for as an expense when incurred.

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Revenue is initially recognised as a finance cost.
Key sources of estimation uncertainty.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Employee benefit obligations. The Group assesses post-employment and other employee benefit obligations using the projected unit cost method based on actuarial assumptions which represent management’s best estimates of variables that will determine the ultimate cost of providing post-employment and other employee benefits. The present value of the pension obligations depends on a number of factors that are determined using the actuarial basis using a number of assumptions.

The major assumptions used in determining the present value of the pension obligations include the discount rate and expected salary increases. Any changes in these assumptions will affect the present value of pension obligations.

Compensation costs. The decommissioning provision represents the present value of decommissioning costs, relate to oil and gas properties, which are expected to be incurred in the future (Note 14). These provisions are calculated using discount rates based on Group’s internal estimates.

Main estimates include future market prices for the necessary decommissioning costs, and are based on market conditions and factors. Additionally, uncertainties relate to the timing of the decommissioning costs, which depends on depletion of the fields, future oil and gas prices and as a result – expected point of time, when there are no further economic benefits in the production.

Changes in these estimates can lead to the material changes in the provisions recognised in the consolidated statement of financial position.

Depreciation of the gas transit assets and depletion of the oil and gas assets. Oil and gas assets are depleted using a unit-of-production method. The cost of the wells is amortised based on the proved volumes of available reserves, estimated in accordance with the standards of the Petroleum Resource Management System (PRMS) prepared by the Oil and Gas Reserves Committee of Society of Petroleum Engineers (SPE).

The estimation of hydrocarbons reserves is carried out in general on the field. Respectively, all wells of the field are depreciated based on the total volume of extracted from the field specific type of hydrocarbons for the period and the balances of reserves of such hydrocarbons at the beginning of the period.

Changes in estimates regarding the volumes of total proved reserves can mean that the carrying value either downward or upward, can result in the change of depreciation and depletion expenses.

The following events occurred during the first quarter of 2017 that provide higher probability of the assumption of no transit flows through Ukraine from 1 January 2020, including but not limited to: ratifying the Intergovernmental agreement in respect of “TurkStream” gas pipeline project by the State Duma of the Russian Federation; obtaining permissions for partial commissioning of gas pipelines within “Nord Stream-2” project. As a result, the Group has revised useful lives of its transit assets planned for decommissioning after 31 December 2019. This resulted in higher depreciation expense by UAH 21,981 million for the year ended 31 December 2018 (2017: UAH 16,486 million).

Estimation of oil and gas reserves. Reserves are the quantities of oil and gas which are anticipated to be commercially recovered from known accumulations from a given date forward under defined conditions. Proved and probable reserves used in depletion rate calculation are determined using estimates of known oil and gas reserves, recovery factors, operating conditions and future oil and gas prices and government regulations. Latest assessment of oil reserves was performed as at 30 June 2017, latest assessment of gas reserves was performed as at 30 June 2016. Reserves estimates involve some degree of uncertainty, and their estimates are revised as additional geologic and engineering data become available or as economic conditions change. Accordingly, depletion rates and discounted cash flows for the assessment and impairment of property, plant and equipment may be revised.

Revolution and impairment of property, plant and equipment. Management performs assessment whether carrying amounts of property, plant and equipment accounted under the revaluation model, differ materially from their fair values. Such assessment is performed on an annual basis, and involves analysis of prices, price indices, changes in technology, foreign exchange rates and other relevant factors. In case that the carrying amounts of property, plant and equipment differ materially from their fair values, the Group engages independent appraisers to perform property, plant and equipment revaluation. Latest revaluation of property, plant and equipment was made as at 31 December 2017.

Management also reviews carrying amounts of property, plant and equipment to determine whether there are any indicators that these assets are impaired. Based on the analysis performed as at 31 December 2018, the management of the Group identifies impaired assets for the following groups of property, plant and equipment: “Gas transmission system” and “Oil transmission system”. The Group has engaged an independent appraiser for testing the existence of economic impairment of relevant groups of cash generating units and, accordingly, recorded the impairment of property, plant and equipment in a total amount of UAH 76,013 million (Note 5).

Major assumptions used in estimating the recoverable amount include judgments regarding discount rates, relevant foreign currency exchange rate and estimated changes in volumes of gas and oil transit and transportation. Management has determined the discount rate by using the after tax rate that reflects current market interest rates with similar risk levels. To project UAH/ EUR exchange rate, the Company has used consensus forecasts of analytical services. Movements in the volumes of gas and oil transit and transportation are based on the assumptions regarding industry developments and expectations on further market changes. Cash flow forecasts are based on the assumptions outlined in the table below for the next five years and the terminal value determined based on indicators for the last of five years.

After tax discount rate for UAH denominated cash flows 13.1% After tax discount rate for UAH denominated cash flows 14.6% Annual gas transit volume, billion cubic meters 86.9 Annual gas transportation volume (exit points from GTS), billion cubic meters 35.4–41.2 Annual gas transportation volume (entry points to GTS), billion cubic meters 19.5–24.7 Annual gas imports volume, billion cubic meters 0–13.6 Annual oil transportation volume, million ton 13.7–13.8 Annual oil transportation volume, million ton 2.6–3.5

Numerical values of key judgments of the Group’s management relate to their estimation of future business trends, are based on both internal and external sources of the Group.

In making the assessment for general impairment, such assessment identifies that carrying amounts of property, plant and equipment differ materially from their fair values. Such assessment includes analysis of market conditions, asset utilisation and the ability to utilise the asset for its intended purpose, an indication of impairment exists, the Group estimates the recoverable value (greater of fair value less cost to sell and value in use) and compares it to the carrying value, and records impairment to the extent that the recoverable value is greater than the recoverable amount.

Useful lives of other property, plant and equipment. The Group’s property, plant and equipment, except oil and gas assets are depreciated using straight-line method over their estimated useful lives, which are based on management’s business plans and operational estimates.

The Group reviews the estimated useful lives of properties and equipment at the end of each annual reporting period. The review is based on the current condition of the assets and the estimated period during which they will continue to bring economic benefit to the Group. Any change in the estimated useful life or residual value is recorded on a prospective basis from the date of the change.

Impairment of trade accounts receivable. Management estimates the likelihood of the collection of trade accounts receivable based on an analysis of individual accounts. Factors taken into consideration include an ageing analysis of trade accounts receivable in combination with the payment history, credit terms allowed to customers and available market information regarding the counterparties. Should actual collections be less than management’s estimates, the Group would record an additional impairment expense.

Inventory valuation. Inventory is stated at lower of cost or net realisable value. In assessing the net realisable value of its inventories, management bases its estimates on various assumptions including current market prices. At each reporting date, the Group evaluates its inventories for excess quantities and obsolescence and, if necessary, records an allowance for impairment for obsolete and slow-moving goods. This allowance requires assumptions related to future inventories use. These assumptions are based on inventories ageing and forecasted demand. Any changes in the estimates may impact the amount of the allowances for inventory that may be required.

28. ADOPTION OF NEW OR REVISED STANDARDS AND INTERPRETATIONS

Adoption of new and revised International Financial Reporting Standards. The following standards have been adopted by the Group for the first time during the year beginning on or after 1 January 2018:

● IFRS 9 “Financial Instruments”;
● IFRS 15 “Revenue from Contracts with Customers” including amendments to IFRS 15: Effective date of IFRS 15 “Revenue from Contracts with Customers”;
● amendments to IFRS 2 “Share-based Payment” – Classification and Measurement of Share-based Payment Transactions”;
● IFRS 15 “Revenue from Contracts with Customers”;
● amendments to IFRS 4 “Applying IFRS 9 “Financial Instruments” with IFRS 4 “Insurance Contracts”;
● amendments to IAS 40 “Investment Property”;
● annual Improvements to IFRS 2014–2016 Cycle.

Except the changes related to adoption of new standards IFRS 9 “Financial Instruments” and IFRS 15 “Revenue from Contracts with Customers” ("IFRS 15") adopted described below, the adoption of amendments to standards did not have any effect on the financial position or performance reported in the consolidated financial statements and had not resulted in any changes to the Group’s accounting policies and the amounts reported for the current or prior years.

With the effect from 1 January 2018, the Group has changed its accounting policy for recognition of revenue as well as classification and measurement of financial instruments according to IFRS 9 and IFRS 15 as described in Note 26.

The Group has adopted IFRS 9 retrospectively. In accordance with the transitional provisions of IFRS 9,
The Group's equity was adjusted upon adoption of the new standard as described below.

## Financial assets

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>IAS 39 carrying amount 31 December 2017</th>
<th>Remeasurements</th>
<th>IFRS 9 carrying amount 1 January 2018</th>
<th>Retained earnings effect on 1 January 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair value through profit or loss</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fair value through other comprehensive income</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Amortised cost</td>
<td>91,321</td>
<td>(3,666)</td>
<td>87,655</td>
<td>(3,666)</td>
</tr>
<tr>
<td>Total</td>
<td>91,321</td>
<td>(3,666)</td>
<td>87,655</td>
<td>(3,666)</td>
</tr>
</tbody>
</table>

### Reconciliation of consolidated statement of financial position balances from IAS 39 to IFRS 9 at 1 January 2018:

**Financial assets**

- **In millions of Ukrainian hryvnias**
  - IAS 39 carrying amount 31 December 2017
  - Remeasurements
  - IFRS 9 carrying amount 1 January 2018
  - Retained earnings effect on 1 January 2018

<table>
<thead>
<tr>
<th>Standards/Interpretations</th>
<th>Effective for annual accounting period beginning on or after</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFRIC 23 &quot;Uncertainty over Income Tax Treatments&quot;</td>
<td>1 January 2019</td>
</tr>
<tr>
<td>IFRS 16 &quot;Leases&quot;</td>
<td>1 January 2019</td>
</tr>
<tr>
<td>Amendments to IFRSs – Annual Improvements to IFRSs 2015–2017 Cycle</td>
<td>1 January 2019</td>
</tr>
<tr>
<td>Amendments to IFRS 9 &quot;Financial Instruments&quot;: Prepayment Features with Negative Compensation</td>
<td>1 January 2019</td>
</tr>
<tr>
<td>Amendments to IAS 28 &quot;Investments in Associates&quot;: Long-term interests in Associates and Joint Ventures</td>
<td>1 January 2019</td>
</tr>
<tr>
<td>Amendments to IAS 19 &quot;Employee Benefits&quot;: Plan Amendment, Curtailment or Settlement</td>
<td>1 January 2019</td>
</tr>
<tr>
<td>Amendments to References to the Conceptual Framework in IFRS Standards</td>
<td>1 January 2020</td>
</tr>
<tr>
<td>Amendments to IFRS 3 &quot;Business Combinations&quot;: Definition of a Business</td>
<td>1 January 2020</td>
</tr>
<tr>
<td>Amendments to IAS 1 &quot;Presentation of Financial Statements&quot; and IAS 8 &quot;Accounting Policies, Changes in Accounting Estimates and Errors&quot;: Definition of Material</td>
<td>1 January 2020</td>
</tr>
<tr>
<td>IFRS 17 &quot;Insurance contracts&quot;</td>
<td>1 January 2021</td>
</tr>
</tbody>
</table>

Management is currently evaluating the impact of the adoption of IFRS 16 "Leases". For other Standards and Interpretations management anticipates that their adoption in future periods will not have a material effect on the consolidated financial statements of the Group in future periods.

### IFRS 16 Leases

IFRS 16 introduces a single comprehensive model for the identification of lease arrangements and accounting treatments for both lessors and lessees. IFRS 16 will supersede the current lease guidance including IAS 17 "Leases" and the related Interpretations for the reporting periods beginning on or after 1 January 2019. The date of first application of IFRS 16 for the Group will be 1 January 2019.

The Group is planning to use the lease determination provisions and related interpretations described in IFRS 16 to all leases concluded or modified on or after 1 January 2019, irrespective of whether it acts as a lessor or lessee under the lease contract.

IFRS 16 will change the Group’s procedure of accounting for leases that were previously classified as operating under IAS 17.

When applying IFRS 16 for the first time, the Group will:

- a) record assets in the form of the right to use and lease liability in the consolidated statement of financial position and measure at the present value of future lease payments;
- b) record depreciation of assets in the form of the right to use and interest on lease liability in the consolidated statement of profit or loss and comprehensive income;
- c) allocate total amount of cash paid to principal (presented within financial activities) and interest (presented within operating activities) in the consolidated statement of cash flows.

In respect of short-term leases (12 months or less) and lease of low value assets (such as personal laptops and office furniture), the Group is planning to record lease expenses on a straight line basis in accordance with the requirements of IFRS 16.

The Group’s management is currently estimating the effect IFRS 16 on the Group’s business, but it does not anticipate that the adoption of IFRS 16 will have a material effect on the Group’s consolidated financial position and/or consolidated financial performance.
The annual report covers the activities of Naftogaz Group during 2018 and is the fourth edition prepared under the GRI Standard. The company seeks to achieve the proper level of disclosure, constantly improving the reporting process. While preparing the report, the company is guided by the GRI Standard principles regarding its quality (accuracy, balance, clarity, comparability, reliability, time sequence), and in determination of the content of the report:

- Interaction with stakeholders;
- Sustainable development context;
- Essence;
- Completeness.

Below is the detailed description of the principles used for determining the content of the report.

**Interaction with stakeholders**

The key principle the company is guided by in determining the content of the report is interaction with stakeholders. The company has the Procedure for interaction with Stakeholders in place that regulates the main principles of interaction, defines the list of stakeholders, the sequence, scope and ways of providing and documenting information, the algorithm for building a bilateral dialogue with them. The Procedure is available on the company’s official website.

The stakeholders map and the main methodologies for interacting with them are presented in the Naftogaz annual report for 2017.

**Sustainable Development Context**

In the preparation of the annual report, Naftogaz seeks to describe the results of its operations and their impacts in the broad sustainable development context. To this end, the report discloses how the company impacts or seeks to impact the changes in economic, environmental and social conditions at the local level, as well as national and global levels.

Naftogaz is aware of its responsibility for its direct and indirect impacts in all areas of sustainable development, especially in the context of potential integration into the European energy market.

**Essence**

In its annual report, Naftogaz discloses topics that are material and reflect the most significant characteristics of the company’s impacts on the economic, environmental and social aspects.

Disclosure of material topics should be in line with the main expectations of the stakeholders, since it impacts their decision-making. Therefore, the significant topics to be covered by the annual report are identified in close interaction with the internal and external stakeholders. All the topics identified in this way are evaluated in terms of their importance for the company’s activities and their impacts on the economic, environmental and social aspects. The following tools are used to evaluate and prioritize the topics:

- Analysis of the company’s external information environment;
- Review of annual reports and sustainable development reports of peer companies in Ukraine and abroad;
- Survey of Naftogaz internal structural units and subsidiaries;
- Consultations with the representatives of company senior management;
- Review of international standards, agreements, resolutions in the field of sustainable development, for example, SDG (Sustainable Development Goals).

For each material topic, its coverage boundaries are defined, i.e. a list of structural and organizational units (subsidiaries, joint ventures) whose performance is included in the report so that a topic is disclosed at an appropriate level. The table below lists the material topics and their boundaries, which are defined in the process of preparing the 2018 report.

The list of substantive topics is reviewed once a year for their inclusion in the next annual report.

**Completeness**

To ensure the principle of completeness, in its annual report Naftogaz discloses information on material topics within their boundaries to the extent necessary to reflect the important characteristics of the company’s impact on the economic, environmental and social aspects, which will enable stakeholders to use this information to assess the results of the group’s operations and make informed decisions.

The principle of completeness is associated with the following factors:

- The list of material topics covered by the report should be sufficient to describe the company’s key economic, environmental and social impacts;
- For some material topics, the boundaries may vary, however, they should cover all significant impacts of the company’s activities;
- The timelines of the report require, first of all, the disclosure of information about events and performances that occurred during the reporting period. At the same time, the report should describe not only the short- and medium-term effects of such events and results, but also their possible impact in the future.

### Categories and Topics

<table>
<thead>
<tr>
<th>Category</th>
<th>Topic</th>
<th>Boundaries</th>
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<tbody>
<tr>
<td>Economic</td>
<td>Economic performance</td>
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<td></td>
<td>Indirect economic impacts</td>
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<td></td>
<td>Procurement practices</td>
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<td>Water</td>
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<td>Biodiversity</td>
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<td>Emissions</td>
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<td>Effluents and waste</td>
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<td>Diversity and equal opportunity</td>
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<td></td>
<td>Non discrimination</td>
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<td>Child labor</td>
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<td></td>
<td>Local communities</td>
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# MATERIAL TOPICS UNDER GRI STANDARD

<table>
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<tr>
<th>Material topic</th>
<th>Disclosure number</th>
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<th>Page number</th>
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<td>General Disclosures</td>
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<td>-</td>
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<td>Human resources indicator has been partially disclosed</td>
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<td>942</td>
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<td>Risk management</td>
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<td>102-10</td>
<td>Significant changes to the organization and its supply chain</td>
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<td>There were no significant changes during the reporting period</td>
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<td>102-11</td>
<td>Precautionary Principle or approach</td>
<td>108</td>
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<td>Risk management at Naftogaz group</td>
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<td>Ecology and environment protection</td>
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<td>128</td>
<td>Labour safety</td>
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<td></td>
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<td>Investments in energy efficiency</td>
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<td>102-12</td>
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<td>The company is a member of such organizations</td>
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<td>- International gas union,</td>
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<td>- European energy forum,</td>
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<td>Statement from the most senior decisionmaker</td>
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### Material topic | Disclosure number | Disclosure name | Page number | Report section and comments
--- | --- | --- | --- | ---
### Reporting practice
102-45 | Entities included in the consolidated financial statements | 146 | Financial statements
102-46 | Defining report content and topic Boundaries | 112 | Determination of the content and the material topics of the report
102-47 | List of material topics | 112 | Determination of the content and the material topics of the report
102-48 | Restatements of information | - | There were no restatements of information provided in previous reports
102-49 | Changes in reporting | - | There were no significant changes from previous reporting periods
102-50 | Reporting period | - | 2018 calendar year
102-51 | Date of most recent report | - | July 17 2018
102-52 | Reporting cycle | - | Annual reporting
102-53 | Contact point for questions regarding the report | - | Aliona Osmolovska
Head of Corporate Communications
Tel.: +380 44 586 3579
Cell: +380 63 555 5538
press@naftogaz.com
6 B. Khmelnytskoho Str., Kyiv 01601 Ukraine
www.naftogaz.com
www.naftogaz-europe.com
102-54 | Claims of reporting in accordance with the GRI Standards | - | This report was prepared in accordance with GRI Standard, "Core" level
102-55 | GRI content index | 212 | GRI content index
102-56 | External assurance | - | This report has not been independently verified

#### Specific disclosures

### Economic

#### Economic performance
201-1 | Direct economic value generated and distributed | 48 | Operations

#### Indirect economic impacts
203-1 | Infrastructure investments and services supported | 12% | Interaction with local communities

### Procurement practices
204-1 | Proportion of spending on local suppliers | 142 | Procurement management

### Environment

#### Disclosures on management approach
302-1 | Energy consumption within the organization | 128 | Investments in energy efficiency

#### Energy

302-4 | Reduction of energy consumption | 128 | Investments in energy efficiency

#### Water

305-1 | Direct (Scope 1) GHG emissions | 132 | Ecology and environment protection

#### Biodiversity

304-2 | Significant impacts of activities, products, and services on biodiversity | 132 | Ecology and environment protection

#### Emissions

305-4 | GHG emissions intensity | 132 | Ecology and environment protection

#### Effluents and waste

306-1 | Water discharge by quality and destination | 132 | Ecology and environment protection

#### Environmental compliance

307-1 | Non-compliance with environmental laws and regulations | 132 | Ecology and environment protection

### Social

#### Employment
401-1 | New employee hires and employee turnover | 112 | Human resources management

401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | 112 | Human resources management

### Human resources management
Material topic | Disclosure number | Disclosure name | Page number | Report section and comments
--- | --- | --- | --- | ---
Labor management relations | 402-1 | Minimum notice periods regarding operational changes | 112 | Human resources management
403-2 | Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities | 118 | Labour safety
403-4 | Health and safety topics covered in formal agreements with trade unions | - | Health and safety topics covered in separate section of collective bargaining agreement
Training and education | 404-2 | Programs for upgrading employee skills and transition assistance programs | 112 | Human resources management
Diversity and equal opportunity | 405-1 | Diversity of governance bodies and employees | 112 | Human resources management
Non discrimination | 408-1 | Incidents of discrimination and corrective actions taken | 112 | During reporting period, the company recorded no cases of discrimination
Child labour | 408-1 | Operations and suppliers at significant risk for incidents of child labor | 112 | Human resources management
| - | - | - | -
 Forced or compulsory labour | 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labour | 112 | Human resources management
| - | - | - | -
 Local communities | 413-1 | Operations with local community engagement, impact assessments, and development programs | 114 | Interaction with local communities
| - | - | - | -

### TERMS AND ABBREVIATIONS

**BCS** - booster compressor stations, which maintain the pressure necessary for production at the final stage of field development

**BP** - British Petroleum, a transnational oil and gas, petrochemical, and coal corporation

**CABINET OF MINISTERS** - The Cabinet of Ministers of Ukraine

**COMPANY** - Naftogaz

**CRIMEA** - The Autonomous Republic of Crimea, a region of Ukraine currently occupied by the Russian Federation

**DHC** - district heating company (same as "teplokomunenergo")

**DISK** - State Emergency Service of Ukraine

**EBRD** - European Bank for Reconstruction and Development

**EC** - The European Commission

**EIB** - European Investment Bank

**EFET** - European Federation of Energy Traders

**EGPC** - Egyptian General Petroleum Corporation

**ENERGY MINISTRY** - the Ministry of Energy and the Coal Industry of Ukraine

**EU** - the European Union

**EUSTREAM** - Slovak gas transmission system operator

**GAS** - natural gas, unless stated otherwise

**Office of Strategic Planning** - a single-line system feeding into the common system of gas pipelines, through which gas is transmitted from the production site to consumers

**GAZPROM** - Public Joint Stock Company Gazprom; a Russian energy company

**GDS** - gas distribution station

**GMS** - gas measuring station


**GTS** - gas transportation system

**HF** - hydraulic fracturing

**IBRD** - International Bank for Reconstruction and Development

**IFRS** - International Financial Reporting Standards

**IMF** - International Monetary Fund, a special UNO agency

**LNG-TERMINAL** - liquefaction terminal, receiving and regasification of liquefied natural gas

**LPG** - liquefied petroleum gas

**MHI** - municipal heating generating entities

**NAFTOGAZ OVERSEAS S.A.** - JSC Naftogaz Overseas (Switzerland)

**NEURC** - National Commission for Regulation of Energy and Utilities

**NODPLAT** - adjusted operating result net of income taxes

**OECD** - Organization for Economic Co-operation and Development

**OSIC KIROVOHRAZZAS** - Kirovohradnaftogaz (KRZgaz) - Open Joint Stock Company Kirovohradnaftogaz, a regional gas distribution and supply company

**SUBSIDIARIES** - subsidiary companies of the National Joint Stock Company Naftogaz of Ukraine

**TENPLIKOMUNENERGO** - enterprises, producing heat and energy, district heating companies

**UES** - underground gas storage

**UNBUNDLING** - separation of gas transmission from gas supply and production

**UHROZHDOROG** - the gas export route connecting the Urengoy gas field and northern gas fields of Western Siberia to Uzhhorod at the western border of Ukraine

**USD** - United States Dollar

**WDO** - worker operations

**WORLD BANK** - the organization that provides assistance for development. It comprises two institutions: the International Bank for Reconstruction and Development (IBRD), and the International Development Association (IDA)
CONTACTS

Naftogaz of Ukraine
6 B. Khmelnytskoho St, Kyiv 01601 Ukraine
T: +380 (44) 586-31-30; 39-63, 32-83
nga@naftogaz.com, press@naftogaz.com
https://www.facebook.com/NaftogazUA
https://twitter.com/naftogazukraine

Ukrtransgaz
26/28 Rudnytskoho St, Kyiv 04053 Ukraine
T: +380 (44) 272-31-35, fax: +380 (44) 461-29-94
pres@gascomc.ua
www.sugc.com

Naftogaz Offices abroad:
Office in the Arab Republic of Egypt
3 A ST. 259, New Maadi Cairo, 11311, Egypt
T.: +202 27543365, +202 25202661
infoEG@naftogaz.com

Office in the Kingdom of Belgium
Rue Dr-Alfred-Vincent 16, c/o SYNERGIX S.A.,
succursale de Geneva, 1201 Geneva, Switzerland
T.: +41 22 735 3805, +41 22 735 3807
infoCH@naftogaz.com
www.naftogaz.com

Naftogaz of Ukraine
2 Hryhurovycha Bansko St, Kyiv 03134 Ukraine
T.: +380 (44) 291-28-05/11
main@ukronaftogaz.com
www.ukronaftogaz.com

Ukrtransgaz
3 Promyslovoj St, Dolyka 03477 Ukraine
T.: +380 (3477) 253-10/11
trgaz@ustg.com.ua
www.ustg.com.ua

Ukrtransnafta
32/2 Moskovska St, Kyiv 01010 Ukraine
T.: +380 (44) 201-57-01/76, 0380 215 515
office@ukrtransnafta.com
www.ukrtransnafta.com

Gas of Ukraine
1 Sholudenka St, Kyiv 04116 Ukraine
T.: +380 (44) 537-05-38, 05-54
melnik@gasukraine.com.ua
www.gasukraine.com.ua

Office in Turkmenistan
ş.Aşgabat, Arçabil şaýoly, Biznes-Merkezi «ABC»
T.: +99 312 48 01-86; 03-10
infoTN@naftogaz.com

Naftogaz Trading Europe S.A.
rue Dr-Alfred-Vincent 16, 26 SYNERGIX S.A.,
succursale de Geneva, 1201 Geneva, Switzerland
T.: +41 22 735 3805, +41 22 735 3807
infoCH@naftogaz.com
www.naftogaz.com

Ukrvetnogaz
2 Hryhurovycha Bansko St, Kyiv 03134 Ukraine
T.: +380 (44) 291-28-05/11
main@ukronaftogaz.com
www.ukronaftogaz.com

Ukrtransgaz
9/1 Klovskyy Uzviz, Kyiv 01021 Ukraine
T.: +380 (44) 461-20-95
forletter@utg.ua
www.utg.ua

Ukrspetstransgaz
3 Promyslovoj St, Dolyka 03477 Ukraine
T.: +380 (3477) 253-10/11
trgaz@ustg.com.ua
www.ustg.com.ua

Naukanaftogaz
8 Kyivska St, Kyiv Oblast, Vyshneve 08132 Ukraine
T.: +380 (44) 391-74-01, F: +380 (44) 496-64-18
info@naftogazukraine.com
www.naftogazukraine.com

LLC Gas supply company “Naftogaz of Ukraine”
1 Sholodenka St, Kyiv 04116 Ukraine
T.: +380 (44) 537-05-54, 380 215 515
customers@naftogazososch.com
www.naftogazososch.com

LLC Gas supply company “Naftogaz Trading”
1 Sholodenka St, Kyiv 04116 Ukraine
T.: +380 (44) 364-76-54, 39-14
ngt@naftogaztrading.com.ua
www.naftogaztrading.com

LLC Gas supply company “Naftogaz Teplio”
1 Sholodenka St, Kyiv 04116 Ukraine
T.: +380 (44) 537-00-43, 01-53
info@naftogazteplio.com.ua
www.naftogazteplio.com.ua

Zakordonnaftogaz
72 Vetka-Vasylivska St, Kyiv 03110 Ukraine
T.: +380 (44) 237-64-65
office@opcc.org.ua
www.opcc.org.ua

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TRANSIT OF RUSSIAN GAS TO EUROPE

Gas imports 2018 (%)

- 80+
- 60 to 79
- 40 to 59
- 20 to 39
- 0 to 19

Traditional route via Ukraine
- Nord Stream
- Nord Stream 2
- Yamal – Europe
- OPAL
- EUGAL

Traditional route
- Turkish Stream
- Blue Stream

LNG floating / fixed regasification unit
- Baumgarten Gas Hub
- Tabriz-Ankara