IN THE BLACK

Annual report

2016
**Gas Value Chain**

- **92%** of the group revenues

**Naftogaz of Ukraine**
- Gas distribution and supply
- Trading (Naftogaz of Europe)

**UKRTRANSGAZ**
- Gas transmission and storage

**UKRSPETSTRANSGAZ**
- Gas transmission and storage

**UKRAVTOGAZ**
- Natural gas supply

**Naftogaz Trading Europe S.A.**
- Trading (former Naftogaz Overseas S.A.)

**Kirovastrgaz**
- Natural gas distribution and supply

**Chornomornaftogaz**
- Oil and gas upstream

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**Oil Value Chain**

- **6%** of the group revenues

**UKRNAFTA**
- Oil production (50% + 1 share)
- 1.3 million t oil production (68% of domestic production)
- 40 million t oil reserves

**UKRGAZVYDOBUVANNYA**
- Oil production (20% of domestic production)
- 3.7 million t oil and condensate reserves

**NAFTOGAZ (HQ)**
- 1.9 million t oil and condensate reserves

**PETROSANNAN CO (JV, Egypt)**
- 0.3 million t oil and condensate production

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**UKRAVTOGAZ**
- Oil production
- 0.9 million t oil production
- 0.5 million t LPG production

**Ukrtransnafta (100%)**
- Oil transportation

**Ukrtransnafta (42%)**
- Oil transportation

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**Naftogaz estimates based on reserves assessed by Ryder Scott Company**
MISSION AND VALUES

OUR MISSION IS TO BECOME THE DRIVING FORCE FOR MODERNIZATION AND PROFESSIONALISM IN THE UKRAINIAN ENERGY SECTOR INTEGRATED WITH THE EUROPEAN MARKET, ENSURING SECURITY OF ENERGY SUPPLIES AT COMPETITIVE PRICES WHILE MAXIMIZING THE VALUE OF NATIONAL RESOURCES

Integrity and trust: we are honest and reliable in our relations both inside the company and with third parties

Transparency: we are open and objective in our interaction both within the company and with third parties

Professionalism: we are dedicated to professional development and adhere to the highest ethical standards

Fairness: we are consistent, fair, and meritocratic in our relationships with all our customers, employees, competitors, and the state
The document you are holding is more than just a report on the group’s performance in 2016. It is a three-year summary of the work done by the current management team of Naftogaz. The company’s major achievement is being in the black for the first time in the past five years, with no support from the state budget for the first time in the past decade.

We also have a number of additional accomplishments to be proud of. Naftogaz is the top taxpayer in Ukraine. Besides providing a secure gas supply to Ukrainian households, we ensure sufficient supplies for all other consumer categories regardless of circumstances, be it an unusually long cold winter or Gazprom refusing to supply gas to Ukraine when coal reserves are well below the minimum. Thanks to diversification of suppliers, effective stock management, and cooperation with international financial organizations, we are now optimizing our major expenditures. In 2016, we managed to end a multi-year downward trend for Ukrnaftovydobuvannya gas production, and we plan to achieve significant growth for the first time in 2017. Transparency and a systemic struggle against corruption are not just attractive catchphrases; they have become key elements of our corporate culture, which, among other things, has made us the biggest user of Ukraine’s corruption-beating ProZorro e-procurement system. As of the date of this address, we have received a separate award from the Stockholm Arbitration Tribunal in the Gazprom vs Naftogaz case, which fully rejects the “take-or-pay” claim of the Russian side in excess of USD 44 billion.

The above-mentioned achievements represent the perseverance and efforts of many people. While very different at first glance, they have one thing in common that serves as the key to the success for any team - this thing is shared values. These values formed the foundations of our strategy in 2014. They have helped us to make tough but important decisions. They are at the core of the group’s new strategy that we have submitted for approval to our shareholder – the government of Ukraine. Our core values are integrity and trust: we are honest and reliable in relations within the group and with third parties. They also include transparency: we are open and objective when interacting, both inside and outside the group. Most of all, we appreciate professionalism: we are dedicated to professional development and adhere to the highest ethical standards. Finally, we ensure fairness: we are consistent and meritocratic with all our customers, employees, competitors, and the state.

I am very grateful to the people who share our values, both within Naftogaz and outside the group. You have led the group to success despite the reckless resistance of the “old system”. In 2016, this resistance continued to pose a key threat to gas market reform, with Naftogaz as an integral part. It was the number one threat. Fighting against this internal enemy turned out to be much harder and more dangerous than any arbitration. I am convinced that in the near future we will succeed in this battle too, and will move forward to new victories.

Sincerely,
Andriy Kobolyev
example of corporate governance reform
The Naftogaz supervisory board is the first government-supervised board in Ukraine. It participated jointly with the management in implementing best practices in terms of management in implementing best governance. The supervisory board was established on 21 April 2016 in accordance with new legislation. The aim was to establish a new corporate governance system for state-owned enterprises in Ukraine.

Key financial results of the holding company in 2016:
- for the first time in the last 5 years, Naftogaz made a net profit amounting to UAH 28.5 billion and positive net cash flow from operating activities of UAH 50.0 billion;
- based on the operating results in 2016, the company will pay dividends of UAH 15.3 billion (55% of income 2016) to the sole shareholder (the state) and advance income tax of UAH 24 billion;
- for the first time since 2003, the company did not receive direct support from the state in the form of compensation for the difference in prices through recapitalization at the expense of obtained government bonds;
- the company paid UAH 16.3 billion to the budget, which is 6% more than planned;
- two times during the year (in January and July-September 2016), imported natural gas was purchased using an EBRD USD 300 million revolving credit line which was received by the company under sovereign guarantee at the end of 2015;
- agreements with Citibank and Deutsche Bank on a EUR 428 million revolving credit facility guaranteed by the World Bank were signed. These have been put in place to finance the purchase of natural gas. By doing so, the cost of financing was reduced. The cost of the credit line does not exceed 2.5% per annum;
- the weighted average effective interest rate under financial liabilities was reduced from 14.3% to 12.0%; despite the fact that loan rates for Ukrainian companies increased both in the domestic and foreign financial markets.

Structure of the board and its committees
Appointment and contracting
According to the Resolution of the Ministry of Economic Development and Trade of Ukraine dated 28 March 2016 No. 562, the supervisory board has a composition of five members, three of which are independent directors. All board member appointments are for a period of four years.

The individual members of the supervisory board have been appointed by the board. The supervisory board has been confirmed on 21 April 2016 by the Order of MERU No. 725. All of the board members have been elected by the nomination committee for appointment of officers of strategically important enterprises at the Ministry of Economic Development and Trade of Ukraine. During 2016, all of the appointed supervisory board members were compliant with the criteria applied to the identity of a board member as established by their respective rules of procedures of supervisory board [in addition approved by the Resolution of the Cabinet of Ministers of Ukraine dated 5 December 2015 No. 1102], including those regarding competence and time to be dedicated to the work on the Board. The current composition of the supervisory board meets the requirements on gender diversity.

Independent directors made statements on their independence to the nomination committee for appointment of officers of strategically important enterprises at their appointment confirming that they are fully compliant with the independence criteria established by said rules of procedure. Reviewed statements are in the annual report submitted to the general shareholder meeting and published on its official website.

On 11 May 2016, independent directors were contracted by the company to perform their board functions on the basis of service agreements. According to the provisions of the service agreements of all independent directors, the fee for performance of their board functions (including compensation for expenses) are payable for the period starting from 25 March 2016.

Mr. Demeshchyn entered into a similar service agreement with the company on 22 September 2016. The fee for services described in said agreement is payable for the period of 25 March 2016.

The Naftogaz supervisory board was established on 21 April 2016 in accordance with new legislation. The aim was to assist the government and company in implementing best international practices in terms of governance. The supervisory board participated jointly with the management in developing the company’s strategy and preparing it for the submission to the government.

The Naftogaz supervisory board is the first example of corporate governance reform of state-owned enterprises initiated by the government adoption of the Law of Ukraine “On amending certain legislative acts of Ukraine on management of state and communal property” dated 2 June 2016 No. 1644-VIII.

The main thrust of the new corporate governance system for state-owned enterprises lies in minimizing political influence on their activity. The changes aim to decrease conflicts of interests between the government policy development and economic feasibility in the managerial decision-making process on the company’s activities while improving the efficiency and transparency of their activities and eliminating corruption to achieve better performance. This will benefit the budget and the public.

Most of the issues dealt with during 2016 by the supervisory board involved resolving past challenges, implementing the corporate governance reform of Naftogaz, and establishing the foundations for improved management systems going forward.

We took forward to starting a new path focusing on future strategy and the internal controls of Naftogaz group to add value to the business and the people of Ukraine.

It should be noted that successful delivery of this approach will require the government to implement the legislative and regulatory changes described in the Corporate Governance Action Plan (the CGAP).

At the time of publication, these actions of Ukraine on management of state enterprises lies in minimizing political influence on their activity. The changes aim to decrease conflicts of interests between the government policy development and economic feasibility in the managerial decision-making process on the company’s activities while improving the efficiency and transparency of their activities and eliminating corruption to achieve better performance. This will benefit the budget and the public.

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At the time of publication, these changes had not been implemented.

Business overview of the company: operational and financial performance
Key results of the company’s operational performance in 2016:
- transit of natural gas through Ukraine of 822 bcm was reached, a volume 22.5% more than in 2015 (671 bcm). The volume of transit and the cost of transit services in 2016 were the highest in the last three years;
- Naftogaz satisfied demand for imported natural gas with the help of suppliers in the European market;
- 812 bcm of imported natural gas (almost two times lower than in 2015) was purchased from 15 European suppliers. The share of each supplier did not exceed 50% of the total volume of gas purchased by Naftogaz;
- development of the company’s own licensed gas resources held through its subsidiary Ukrzhydobyvannya. An agreement was concluded with Ukrzhydobyvannya on drilling wells and equipping fields at licensed sites of the company HQ to perform minimum obligations via work programs that are integral parts of special permits for subsoil use.

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### Supervisory board

<table>
<thead>
<tr>
<th>Name</th>
<th>Attendance of the supervisory board meetings in 2016 (both regular and extraordinary)</th>
<th>Audit committee¹</th>
<th>Ethics committee¹</th>
<th>Nomination and remuneration committee¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kovaliv Yulia Ihorivna</td>
<td>9/10 (with partial presence during meetings on 15-17 July 2016 due to a business trip and 8-11 November 2016 and 5-9 December 2016)</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
<tr>
<td>Warwick Paul Cyril</td>
<td>9/10</td>
<td>5/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
<tr>
<td>Richards Marcus Trevor</td>
<td>8/10</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
<tr>
<td>Proctor Charles Richard Faraday</td>
<td>9/10 (with partial presence during meeting on 15-17 July 2016)</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
<tr>
<td>Demchishyn Volodymyr Vasyliyovych</td>
<td>9/10</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
</tbody>
</table>

¹Total number of meetings excludes the first supervisory board meeting held on 11-13 May 2016 which resulted to establish the audit committee, the ethics committee, and the nomination and remuneration committee.

### Remuneration of the individual members of the supervisory board for the year 2016

<table>
<thead>
<tr>
<th>Name</th>
<th>Total, UAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Warwick Paul Cyril</td>
<td>5 218 222.29</td>
</tr>
<tr>
<td>2 Richards Marcus Trevor</td>
<td>5 579 701.40</td>
</tr>
<tr>
<td>3 Proctor Charles Richard Faraday</td>
<td>5 229 498.52</td>
</tr>
<tr>
<td>4 Demchishyn Volodymyr Vasyliyovych</td>
<td>2 835 826.25</td>
</tr>
<tr>
<td>5 Kovaliv Yulia Ihorivna</td>
<td>106 470.56</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>19 069 718.03</strong></td>
</tr>
</tbody>
</table>

### The board focused on:
- development, jointly with the executive board of robust strategy for Naftogaz and the group in the light of emerging opportunities and the assets of the current business based on sound commercial principles and recognition of the company’s public-service obligations underpinned by forward projections on health, safety and the environment, financial and operating performance, and risk management requirements.
- implementation of the spirit and intent of the CGAP to align corporate governance and the relationship with the shareholder in line with accepted OECD principles for state owned enterprises, to allow the company to operate as an ethical and commercial concern, meeting its public service obligations and foreign direct financial support, and
- initiating design and execution of a consistent enterprise management framework (system of internal financial control) across Naftogaz group to ensure that effective control are in place to drive health, safety and the environment, operational and financial performance of the company and Naftogaz group consistent with international best practice.

### Conflict of interest
Members of the supervisory board are required to disclose any potential conflicts of interest with the items of the agenda. During extra ordinary supervisory board meetings held on 26 July and 12 August 2016, agenda items on the approval of interested transactions agreements for natural gas supply for July and August 2016 between the company and Odesa Port Plant were notified of a conflict by the chair of the supervisory board as far as during that time, the chair has been a member of the working group preparing recommendations and proposals to the draft decisions of the Cabinet of Ministers of Ukraine on the sale of state property subject to privatization (Ukrainian government consulting and advisory body engaged in advising on Odessa Port Plant privatization).

### Board priorities
In the absence of approved ownership policy from the shareholder, the priorities of the supervisory board in 2016 were to engage in reviewing and setting up the strategy of the company, developing and implementing a system of internal control and a system of delegation of authorities, launching the internal audit function, and collaboration with the executive board and key subsidiaries of the group on drafting financial and investment plans for 2017.

The supervisory board and the executive board focused on the development of the optimal operational model of Naftogaz and its group of companies and on implementation of the CGAP adopted by the government in 2015. By the end of 2016, the vast majority of actions required by the CGAP on the part of the company and the board were complete, whilst performance of pending actions were rescheduled due to delays in performance of Phase II of the CGAP on the side of the government.

All of the required decisions regarding the operations of the board, committees and corporatesecretariat were adopted during the reporting year.

In addition to this, the board elected a chief compliance officer, risk management officer and chief audit executive to objects of state property subject to privatization (Ukrainian government consulting and advisory body engaged in advising on Odessa Port Plant privatization).

### Shareholder and external communication
In 2016, the supervisory board established the practice of regular communication with the government by holding joint meetings with the Vice Prime Minister and other representatives of the sole company shareholder.

The board regularly met with representatives of international financial organizations as the company’s lenders, and took an active part in cooperation with professional external advisors engaged by the company to develop Naftogaz group strategy and implement a system of internal controls.
**Competence and proceedings of supervisory board committees**

**Audit committee**

**Purpose of the committee**

The audit committee was formed via a resolution of the supervisory board meeting dated 11-15 May 2016 as a permanent consultative body accountable to the supervisory board.

The purpose of the committee is to assist the supervisory board in overseeing the completeness, accuracy and accountability of financial statements, the effectiveness and reliability of internal controls, the independence of both external and internal audits, and adherence to the law and the Naftogaz code of ethics.

**Key functions of the committee**

The regulations on audit committee of the supervisory board define the following key tasks and functions of the committee:

1. to organize and perform preliminary review of matters included into the agendas of the committee and the supervisory board and related to finance, audit and risk management;
2. to organize and elaborate the drafting of conclusions, proposals, recommendations, draft policies, strategies, rules of procedure, procedures, decisions related to finance, audit and risk management, and their submission for supervisory board review;
3. to organize and perform functions related to financial statements as detailed in regulations;
4. to organize and perform functions related to internal controls and risk management as detailed in regulations;
5. to organize and perform functions related to the external audit of the company as detailed in regulations;
6. to organize and perform functions related to the internal audit of the company as detailed in regulations;
7. to organize and perform functions related to the treasury arrangements of the company as detailed in regulations;
8. to organize and perform other company responsibilities including special investigations and the consideration of fraud allegations.

**Key results in 2016**

During 2016, the committee reviewed Naftogaz’s standalone and Naftogaz group’s consolidated financial statements as approved by independent auditors. It met with the company’s external auditors, independent of the executive board. It reviewed the overall treasury management activities of the company and approved a number of recommendations on these matters. It considered proposals on restructuring the internal audit function and development of internal audit plan for 2017 to enable proper internal audit of Naftogaz and its group companies. As part of the overall Audit Program of Naftogaz, in December 2016 the committee initiated special investigations of certain audit findings after being alerted by the company’s external auditors regarding suspicious operations within Uktransgaz.

**Ethics committee**

**Purpose of the committee**

The ethics committee was formed via a resolution of the supervisory board meeting dated 11-15 May 2016 as a permanent consultative body accountable to the supervisory board with the main purpose of assisting the board in the protection of the company’s interests by evaluating and providing recommendations and proposals.

**Key functions of the committee**

The regulations on ethics committee of the supervisory board define the following key tasks and functions of the committee:

1. implementation of the code of corporate ethics for the company, including monitoring and resolving conflicts of interest, establishing specific rules and procedures for the handling of third-party complaints related to ethics breaches committed by the company’s officers and employees;
2. application of the code of corporate ethics to ensure ethical decision-making, compliance with the laws in the jurisdictions in which the company operates, as well as conformance with internal company standards; establishment of reporting, investigation, and treatment of violations;
3. setting a framework for the company’s risk policies, analysis and review of the company’s rules, procedures and practice on ethics-related issues with a view to identifying possible breaches and assessing their effectiveness in meeting the company’s interests and needs;
4. monitoring of the operating environment and best international practices (general and sector-specific) in terms of corporate ethics, engagement with various stakeholders to assess the adequacy of current company policies;
5. ensuring the appropriate level of accountability and transparency of the company;
6. promotion of effective communication between the company’s management and its staff with a view to reinforcing understanding of the company’s ethical values and encourage their implementation as well as to deter unacceptable practices.

**Key results in 2016**

In 2016, the committee focused on significant revision and update of the existing code of corporate ethics of Naftogaz, on structuring the help line and whistleblowing functions with the aim of implementing principles of ethical behavior and creating a modern corporate culture within Naftogaz to operate as other leading national oil & gas companies around the world.

**Nomination and remuneration committee**

**Purpose of the committee**

The nomination and remuneration committee was formed via a resolution of the supervisory board meeting dated 11‑15 May 2016 as a permanent consultative body accountable to the supervisory board. Its main purpose is to ensure preliminary review and detailed elaboration of matters within the supervisory board authority in the sphere of nominations and remunerations. It aims to provide recommendations to the supervisory board in the sphere of human relations, including engaging qualified specialists in the sphere of management, and creating necessary incentives for efficient activity.

**Key functions of the committee**

The regulations of the nomination and remuneration committees of the supervisory board define the following key tasks and functions of this committee:

1. assistance to the supervisory board in the drafting and implementation of the succession strategy of the company’s management in order to ensure continuous work of the executive board;
2. establishment and implementation of nomination policies and standards of the company on the selection of nominees for positions in the executive board;
3. defining principles of remuneration and the terms of employment agreements of members of the executive board in order to create the necessary incentives for efficient work implementing the company’s development strategy;
4. organization of drafting and processing policies, strategies, rules of procedure, resolutions and other documents that regulate activity in the sphere of nominations and remunerations of the members of the executive board, preparing conclusions, recommendations, and proposals for the supervisory board in this area;
5. preparation and submission for review by the general shareholders meeting or the supervisory board (as established by the charter) of proposals regarding the election or termination of the authorities of the chief executive officer and members of the executive board, other officers of the company nominated and dismissed by the supervisory board;
6. forming proposals regarding criteria and systems of assessment for the chief executive officer and members of the executive board, corporate secretary, risk management officer, chief audit executive, chief compliance officer, and anticorruption officer;
7. preliminary analysis of performance results of the chief executive officer and members of the executive board, including in view of possible remuneration increases and the application of other incentives.

**Key results in 2016**

In 2016, the committee focused its work on developing the nomination and succession policies for both the company’s staff and the executive board, as well as on assisting the executive board to develop an organizational structure for Naftogaz and its group following the best international practices of leading oil & gas companies.

Following commencement of its operations in 2016, the committee concluded that the Naftogaz HR processes and procedures underpinning the work of the nomination and remuneration committee required a thorough transformation. This included implementation of an effective performance management system, fully developed succession plan and remuneration schemes, including executive and staff bonuses. This will be a multi-year project requiring external expert help and several continuous improvement, as has been the case in most companies who excel in these areas. It is the intention of the committee to work with the management of the company to pursue this agenda throughout the group, including all subsidiaries.

**Adoption and review of the regulations on committees**

The regulations on audit, ethics, and the nomination and remuneration committees were adopted on the basis of the requirement to resist them after six months to assess possible improvements. The board plans to address this in 2017 within the framework of implementation of the system of internal controls within the company.
ROLE OF THE STATE AS THE SHAREHOLDER

The State as the shareholder, represented by the Cabinet of Ministers of Ukraine, sets directions to the company:

- Set directions should be consistent with the state’s ownership policy where the government explains to the people of Ukraine why it needs Naftogaz in state ownership.
- Strategy of the company is based on the directions set up by the government.
- The supervisory board is assigned with a broad mandate including approval of strategy, financial and investment plans, election and termination of authorities of executive board members.
- The State guarantees prevention of political meddling into activities of the company.
- The State is an active and informed owner. Corporate governance is performed with due account for the specifics and needs of the company in order to ensure that the company follows the directions set by the government.
- The State establishes efficient corporate bodies, appoints highly qualified reputable professionals, and delegates governance of the company to them. In addition, an appropriate internal control system is duly functioning in the company and an independent auditor is elected.
- Regulatory and ownership (shareholding) functions should be separated.

GOALS OF CORPORATE GOVERNANCE REFORM

To implement corporate governance structure compliant with the best world practices for state-owned companies:

- To elect supervisory board members with a majority of independent directors.
- The supervisory board is assigned with a broad mandate including approval of strategy, financial and investment plans, election and termination of authorities of executive board members.
- To establish functional internal control systems to include internal audit, compliance, financial control, risk management, etc.
- To confirm the company’s status as a legal entity of private law.
- To confirm the company’s title to the shares/corporate rights of the legal entities whose shareholder is the company.

The company, as well as other state-owned enterprises, will observe high standards of transparency. In addition to obligatory disclosures, the company will be subject to the same high-quality accounting, disclosure, compliance and auditing standards as listed companies.
CREATING VALUE: SIX CAPITALS

2016 data

MANUFACTURING
Naftogaz is a leading enterprise in the oil and gas sector and one of Ukraine's biggest companies.
See p. 104 for more details

<table>
<thead>
<tr>
<th>Natural gas production</th>
<th>Crude oil and gas condensate production</th>
<th>Natural gas storage</th>
<th>Natural gas transmission and distribution</th>
<th>Crude oil transportation</th>
<th>Natural gas sales and supply</th>
<th>Crude oil refining and gas condensate processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.5 UAH billion</td>
<td>9.4 UAH billion</td>
<td>185.5 UAH billion</td>
<td>2654 UAH billion</td>
<td>15.6 UAH billion</td>
<td>0.2 UAH billion</td>
<td>8.2 UAH billion</td>
</tr>
</tbody>
</table>

VALUE OF FIXED ASSETS BY SEGMENT

NATURAL
Naftogaz tries to minimize its environmental impact.
See p. 103, 107 for more details

<table>
<thead>
<tr>
<th>Reserves</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>gas:</td>
<td>gas:</td>
</tr>
<tr>
<td>304.8 bcm</td>
<td>211.7 bcm</td>
</tr>
<tr>
<td>oil and gas condensate:</td>
<td>oil:</td>
</tr>
<tr>
<td>47.2 million t</td>
<td>98.8 million t</td>
</tr>
</tbody>
</table>

Naftogaz estimates based on reserves appraised by Ryder Scott Company

INTELLECTUAL
Intellectual capital is one of the strategic assets of Naftogaz group and our competitive advantage.
See p. 112 for more details

INTERNAL MANAGEMENT AND CONTROL SYSTEMS
INTELLECTUAL PROPERTY
CORPORATE GOVERNANCE SYSTEM IN LINE WITH THE OECD CORPORATE GOVERNANCE PRINCIPLES
RISK MANAGEMENT SYSTEM

HUMAN
Naftogaz is one of the biggest employers in Ukraine. Naftogaz group companies employ 74,765 persons.
See p. 26 for more details

<table>
<thead>
<tr>
<th>Development and Social Security for Employees</th>
<th>Safe Working Conditions (Health, Safety and Fire Prevention)</th>
<th>Qualified Specialists (Improved Their Qualification)</th>
<th>Competitive Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8 UAH billion</td>
<td>391.9 UAH million</td>
<td>19,643 persons</td>
<td>71% higher compared with the industrial sector of Ukraine</td>
</tr>
</tbody>
</table>

FINANCIAL
Naftogaz continuously works to secure competitively priced funding and honors all obligations to its lenders.
See p. 112 for more details

<table>
<thead>
<tr>
<th>Net Assets</th>
<th>Net Profit</th>
<th>Net Operational Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>460 UAH billion</td>
<td>22.5 UAH billion</td>
<td>47.3 UAH billion</td>
</tr>
</tbody>
</table>

SOCIAL
We realize social importance of our activity for the country's economy and Ukrainian public and believe that our activity in the area of corporate social responsibility is our contribution to sustainable development of Ukraine.
See p. 121 for more details

<table>
<thead>
<tr>
<th>Social Development of Local Communities</th>
<th>Responsible Corporate Culture</th>
<th>Relations with Stakeholders</th>
<th>Principles and Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>55.8 UAH million</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EXECUTIVE BOARD STRUCTURE AND REMUNERATION

Andriy Kobolyev
Chief executive officer (chairman of the executive board) since 25 March 2014

Andriy began his career at the international audit and consulting group PriceWaterhouseCoopers (PwC), where he specialized in issues of strategic management and corporate transformation. From 2002 to 2010 he worked at Naftogaz, rising from a chief specialist to adviser to the chairman. Some time later, Andriy co-founded AYA Capital investment banking group where he focused on debt and equity capital raising, debt restructuring and corporate reorganizations of large enterprises and holdings. Andriy holds a master’s degree in international economic relations with honors from the Institute of International Relations at Kyiv Shevchenko National University.

Sergiy Konovets
Chief financial officer (deputy chairman) since April 2014

Sergiy is responsible for financial and economic management in Naftogaz. Sergiy has more than 20 years of professional experience in strategy development, business development, finance and audit with international companies. He worked as audit partner for leading audit companies Deloitte and EY. Before his appointment to Naftogaz, Sergiy worked at international consultancy Boston Consulting Group. He also worked in a business development and strategic planning function at international agriculture holding Bunge located in Switzerland. Sergiy holds an MBA degree from the International Institute for Management Development (IMD) in Lausanne, Switzerland.

Sergiy Pereloma
First deputy chairman since August 2014

Sergiy has more than 15 years experience in the oil and gas industry and manages divisions responsible for transit and supply of natural gas, customs clearance, gas sales and gas balancing. He has extensive experience in finance, banking and insurance sectors. Sergiy graduated from the Institute of International Relations at Kyiv Shevchenko National University.

Yuriy Kolbushkin
Member of the executive board since February 1999

Yuriy has worked at Naftogaz since the company was founded. He is responsible for taxation, pricing policy, budgeting and economic relations. Before moving to oil and gas industry, he worked for 15 years in the Finance Ministry of Ukraine. Yuriy graduated from the Kyiv Institute of National Economy, holds a doctoral degree in economics and is a member (academic) of the Ukrainian Academy for Oil and Gas.

Remuneration of the management
During 2016, the management consisted on average of 4 executive board members and 6 directors (4 executive board members and 4 directors in 2015). Compensation to the management, which is part of other operating expense, included salary and additional current bonuses and made up UAH 88 million in 2016 (UAH 7 million in 2015). Please find the income declaration of chairman of the executive board Andriy Kobolyev for 2016 on the company’s website www.naftogaz.com in Corporate governance section.

Remuneration paid to Naftogaz board members in 2016

<table>
<thead>
<tr>
<th>Members 01.01.2016-31.12.2016</th>
<th>Gross remuneration in 2016 as board member, UAH million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andriy Kobolyev</td>
<td>19.0</td>
</tr>
<tr>
<td>Yuriy Kolbushkin</td>
<td>10.2</td>
</tr>
<tr>
<td>Sergiy Konovets</td>
<td>10.1</td>
</tr>
<tr>
<td>Sergiy Pereloma</td>
<td>10.5</td>
</tr>
<tr>
<td>Total</td>
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</tr>
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<td>10.5</td>
</tr>
<tr>
<td>Total</td>
<td>50.8</td>
</tr>
</tbody>
</table>
YURIY VITRENKO
Chief commercial officer of Naftogaz Group

Yuriy is responsible for strategic development and reform of Naftogaz and for the diversification of gas supplies to Ukraine. He also supervises international business activity of the company as well as development of international cooperation and manages gas purchases in European gas markets.

Yuriy worked for Naftogaz in 2002-2003 and 2005-2010 being responsible for international bank loans and debt restructuring. He was an adviser to the chairman of the board on permanent and freelance basis.

His career began in 1998 with the international audit and consulting group PriceWaterhouseCoopers [PwC], where he advised major Ukrainian companies on financial management. He has 9 years of experience in investment banking and finance in Ukraine and abroad. Yuriy worked for Merrill Lynch investment bank in London and was the senior vice-president and chief operational officer at Amstar Europe international investment fund. He is a co-founder and partner AYA Capital investment banking group and headed the company between 2010 and 2016.

In 2004 Yuriy graduated from the MBA program at the INSEAD Business School (France, Singapore). He holds a master’s degree in International Business Management from Kyiv National Economic University, and is an Associate of the London Securities and Investment Institute (ASI).

From April 2014 till June 2016 held the position of director for business development

VITALIY SHCHERBENKO
Director for administrative activity and energy efficiency

Vitaliy is responsible for organizing and planning capital investment and non-core asset programs at Naftogaz group. He manages investment raising for projects on energy saving technologies, minimizing natural gas losses and consumption and increasing the share of renewable energy sources. He is also responsible for procurement, coordinates personnel policy, social issues and logistic support. He has more than 20 years of experience in senior management positions. Vitaliy studied Economics at Kyiv National Economic University.

From April 2014 till June 2016 held the position of director of energy efficiency and procurement

YAROSLAV TEKLYUK
Director for legal affairs

Yaroslav is responsible for legal matters and government relations. He has more than 15 years of professional experience in legal practice. Yaroslav has provided legal advice and represented corporate clients in banking, financial, and telecommunications sectors. Prior to joining Naftogaz he spent eight years at Vasil Kisil and Partners, a leading Ukrainian law firm, including four years as a partner. Yaroslav has graduated in International Law from the Institute of International Relations at Kyiv National Shevchenko University.

From April 2014 till June 2016 held the position of director for legal affairs and government relations

ROMAN BILIAHA
Procurement director of Naftogaz Group

Roman is responsible for successful implementation of a single procurement policy and innovative procurement methods for Naftogaz and its group companies. In this role, he is focusing on the development and adoption of common standards and regulations, specifically related to procurement in infrastructure projects. Roman has a total of more than 10 years’ procurement experience in senior positions within the oil and gas industry [mainly with TNK-BP, one of the largest oil companies]. He holds an engineering degree from Vinnitsa National Technical University.

From November 2015 till June 2016 held the position of director, procurement centre of excellence
**PERSONNEL**


**Naftogaz group personnel profile**

Today, the enterprises of the group employ professionals who have experience with large international companies such as ArcelorMittal, BCG, Chevron, ConocoPhillips, Deloitte, Dragon Capital, ExxonMobil, EY, KPMG, McKinsey&Company, PwC, Shell and others.

Naftogaz is one of the largest employers in Ukraine. The enterprises of Naftogaz group employ 74,765 persons, including 8,466 managers (11%), 12,537 professionals and specialists (17%), 493 technical staff (0.7%), and 53,269 skilled and other workers (71.3%).

78% of group personnel are men (58,190 persons) and 22% are women (16,575 persons).

The total number of managers, professionals, specialists of the group is 21,003 persons, of which 20,680 persons, or 98%, have university degrees (higher education, incomplete higher or basic higher education). 217 persons have PhDs and 22 persons – academic titles.

The personnel breakdown by age: 25% (18,893) are persons under 35, 14% (10,154) are those who will be entitled to retire in 5 years or earlier, 3% (2,055) are old age pensioners, and the vast majority of employees are 35 to 50 years old (58%).

**Human rights policy**

As an international company, we respect and protect human rights in our countries of operation. The company operates in accordance with the principles of the Universal Declaration of Human Rights, Conventions of the International Labor Organization (Convention No 29, 87, 98, 100, 135, 111, 128, 182), the UN Global Compact 1999. The company’s human rights policy meets the provisions of the above acts.

Workflow in the companies is organized and labor relations are regulated based on the following principles:

- Freedom of association and collective bargaining;
- Adequate working conditions and terms of remuneration;
- Prohibition of discrimination based on sex, political affiliation, religion, ethnicity or age, forced, sexual identity and of forced and child labor. During 2016, the company recorded no cases of discrimination.

**Head of human resources and social policy**

Ivan Synyakov

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**Naftogaz group personnel structure, 2016**

<table>
<thead>
<tr>
<th>Personnel categories¹</th>
<th>Gender structure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>men</td>
</tr>
<tr>
<td>Qualified and other workers</td>
<td>72%</td>
</tr>
<tr>
<td>Professionals and specialists</td>
<td>16%</td>
</tr>
<tr>
<td>Managers</td>
<td>3%</td>
</tr>
<tr>
<td>Technical staff</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

¹ personnel categories according to the Ukrainian Occupational Classification

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**Number of staff by core operations**

<table>
<thead>
<tr>
<th>Core operations</th>
<th>Number of staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>men</td>
</tr>
<tr>
<td>gaz/oil extraction</td>
<td>16,093</td>
</tr>
<tr>
<td>gas transportation</td>
<td>10,944</td>
</tr>
<tr>
<td>other types of activities</td>
<td>2,055</td>
</tr>
</tbody>
</table>

---

"We have a fair, balanced, transparent and performance-oriented remuneration system. That is the main tool for attracting and retaining the best professionals with the required skills, knowledge, competencies, and relevant values who will work efficiently to achieve results in accordance with the company business strategy and get fair compensation for that. Employee involvement and motivation for change within the company really matters."

Head of human resources and social policy

Ivan Synyakov
The company guarantees that the legitimate rights of employees are in no way violated. The company continuously analyzes risks that could potentially lead to violations of the rights of employees and makes every effort to prevent them.

**Remuneration for staff**

Naftogaz has a fair and transparent remuneration system in place in compliance with the standards and safeguards required by law of Ukraine, together with general and sector agreements. During 2016, the average salary of regular employees in Naftogaz group increased by 37% compared to 2015.

**Social security of employees**

The management of the company and its enterprises realize that the sustainable and efficient operations of the company and the oil and gas industry depend on the climate in the workplace, timely payment of wages, creation of safe working conditions, ensuring a decent standard of living, and secure social protection.

Therefore, despite the tough economic and political conditions in the country, over the past year the enterprises of the company, within the available funds, have performed the requirements of the sectoral agreement and collective agreements. They have taken measures to maintain guarantees, benefits, and compensation to the workers in the industry, and to protect the rights of personnel.

Under the terms of the sector agreement and the collective agreements, the enterprises and trade unions of the company arranged rehabilitation and recreation activities for the employees and their families and pensioners. During the reporting period, health resort vouchers were provided to more than 8,000 employees, which is two thousand more than in 2015 and includes more than 8,000 children, which is the same as last year. The total cost of their recreation amounted to UAH 95.6 million. That is 11% more than in the same period of 2015.

The company also provides funds and maintains social infrastructure facilities owned by company enterprises and which are used not only by the company employees, but also by the residents of the towns where enterprises and affiliates are located.

These include housing facilities, cultural institutions, health care facilities and canteens, sports and recreation facilities, etc. For the reporting period, their maintenance costs amounted to UAH 355.0 million, which is 28% more than in 2015.

Under the collective agreement, the additional benefits and guarantees include expenditures on:

- rehabilitation and recreation of employees and their families
- health insurance and/or compensation for the treatment
- bonuses
- other financial assistance and benefits (financial assistance at birth, and to low-income and large families, benefits to pensioners and veterans, etc.)

Non-financial incentives include corporate awards (honors and certificates). The company also encourages its employees by providing opportunities to study and improve their skills.

**Social partnership in labor management**

The enterprises of the group base their social partnership on the following principles:

- equality;
- respect and consideration for the interests of the parties;
- compliance by the parties and

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- equality;
- respect and consideration for the interests of the parties;
- compliance by the parties and
their representatives of laws and regulations;
- contractual regulation of social and labor relations;
- need to achieve mutually acceptable compromises when negotiating the terms of the collective agreement;
- freedom of choice when discussing matters related to labor;
- adoption of voluntary commitments by the parties;

98% of the employees of Naftogaz group are trade union members. Joint meetings of the employer’s bodies and trade unions are held twice a year to discuss the implementation of sectoral agreements.

The provisions of collective agreements and sectoral agreements apply to all employees of the group enterprises, including temporary or part-time employees.

Professional development of employees

Naftogaz is implementing policies aimed at improving professional skills and the development of human resources. The company staff training plan is designed based on the responsibilities of its business units and their proposals. It focuses on the development and improvement of professional skills and knowledge.

In addition, the company has corporate training programs on quality, environment, energy saving and social responsibility as part of the implementation of integrated management system in accordance with the requirements of ISO 9001, ISO 14001, ISO 50001, OHSAS 18001 (ISO 45001) and SA 8000.

In 2016, 19 643 employees were trained compared to 17 482 employees in 2015. They are mostly technical staff and skilled workers (13 206). 2 239 employees gained new qualifications (trained, retrained, trained in related occupations). In 2016, 219 employees attended English courses.

Working with students and recent graduates

Working with talented young people is one of the top priorities of Naftogaz, which makes consistent steps to ensure stable annual recruitment and to attract the best generation of professionals. In this regard, Naftogaz closely cooperates with top universities. The students of Ivano-Frankivsk National Technical University of Oil and Gas, Pontava National Technical University, Drohobych Oil and Gas College, and other universities and educational centers have the opportunity to study under a dual system where students receive theoretical knowledge at their universities or colleges and at the same time gain practical skills at the enterprises of the group. The students are fully immersed in the production environment with the specifications, plans, weekly reports, quality control. They learn how to work as a team.

During these apprenticeships, each student gets his/her coach – an employee of the business unit, who helps them to learn a profession, to adapt to the new environment, and to get the idea of the workflow.

With a successful apprenticeship, students of blue-collar occupations tend to get a job offer at the enterprises of the group after they graduate.

The enterprises of the group willingly employ graduates and are committed to invest in their development and training and to facilitate their successful career. Learning at work is the main but not the only part of the learning process.

On 16 June 2016, Ukrzasvydobyvannya and Professional Government Initiative signed a memorandum of cooperation in order to attract qualified candidates. With organizational support provided by the Professional Government Initiative, short-term internships in the company will be arranged to train specialists for Ukrzasvydobyvannya, state-owned enterprises and public service.

Major tasks for 2017

The company has established its major tasks in personnel management for 2017:

1. Completion of the implementation of a grade-based wage system (at all levels) for all categories of staff and target-oriented assessment management systems. This would link the remuneration pattern to business objectives (performances, achievement of objectives), create conditions for building a consistent remuneration and benefit policy in line with international standards and best practices, and create a common understanding of the meaning and contribution of each employee in achieving the strategic objectives of the company.

2. Construction of an efficient internal communications system within Naftogaz group. The communications system will include a set of channels and tools to communicate with different target groups. An integrated system will operate on a permanent basis under unified standards that will allow every employee to receive prompt and accurate information about the company objectives, strategy, results of the company, enterprises and individual employees. A feedback mechanism is to be introduced through dedicated channels and surveys, which would enable us to engage employees in the planning of the company operations and their involvement in adjusting the company processes.

3. Establishment of Naftogaz unified system of knowledge management, leadership and talent development at the Corporate University. The objective is business development through a single set of measures to develop key skills, competencies and managerial capacity of Naftogaz group staff.

4. Establishment of the Ukrainian employer association as the authorized body to represent and protect the rights and interests of employers of the industry in economic, social, labor, employment and other areas, including their relations with other parties to the social dialogue and the conclusion of the sectoral agreement.

5. Adoption of Naftogaz group’s unified personnel policy which will specify single standards, principles and rules for HR management and relationships between employees and the company at all levels and enterprises.

“Recently we’ve welcomed a lot of young people to the company. The wage is very decent. We still have vacancies, but my advice is – do not ignore any opportunities. Because in addition to the knowledge and desire to work in a prestigious company, one must gain the necessary experience.”

Chief geologist of Ukrgazvydobuvannya Mykhailo Machuzhak
Naftogaz group health and safety policy

The employees of Naftogaz group operate sophisticated equipment and perform a large number of hazardous works. The company is committed to preventing employee exposure to accidents and occupational health risks.

The occupational health and safety strategy of Naftogaz group determines its policy, objectives, goals, key principles and areas for creation of proper and safe working conditions, prevention of accidents, occupational health risks, traffic accidents and accidents at work.

The safety and health of workers is an integral part of the social responsibilities of the company. The desire to maintain a safe working environment not only requires the implementation of the relevant economic policies, but also protects fundamental human rights.

The objectives of the company in the field of occupational health and safety are to reduce the number of:
- industrial injuries and disability days due to accidents at work
- workplace deaths as a result of sudden health deterioration due to existing diseases
- accidents involving company vehicles
- occupational health risks and accidents at work

“Occupational safety, including adherence to traffic regulations by the employees of our enterprises, depends on safety awareness of managers at all levels. The situation in this area will improve. Our priority is to maintain an active dialogue with each other.”

Director for safety, environmental and industrial security of Naftogaz Vitaliy Zayets

The company, realizing its full responsibility for the health and safety of workers employed at its oil and gas production facilities, is guided by the applicable principles of European law and the best international practices.

Reducing workplace injuries. Analysis of health and safety indicators

Naftogaz takes consistent actions to reduce occupational injuries within the group of companies.

In 2016, 24 accidents occurred at the enterprises of the group (in 2015 – 22), including three accidents involving groups of employees (in 2015 – 2).

In total, 27 employees were injured (in 2015 – 24).

The last three years have seen a reduction in the number of victims of fatal work injuries: in 2014, eight workers were killed in accidents at work.

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Fatal accident frequency rates of Naftogaz with those in other industries and Ukrainian national average rate

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naftogaz</td>
<td>1.1</td>
<td>0.32</td>
</tr>
<tr>
<td>Metallurgical industry</td>
<td>1.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Chemical industry</td>
<td>1.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Ukraine</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Accident frequency rates of Naftogaz with those of other industries and Ukraine national average rate

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naftogaz</td>
<td>3.3</td>
<td>2.0</td>
</tr>
<tr>
<td>Metallurgical industry</td>
<td>6.4</td>
<td>4.7</td>
</tr>
<tr>
<td>Chemical industry</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Ukraine</td>
<td>3.0</td>
<td>2.5</td>
</tr>
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</table>

Number of workplace injuries at Naftogaz group enterprises in 2014–2016

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of injuries (in thousands)</td>
<td>500</td>
<td>400</td>
<td>300</td>
</tr>
<tr>
<td>Number of workplace injuries (in thousands)</td>
<td>200</td>
<td>150</td>
<td>120</td>
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Fatal accident frequency rates of Naftogaz with those in other industries and Ukrainian national average rate

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<td>0.6</td>
</tr>
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<td>1.0</td>
<td>0.8</td>
</tr>
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<td>Chemical industry</td>
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<td>0.6</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Fatal accident frequency rate is calculated per 10,000 listed employees.

Fatal accident frequency rate = \( \frac{N \times 10000}{A} \)

where:
- \( N \) = the number of reported workplace fatal accidents for the reporting period;
- \( A \) = the average number of listed employees for the reporting period.

The accident frequency rate is calculated per 1,000 listed employees.

Accident frequency rate = \( \frac{N}{A} \)

were fatally injured. In 2015 the figure was five workers, and in 2016, two workers. The deaths in 2016 occurred due to road accidents.

To control working conditions at the workplace, annual hazard identification and accident risk assessment measures are in place at Naftogaz. Based on the findings of these assessments, a general register of hazards and risk assessment is maintained and regularly reviewed.

In 2016, loss of time due to workplace accidents fell by 13% to 1,792 workdays, compared to 1,947 workdays in 2015.

Accident frequency rate at Naftogaz group enterprises in 2016 is 0.350 [in 2015 – 0.323], fatal accident frequency rate in 2016 is 0.68 [in 2015 – 0.774].

Findings of labor protection inspections in 2016

The group enterprises promptly consider and analyze cases of occupational injuries and take necessary preventive measures. In 2016, the occupational safety and health divisions and standing commissions at the enterprises of the group conducted 12,210 inspections (in 2015 – 10,240). Based on indentified violations 2,034 workers were deprived of a bonus, 277 were reprimanded, and one employee was dismissed.

The main types of violations in labor safety included incorrect workplace layout, violations in recording operational labor safety documentation, performance of work without personal protective gear (when available), lack of instructions on safety in the workplace. A bulldozer driver was dismissed for being drunk at work.

In addition, during 2016 the authorities of the State Labor Service of Ukraine conducted 17 inspections of group enterprises (89 inspections in 2015) and fined 68 employees (182 employees in 2015).

Operational and financial performance audits were performed at a number of the group enterprises and their affiliates, structural and production units, including Ukrtransgaz, Ukrgazvydobuvannya, Ukrtransnafta, Ukrtransmetall, and Ukrtransnafta. A representative of the US insurance company PICC conducted a technical audit of selected underground gas storage facilities of Ukrtransgaz, Prykarpatttransgaz and Ukrtransgaz.

The enterprises of the group received informative notes and instructions on labor safety organization, prevention of workplace accidents, and creating proper and safe working conditions.

Investments in labor safety

In 2016, investments into the labor safety and health of the employees increased by 12.5% and amounted to UAH 155.9 million compared to UAH 156.4 million in the previous year.

Investments into labor safety include not only the cost of compliance with mandatory legal requirements, but also targeted corporate programs focused on reducing injuries.

All employees of the enterprises working under an employment agreement [contract] are insured against workplace accidents and occupational diseases. In accordance with regulations, they receive personal and collective protection gear [including that against radiation and chemical impacts of potential accidents].

In 2016, Ukrtransnafta spent UAH 25.89 million, Ukrtransgaz UAH 17.08 million, Ukrgazvydobuvannya UAH 13.33 million, and Ukrtransnafta UAH 8.24 million for the purchase of modern certified personal protective gear.

Labor safety and industrial security activities in 2016

In 2016, the company continued systemic activities to improve labor safety at its enterprises.

In 2016, the companies of the group implemented the following measures:
- according to the requirements of antiterrorist centre of the Secu-
Prevention of workplace injuries

- the SSU ATC anti-terrorism security passports prepared for 102 facilities;
- the SSU ATC coordination groups carried out 18 special tests to check the anti-terrorism protection of critical facilities of the group. Following the findings of the tests, the enterprises of the group took measures to strengthen the protection of the facilities and eliminate the shortcomings;
- Naftogaz security department officers conducted 12 on-site inspections to check the security of 90 critical facilities of group companies;
- the emergency communication charts and personnel evacuation plans in case of sudden crisis attacks caused by terrorist have been improved;
- in the reporting period special meetings, trainings and practical exercises on anti-terrorism measures were held at the facilities of the group enterprises in Ivano-Frankivsk, Sumy, Odesa, Zakarpattia, Lviv, Ternopil, Volyn, Poltava regions.

Fire safety measures in the group enterprises

Fire prevention measures in the enterprises of the group are subject to the Fire Safety Rules in Ukraine and Naftogaz Fire Management System. The total number of fire safety managers in 2016 was 225, including 101 full-time professionals and 114 persons that also perform some additional functions. In 2016, in the enterprises of the group there were 212 fire technical committees and 357 fire brigades with 3,424 members. The persons responsible for fire prevention are designated, the relevant regulations and instruction are developed, regular training is held and fire safety awareness is checked.

During 2016, fire safety managers carried out 5,818 inspections of fire safety conditions of company facilities and found 25,154 violations, of which 21,548 were remedied. 158 disciplinary punishments were imposed for violations of fire safety rules.

The State Emergency Service of Ukraine conducted 786 inspections at company enterprises, which resulted in 5,528 proposed fire prevention measures, of which 3,202 were implemented. Administrative punishments were imposed on 192 persons for violations of fire safety rules.

Providing personal protective gear to employees (64.8)
Providing labor safety regulation documents to employees (5.7)
Operations of labor protection offices (22.9)
Purchase of first aid kits (2.8)
Modifications of fixed assets to bring them into line with labor protection requirements (22.9)
Providing special food to employees (13.3)
Elimination and minimization of dangerous and harmful impacts on employees (21.0)
Labor safety trainings (6.0)
Medical examinations of employees (2.1)
Assessment of workplaces (2.7)
Other measures (18.3)

Investments in labor safety, UAH million

The facilities of the group enterprises are protected by 26 fire-rescue units of the State Emergency Service of Ukraine on a contract basis. They are equipped with 86 fire engines. The manning strength of the units is 966 people.

2,782 facilities of the group enterprises are equipped with an automatic fire alarm, 805 are equipped with automatic extinguishing systems. In total, there are 234 designated departmental fire trucks (of which 121 are on twenty-four-hour alert), one fire boat, 96 water motor pumps, including 35 drawn motor pumps, and 1,035 fire reservoirs.

During 2016, at the enterprises of the group there were two fires caused by short circuit in vehicles. The direct material damage amounted to UAH 182.5 thousand.

Cooperation between Naftogaz and the EBRD in the field of labor protection

At the end of 2015, Naftogaz began cooperation with the EBRD. Under the terms of the Loan Agreement, the Bank allocated funds for the purchase of gas and laid down a number of conditions related to the environmental and social liabilities of the company.

As one of the steps to attract funding from the European Bank for Reconstruction and Development (EBRD), Naftogaz board approved the Environmental and Social Action Plan, which provides for the development, implementation and certification of labor safety management system based on the requirements of the relevant international standard (OHSAS 18001).
Training on labor safety and industrial security

To improve the competence of employees, we organize labor safety training and implement the methodology for assessing knowledge and skills of our staff.

During 2016, the employees of the health and safety, environmental and industrial security department were trained on the following topics: Risk management methods and tools in labor safety. Development and implementation of risk management systems, Audit and certification of management systems, Risk management tools and methods in labor safety management systems, and Audit of the integrated labor protection management system. In addition, they were instructed in the integrated management system development methodology and management system implementation according to the requirements of ISO 9001, ISO 14001, ISO 50001, OHSAS 18001 (ISO 45001) and SA 8000 and received the relevant certificates.

In June 2016, the health and safety, environmental and industrial security department held a training workshop on labor protection management for the managers and employees of the structural business units of the company who are responsible for identifying hazards and assessing risks of accidents. Eighty employees attended the event.

The company has a corporate training program in labor safety and industrial security in place, which includes lectures.

Plans for 2017

The strategy of the company in the field of occupational health and safety is determined by company leadership together with the working group on labor protection. This includes representatives of Naftogaz group, the Trade Union of Oil and Gas Industry of Ukraine, the Federation of Mining Employers of Ukraine, international experts, and auditors on labor protection.

The company's plans in the field of health and safety in 2017 include:

4. Measures to implement the relevant best practices and international standards ISO 39001:2012 Road traffic safety (RTS) management systems - Requirements with guidance for use.
6. Development of a corporate program dubbed “Changing Minds” designed to implement best international practices to enhance occupational safety.

Current and expected risks at oil and gas facilities:

- deliberate damage to or destruction of the main and industrial oil, gas and condensate pipelines with a view to steal hydrocarbons, particularly those transmitted through the territory of Ukraine to European consumers;
- inability to perform the necessary repair and maintenance work on oil and gas facilities in the area of the anti-terrorist operation (some areas of Donetsk and Luhansk regions);
- oil spills at the sites of oil production and transportation, in particular due to illegal taps in the pipelines;
- risks associated with natural disasters (floods, landslides, forest fires, earthquakes, etc.), war, terrorist acts, and proximity to potentially dangerous objects;
- failure to perform timely repair of compressor equipment, control systems, refuse, pollution control, fire safety.

In 2016, Naftogaz group spent UAH 236 million on fire prevention measures, of which:

**UAH 128 million**
modernization of fire safety equipment

**UAH 32 thousand**
research and development activities

**UAH 2.6 million**
implementation of resolutions of the State Emergency Service of Ukraine

**UAH 65 million**
protection of company facilities by the fire units of the State Emergency Service on a contract basis

**UAH 18 million**
other fire prevention measures
LOCAL COMMUNITY DEVELOPMENT

IN OUR ACTIVITY, WE TRY TO TAKE INTO ACCOUNT THE INTERESTS OF LOCAL COMMUNITIES, REALIZING THAT THIS FORM OF PARTNERSHIP IS MUTUALLY BENEFICIAL FOR BOTH PARTIES

The enterprises of Naftogaz group share the principles of the UN Global Compact and choose the path of sustainable business, personnel and society development.

The enterprises of the group carefully study the needs of local communities and actively participate in the development of infrastructure, education, culture and sport in the regions they are present.

To solve complex problems, we engage in social investment and seek to build partnerships with local communities.

In 2016, we supported study the needs of local communities in the areas of its activity in Kharkiv region.

The funds allocated by Ukrgazydobuvannya were spent on local infrastructure. This included the reconstruction of the well No 5 at the central water intake facility in Barinikove town, some sections of the water conduit in the Chuhuiiv town, the Chuhuiiv oilfield and well No 3 which is part of the water supply to Pechenity town, and reconstruction of a high pressure gas pipeline from the village of Velykyi Burluk to the boiler unit of Prykolotne oil extraction plant in Velykyi Burluk district. The company also funded the construction of gas supply infrastructure in villages of Kharkiv region.

As part of a cooperation agreement with the Kharkiv Regional State Administration, the company provided aid to schools and hospitals. This included major repairs of the roof of the infectious disease department of Bloznitsky Central District Hospital, reconstruction of a school canteen in Zolochiv village, and an overhaul of the infectious department of Krasnozakutsky Central District Hospital.

A pilot social facilities heating rehabilitation project has been completed in Yovkivskyi district. This includes technical upgrade of the heating system in a geriatric accommodation facility (solid fuel boiler installed), technical upgrade of a school heating system, overhaul of the heating system (independent boilers installed) and major repair of the facades of buildings using efficient technologies in the village of Cherenvoni Donets.

The company paid for the completion of the Hangar sports complex for the residents of Horlivsk. The construction began in 2012. However, due to lack of funding, the work was suspended in 2014. The complex includes volleyball, football and basketball facilities, and several gyms.

In 2016, as a part of cooperation with the Poltava Regional State Administration, Ukrgazydobuvannya spent UAH 9.5 million on socially significant projects aimed at developing environmental culture. For example, in 2016, a new well was drilled and a water supply was built for the village of Sanicha (Lokhtytsia district, Poltava region) which provided the residents of the village with a stable water supply and quality drinking water.

Charity initiatives

Since the end of 2014, the employees of Naftogaz have collected UAH 14.2 million to support Ukrainian military units in the combat zone and to provide health facilities with the equipment for the rehabilitation of people affected by hostilities in the ATO zone. In 2016, aid provided to the Ukrainian military units engaged in hostilities in the ATO zone amounted to UAH 4.6 million, or 53% of the total amount of aid received.

This aid is for frontline military units. They include Kyivska Rus unit, Bonbas

“We want local communities to feel that we help develop their infrastructure, and this practice will continue. We also look forward to working closely with local authorities, experts, scholars and communities to increase gas production in the western region and will work to enhance the energy independence of our country.”

Oleg Prokhorenko,
Ukrgazydobuvannya CEO
In 2016, Naftogaz supported the cross-fire competition among ATO participants called “Games of Heroes”. This is a nationwide competition for wounded soldiers and people with disabilities. The objective of the games is the psychological and sports rehabilitation of our heroes and the social adaptation of persons with disabilities along with the promotion of sports among youth and socially vulnerable people.

In 2017, Naftogaz employees continued to donate money from their own salaries to support the needs of the army and hospitals.

In 2016, Ukrtransnafta signed 20 motor vehicles over to the Ministry of Defense of Ukraine. These vehicles will be used to equip the units of the Armed Forces of Ukraine involved in ATO hostilities. Military units will receive cars, trucks, a tractor, a trailer, a bus, minibuses and repair shops. All vehicles have been reconditioned and fully equipped.

Ukrtransgas also provides financial support to the military units engaged in the ATO. In 2016 the cost of the equipment, radio stations, appliances and protective kit purchased by the company amounted to UAH 12.7 million. In addition, Ukrtransgas converted Severodonetsk airport for use by the Armed Forces of Ukraine. The airport is forty kilometers away from the contact line. The company also granted permission to use a skiing recreation facility (Donetsk region) which will later be signed over to the Ministry of Interior Affairs of Ukraine.
ENERGY EFFICIENCY

NAFTOGAZ PRIORITIES TO PROTECT THE ENVIRONMENT ARE MAINTAINING HIGH ENVIRONMENTAL STANDARDS, RATIONAL USE OF FUEL AND ENERGY RESOURCES, ENERGY EFFICIENCY, AND THE INTRODUCTION OF ENERGY MANAGEMENT SYSTEMS BY THE ENTERPRISES OF THE GROUP

The group’s energy consumption structure

Natural gas dominates (almost 86%) the fuel and energy resources (FER) consumed by the enterprises of the group. In 2016, the enterprises of the group used 3.7 million t of reference fuel (2.6 million t in oil equivalent), for their technical needs including:
- natural gas – 2.5 bcm;
- electricity – 12 billion kWh;
- thermal energy – 637.5 thousand Gcal;
- oil (gas condensate) – 127.2 thousand t;
- other types of energy resources (boiler and furnace fuel) – 363.7 thousand t in reference fuel.

As a result of the energy efficiency program for 2016-2020 and energy conservation programs implemented by subsidiaries, in 2016 Naftogaz saved 306.8 thousand t in reference fuel (214.8 thousand t in oil equivalent), or UAH 1.6 billion in monetary terms.

Natural gas savings amounted to 240.1 mcm and electricity savings totaled 25.6 million kWh. Actual energy savings exceeded the target by 90.8 bcm in reference fuel, including natural gas by 68.9 mcm.

The introduction of a 6 MW condensing power plant (CPP) into operation in Shebelyiska gas condensate and oil processing enterprise [Ukrzavzdvobuvannya] resulted in significant reduction in thermal energy consumption. The CPP uses waste heat of flue gas from gas fractionation units for technological needs and producing electricity in a steam turbine for its own needs.

Implementation of energy management system at the enterprises of the group

In 2016, Naftogaz began to implement an energy management system (EnMS) to streamline energy efficiency management procedures in accordance with the energy efficiency requirements of ISO 50001.

During 2016, an energy audit was performed at the enterprises of the companies, energy efficiency policies and objectives were drafted, and an EnMS implementation plan for 2017-2020 developed.

Monitoring of natural gas consumption by different groups of households

In order to analyze the actual use of natural gas by households, the company has monitored the consumption of natural gas during the heating season 2015-2016 via use in different social groups.

In addition, to determine the maximum amount of natural gas used for different purposes by customers with no heating sources other than natural gas, the company, together with gas distribution organizations, conducted monthly on-site inspections to check the use of gas consumption.

Based on the results of this analysis, the company provided its proposals to improve the use of natural gas by households. The proposals would help to optimize the cost of budgetary funds allocated as subsidies to vulnerable households for partial coverage of the cost of natural gas used:
- improve the procedure for granting subsidies for natural gas;
- pay back to the budget the amount of overpaid subsidies;
- optimize standard natural gas consumption rates;
- gradual shift to full monetization of subsidies;
- encourage vulnerable households to adopt efficient use of natural gas.

The company initiated and conducted meetings to promote and implement proposals to improve the procedure for granting subsidies and encourage consumers to reduce consumption of natural gas. The meetings were attended by advisers to the Prime Minister of Ukraine, adviser to the Deputy Prime Minister, and the representatives of the EBRD, IFC, and EU, along with experts and representatives of various NGOs.

Naftogaz experts joined working groups on subsidy monetization. Implementation of the company’s proposals will improve the efficiency of natural gas use, reduce the need for natural gas and for subventions from the state budget for subsidies.
HOW WE WORK

Fuel and energy savings, in 2014-2016

<table>
<thead>
<tr>
<th>Fuel and energy type</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity (million KWh)</td>
<td>203.1</td>
<td>191.7</td>
<td>108.8</td>
</tr>
<tr>
<td>Natural gas (mcm)</td>
<td>252.2</td>
<td>192.9</td>
<td>240.1</td>
</tr>
<tr>
<td>Heat energy (million Gcal)</td>
<td>23.5</td>
<td>24.9</td>
<td>25.6</td>
</tr>
<tr>
<td>Other types of energy (thousand t in reference fuel)</td>
<td>1.3</td>
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<td>1.3</td>
</tr>
</tbody>
</table>

and create the conditions for the
direction of released funds to increase
hydrocarbon production in Ukraine.

Implementation of innovative energy efficiency projects

In 2016, Ukrtransgaz worked with the Institute of Engineering Thermophysics and the National Academy of Sciences of Ukraine to develop a basic solar power plant scheme for the simultaneous production of electricity and cooling at transmission system facilities.

As of the date of this report, the solar power plant pilot project has been launched. The power plant can generate almost 400 thousand KWh of electricity per year to satisfy the office and industrial site needs of Ukrgaztehzvyazok branch facility.

The power plant consists of 1140 solar panels with 250 watts of nominal power each; they are installed on the roof of the production facility and cover 1850 sq. m. This object is unique in the Kyiv region. Ukrtransgaz plans to scale up this practice and to equip its production facilities with solar panels.

In addition, Naftogaz has developed a number of recycling projects designed to transform combustion heat at compressor stations (CBS) and boosting compressor stations (BCS), the energy of overpressure at gas transportation system (GTS) facilities and the geothermal energy in the depleted oil and gas wells.

Targets for 2017

- Promote company proposals to allow households to use the unused part of their energy subsidies for energy saving measures.
- Continue implementation of the energy efficiency program. In 2017, as a result of implementation of the energy efficiency program, the enterprises of the company plan to save 148 thousand t in reference fuel (302.7 thousand t in oil equivalent).
- Continue implementation of energy management systems according to the requirements of ISO 50001.

Fuel and energy savings, thousand t in reference fuel

Benefits from implementation and further sanitification of EnMS

Direct benefits

- continuous improvement of energy efficiency, decrease in energy input for products (services), increased competitiveness
- improving operation and maintenance procedures
- control of energy consumption
- reduction of environmental impact
- image and investment attractiveness
- energy management best practices in place and compliance with international standards

Indirect benefits

- involvement of the whole team in energy efficiency activities
- training on energy issues
- improvement of relations with energy and equipment suppliers
- reduced risks and costs
- compatibility with other management system standards

Major efforts that enabled the enterprises of the group to save 260.1 mcm of gas:

- introduction of defective pipeline sections repair technology without emptying the section;
- maximum gas evacuation from the pipeline before repair works start;
- construction of waste heat utilization facilities;
- introduction of modern electronic ignition systems for GMK-10 gas compressors;
- construction boosting compressor station to collect low-pressure petroleum gas;
- reconstruction of gas disposal systems at oil and gas collecting facilities;
- construction of a closed oil treatment system;
- utilization of oil gas from condensate and oil decontamination;
- upgrading gas pumping unites to improve unit efficiency;
- reducing radial gas in the flow section of ТВТ and ТНТ of GRK-10 units, which increases the efficiency of the unit;
- reducing radial gas in the flow section of OK using special mastics;
- recycling of exhaust gas produced by a gas turbine power plant for heating instead of boilers;
- identification and elimination of gas waste by sealing technological equipment of UGS, CS;
- maintenance of boilers and their operation in accordance with technology cards etc.

A total of 25.6 million kWh of electricity was saved due to:

- modernization of anode bed of gas pipeline cathodic protection systems at oil and gas collecting facilities;
- construction of bottom water treatment system;
- installation of frequency control devices and soft starting of induction motors;
- introduction of highly efficient screw pumps for the extraction of viscous oil;
- construction of bottom water previous discharge unit;
- optimization of indoor illumination of production facilities;
- use of UTDU-2500 recovery pressure reducing power plant which, due to the energy of gas while expanding in the turbine of a pressure-reduce valve, allows for additional temperature reduction for greater hydrocarbons extraction and electricity in the power generator for internal needs;
- use of UTDU-2500 recovery pressure reducing power plant for recovery of compressed gas throttling energy at GDS-7 in Snipro city;
- bringing unloaded power transformers out of operation; reasonable use of gas cooling fans (APF), antifreeze and turbine lubricants;
- energy saving measures;
- pumping oil stations in oil pipeline sections in optimal mode, using the most efficient units;
- reduced electricity consumption for pumping oil as a result of timely cleaning of the main oil pipelines from paraffin deposits using modern highly efficient devices.

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- reduced electricity consumption for pumping oil as a result of timely cleaning of the main oil pipelines from paraffin deposits using modern highly efficient devices.
Naftogaz applies a comprehensive approach to reduce its direct and indirect negative impacts on the environment. The approach encompasses all areas of impact including:

- air protection;
- protection of water resources;
- land protection and waste disposal;
- protection of biodiversity;
- energy and resource saving.

**Environmental safety management system**

In the environmental area, the company is guided by its Charter, Code of Corporate Ethics, the requirements of Ukrainian law, and international directives, conventions and standards.

In 2016, the company approved a new version of its environmental policy that meets the requirements of ISO 14001 and determines the company’s operating principles and commitments in the field of environmental protection.

The company has in place and consistently implements its comprehensive environmental protection action plan for 2015-2020.

Naftogaz pays particular attention to the social and environmental aspects of the procurements made by the company. To monitor how suppliers meet the health safety and environmental requirements,

**Key results of 2016**

- operating costs and capital investments of Naftogaz group enterprises spent on environmental protection.

**Cooperation with international financial institutions**

In cooperation with international financial institutions, the company has committed to approximate its standards to the principles of EBRD environmental and social policy. In 2016, the EBRD monitored implementation of new reporting, transparency, environmental and social responsibility standards at Naftogaz.

In May 2016, OPIC Corporation, USA, conducted a technical audit of the western underground gas storage complex and provided a clean audit opinion with regard to Naftogaz safety and environmental impact.
Environmental protection services, UAH million

Environmental, tax, UAH million

Recycled materials sales revenue, UAH million

Payments for environmental services, UAH million

Environmental protection expenses, UAH million

In 2016, the company signed an agreement with a research organization to review and update the current SOU No 7-2007-7722-05-14 2009 “Protection of the environment. Decontamination of soils and water from oil and petrochemicals. Regulations” to set more stringent environmental requirements for the enterprises of the oil and gas complex.

Cooperation with the stakeholders on environmental issues

Any activity by the company and any project that significantly impacts the environment and community life are subject to internal agreement under the existing procedure for interaction with stakeholders. Development of any project includes development of the relevant stakeholder interaction plan to be adhered to by the enterprises of the group.

For example, in 2016 Ukrgazvydobuvannya, as part of intensification of natural gas extraction through hydraulic fracturing, held meetings with the public, the media, and representatives of local authorities in order to properly inform stakeholders about the potential environmental and social impacts of the planned works.

The enterprises of the group are actively involved in the implementation of infrastructure and social projects to address the urgent problems of the communities affected by the company's production activity (for more details see community development section).

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How We Work

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biodiversity, research and conservation
and surface water, UAH 7.4 million
rehabilitation of soil, groundwater
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Emissions of methane by Naftogaz group enterprises in 2014-2016,
Emissions of non-methane volatile organic
dioxide by Naftogaz group enterprises in 2014-2016,
HOW WE WORK

Waste management in Naftogaz group enterprises, 2014-2016, thousand t

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total accumulated waste</td>
<td>137.3</td>
<td>102.5</td>
<td>85.4</td>
</tr>
<tr>
<td>Waste removed at the facilities of the enterprises</td>
<td>43%</td>
<td>4.5%</td>
<td>0.0003%</td>
</tr>
<tr>
<td>Waste disposed of and recycled</td>
<td>122.2</td>
<td>91.3</td>
<td>49.3</td>
</tr>
<tr>
<td>Waste supplied to specialized disposal companies</td>
<td>86.3</td>
<td>80.9</td>
<td>38.1</td>
</tr>
</tbody>
</table>

the state of 106 flow strings of oil and injection wells. In addition, the company eliminated and recultivated seven oil lakes and restored 120 other breaches.

In 2016, Ukrtransgas assessed the biological resources of the water bodies used for intake or discharge of water in the course of business. Such studies were also carried out as part of the reconstruction of Urengoy-Pomary-Uzhhorod main gas pipeline. These activities could have had a negative impact on biodiversity of local flora and fauna. The company conducted an assessment and continues to monitor the situation. Specifically, in 2016 a detailed assessment of biodiversity in the affected swamp and forest area was carried out near Lokhvytsia town, in the vicinity of the Hrebinky-Sofivka section of the pipeline [km 3 488.55-3 519.87]. Based on these findings, the center of ecological expert analysis (Ministry of Environment) developed recommendations, mitigation measures, and offered a positive expert opinion. If all the recommendations and mitigation measures are implemented, repair of the Urengoy-Pomary-Uzhhorod main gas pipeline will not have any negative impact on biodiversity.

Waste management

For the last three years, the total waste at the enterprises of the group has been steadily decreasing. In 2016, total waste was 85.4 thousand t, which is 16.7% less than in the previous year. Over 80% of production waste at the enterprises of the company is hazard class IV waste, i.e. the low-risk category. A very small part of total production waste (about 0.15%) are hazard class I substances [extremely dangerous]. These include spent fluorescent lamps, inoperative or waste lead batteries, and accumulators. All hazard class I waste is supplied to specialized enterprises for further environmentally sound recycling on a contractual basis. In addition, waste batteries and fluorescent lamp collection points are open at many enterprises of the group and in its headquarters.

The most common class II waste is waste oil and grease (the group has accumulated 42.1 t) and rechargeable batteries (15.5 t). The most common class III waste at Naftogaz enterprises isprocessed petroleum products and oil sludge – 3 000 t.

Some enterprises have received the appropriate permits and equipment designed to dispose of hazardous waste at their own facilities. In 2016, Ukrtransgas disposed of 5.4 thousand tons of oil sludge generated in the past, using special plants for processing oil sludge, waste oil, and oil-resistant emulsions.

The hazard class IV includes the following main types of waste: drilling sludge [cuttings, drilled mud and drilling waste water] – 42 664.6 t, ferrous scrap – 6 200.7 t, mixed municipal waste – 9 794.8 t, worked out and damaged tires – 750.2 t, construction waste – 5470 t, vehicles and conveyor, written-off as scrap – 648.8 t, agricultural production waste [different] 256.3 t and other waste generated mainly at construction, drilling, production sites, in the process of oil and gas transportation, processing, storage etc.

For the purposes of drilling waste disposal, the enterprises of the group use fluid regeneration technologies and drilling wastewater treatment technologies. During 2016, the enterprises of the company disposed of 43.9 thousand t of drilling waste.

In addition, oil pollution of soil has been eliminated in places of emergency using modern microbiological biodestructing sorbents.

In their production activities, the enterprises of the group use dangerous chemicals, including in gas and gas condensate extraction and processing technology, namely methanol, glycol, acids, odors, and liquid technical ammonia.

In addition, precursors [hydrochloric and sulfuric acid, acetone, toluene, potassium permanganate] are used at some facilities. All enterprises that use precursors have appropriate permits, and the facilities are provided with physical protection.

The enterprises of the group that use dangerous chemicals and poisonous substances obtained the relevant permits for substance transportation. Plants and equipment that use hazardous chemical substances are assembled and installed in compliance with the relevant design documents and commissioned by the authorized committees.

These enterprises have been certified and categorized as extra high hazard objects. They have public indemnity insurance for harm that may be caused by fires and accidents at high hazard objects or at facilities whose economic activities could lead to environmental and sanitary-epidemiological emergencies. Most enterprises have voluntary fire brigades in place.

These enterprises have developed, approved and put in place instructions on how to work with hazardous chemical substances. Dedicated staff responsible for chemical hazardous substances registration and handling have been designated by special order.

Personnel are trained, tested and updated on current regulations on a regular basis.

Oil and gas extracting enterprises produce naturally-occurring materials [NORM] or according to the international classification NORM [naturally-occurring radioactive materials]. Pump and compressor tubes, pipelines, equipment and sludge fragments etc. are temporarily stored in specially equipped areas of Ukrtransnafta and Ukrzakazdobyvannya. These areas are secured and provided with physical protection. The accumulated materials are transferred under contract to specialized companies of the UkrDO Corporation ‘Radon’ that have the necessary permits and are licensed for storage, further utilization or disposal in their own facilities (in Chornobyl Exclusion Zone and Kharkiv city). Specially equipped certified vehicles owned by these companies transport the materials in accordance with radiation safety requirements. All storage sites and vehicles have sanitary passports.

The company performs no cross-border transportation of waste. The company does not import or export waste that is hazardous under the Basel Convention.

Prior to signing any hazardous waste disposal contract, the company carries out an assessment of the supplier for availability of licenses and relevant facilities and equipment for processing and disposal of hazardous waste. Ukrtransnafta tenders for suppliers of natural gas for industrial and technological needs include an assessment of bidder environmental and social policies.

Environmental culture

In the spring of 2016, Naftogaz joined Go Green movement and announced the introduction of the Green Office concept to reduce the company’s negative impact on the environment and improve natural resource management.

Every year, the employees of the company are engaged in cleaning their cities and villages, industrial sites and surrounding areas, planting trees and participating in various environmental and/or natural disaster. Emergency localization and liquidation plans are approved by the regional authorities of the state Emergency Service of Ukraine under the established procedure.

Potentially dangerous objects and high-risk objects are recorded and monitored.

The reported incidents and emergencies with environmental consequences are recorded and transmitted in accordance with the notification procedure approved by the company.

Plans for 2017

The company has developed a set of environmental objectives and specific measures to achieve these goals. One of the objectives is reducing water consumption by the enterprises of the group compared to the previous year

ANNUAL REPORT 2016

NAFTOGAZ GREEN OFFICE: OUR ACHIEVEMENTS

- 530 kg of waste paper collected
- 1115 ha of lawns made
- 441 unauthorized garbage dumps eliminated
- 2 394.3 ha cleared
- 40 kg of batteries collected
- 50 hectares of land devoted for disposal of contamination
- 3 056 shrubs planted
- 4 165 trees
- 5554 new trees

WATER 1182 CUBIC M LESS – monthly rate for 500 persons

ELECTRICITY REDUCED BY $3 400 KWH – lighting for 250 apartments for one month

CONSUMPTION COMPARED TO 2015 (May-December)
by 5% due to the rational use of water resources in accordance with established standards and consumption limits. Ukrtransgaz, as the enterprise with the largest share of emissions into the air in the company, has set itself the goal of reducing such emissions by 3% in 2017. Ukrtransnafta plans to complete reconstruction and modernization of waste water treatment at OPS Kurivychi, LPS Skole, OPS Zhulyn in 2017. Ukrnafta’s objective is reducing environmental risks and social tension caused by gas-polluted air in Boryslav town. In addition, the objectives of the group enterprises in 2017 are as follows:

- rational use of natural resources, including water, land and mineral resources in accordance with established limits and permits;
- separate storage of waste by type, according to issued permits and approved limits on waste generation and disposal, calculated based on the norms for each types of waste;
- improvement of environmental management system, implementation of modern energy and resource saving technologies, and energy efficient production systems designed to stabilize or reduce negative environmental impact;
- upgrading industrial sites, sanitary protection, and recreational areas;
- supporting initiatives of local authorities and the public to promote the improvement of the environment;
- increase employee legal awareness of environmental protection and the rational use of natural resources.

For more details about the Naftogaz Green Rules, see www.naftogaz.com
During 2016, Ukraine’s economy grew by 2.5%, posting a 4.6% recovery in Q4 2016 on a year-on-year basis. However, this recovery is not enough to offset the decline in economic activity during the years 2015-2016 when the economy shrank by 14% (equivalent to a 3.7% average annual economic decline). By comparison, the economies of Eastern European countries during the same period grew by 7.8% (an average annual growth rate of 1.9%), while the economies of other developing countries grew by 11.3% (4.2% average annual growth).

Experts attribute this result to objective factors and the slow pace of reforms in the country, while pointing out the tendency towards slowing down reforms. For example, the dynamics of the iMoRe index (which characterizes the pace of reforms) with a few exceptions, is not only below the level which corresponds to the “satisfactory” pace of reforms (2 points), but also shows a clear trend toward falling to zero.

Likewise, consumer sentiment indices show similar results reflecting both a decrease in the positive balance of consumer sentiment and reduced optimism about future expectations regarding the situation in the current period.

The negative impact of a slowdown in economic reforms in the country to some extent affects other macroeconomic parameters such as:

- relatively high inflation (although within the NBU target range);
- exchange rate volatility;
- high credit risks;
- high cost and low availability of capital.

In 2016, inflation was 12.6% on a year-on-year basis, showing a slight increase at the end of the year. Compared to 2015, the rate of inflation slowed down but it remained rather high (by comparison, the EU harmonized inflation index stood at 1.7% for the same period). Administratively regulated prices continued to drive inflation dynamics significantly.

During 2016, the hryvnia exchange rate fluctuated mainly within the range of USD 26-28, showing a general trend toward devaluation, which was over 13% in 2016. The pricing of natural gas is particularly sensitive to such fluctuations. This is important both (1) in terms of purchases of gas partially satisfied by imports, and (2) in the context of its sale, where as a result of devaluation, the gap between regulated prices for natural gas enjoyed by some categories of consumers (these prices have remained unchanged since May 2016) and natural gas market prices widened. The significant difference between regulated and market prices (as of and of 2016 — almost by 1.5 times) encouraged hidden subsidizing of consumers and reduced incentives to increase energy efficiency.

Ukraine’s credit rating during 2016 did not change significantly. Rating agencies such as Moody’s and S&P confirmed credit rating on the same level, but in November 2016, Fitch raised Ukraine’s long-term credit rating to B- and short-term credit rating to B.

The sovereign premium for default risk for Ukraine (credit spread) was relatively stable showing a slight downward trend. During 2016, it fluctuated within the range of 6.0-7.5%, which is on average 2 times higher than the risk premium for all other developing countries. High risk further limits the possibility of raising capital for Ukraine’s economy. The high cost of capital is holding back the revival of economic activity in the country.

Given high inflation and risks, in 2016 the cost of credit also remained objectively high even though it declined compared to 2015. At the end of 2016, commercial banks offered short and long-term loans in the national currency at approximately 18% and 23% per annum, respectively. In the case of foreign currency loans, the average loan interest rate was around 7% and 9% for short-term and long-term loans, respectively.

7% and 9% for short-term and long-term loans, respectively.
### Gas Consumption in Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Gas Consumption (bcm)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>89.1</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>81.5</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>70.9</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>49.8</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>39.3</td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>8.0</td>
<td></td>
</tr>
</tbody>
</table>

### Gas Production in Europe

- **Norway**: 1,858.0 bcm
- **Netherlands**: 674.0 bcm
- **United Kingdom**: 207.0 bcm
- **Ukraine**: 603.0 bcm
- **Austria**: 63.6 bcm
- **Czech Republic**: 41.4 bcm
- **Poland**: 40.0 bcm
- **Spain**: 31.0 bcm
- **Romania**: 21.7 bcm
- **Denmark**: 12.5 bcm
- **Belgium**: 8.9 bcm
- **Bulgaria**: 6.1 bcm
- **Croatia**: 2.7 bcm
- **Greece**: 4.1 bcm
- **Hungary**: 4.2 bcm
- **Slovakia**: 4.0 bcm
- **Slovenia**: 0.9 bcm
- **Sweden**: 0.8 bcm
- **Slovenia**: 0.5 bcm
- **Macedonia**: 0.2 bcm
- **Luxembourg**: 0.8 bcm

### Notes
- Conversion ratio: 10.46 TWh = 1 bcm.

### Gas in Europe

- **Ukraine** is the largest UGS in Europe.
- **Ukraine** is the #1 gas transit country.
- **Ukraine** is the #3 proven gas reserves country.
- **Ukraine** is the #4 gas production country.
- **Ukraine** is the #7 gas consumption country.
- **Ukraine** is the #14 gas imports country.

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### Conversion Ratio

- 10.46 TWh = 1 bcm.
UKRAINE'S GAS BALANCE 2016, bcm

**Production**
- Ukrgazvydobuvannya: 14.6 bcm
- Ukrtransgaz: 4.2 bcm
- Other: 1.3 bcm

**Imports**
- Naftogaz: 2.9 bcm
- Private importers from Europe: 2.0 bcm
- UGS net injection: 8.2 bcm

**UGS**
- Net injection: 2.0 bcm
- Net withdrawal: 3.9 bcm
- The volume of gas stored in UGS as at 31 December 2016: 12.0 bcm

**Sources of Gas**
- Production: 20.1 bcm
- Imports: 11.1 bcm
- Total: 33.2 bcm

**Gas Usage**
- Households (direct use): 11.9 bcm
- DHCs for households: 5.7 bcm
- DHCs for public sector and industrial consumers: 2.0 bcm
- Gas distribution networks: 0.5 bcm
- Other: 0.1 bcm

**Operating Needs**
- Households: 11.9 bcm
- Industry: 9.9 bcm
- Other: 3.6 bcm

**Sectors**
- HOUSEHOLDS: 11.9 bcm
- INDUSTRY: 9.9 bcm
- OPERATING NEEDS: 3.6 bcm

**UGS: underground gas storage**
- UGS: companies generating heat for households, public sector and other institutions
- DHC: companies generating heat for households, public sector and other institutions

**Notes**
- The volume of gas stored in UGS as at 31 December 2016: 12.0 bcm
- Gas usage by sector:
  - Households: 11.9 bcm
  - Industry: 9.9 bcm
  - Operating needs: 3.6 bcm
1. Data on Crimea, Sevastopol and the uncontrolled territories are not available
2. Naftogaz group regained control over Ukrnafta as of 22 July 2015 and from that date accounts the company’s performance in its financial statements
3. 1 bcm of gas own used for operating needs or as new material for LNG production
4. Additional 1.7 bcm of gas used by Ukrtransgaz for its own operating needs
5. Excluding 0.02 bcm of unallocated gas volumes. Excluding the possible volume of the secondary market
6. Infrastructure that should be unbundled from trading functions according to the EU Third Energy Package is marked with an orange line
7. Operating needs of oblgazes accounted for additional 1.0 bcm
8. Including 4.1 bcm of gas supplied to end users directly through trunk gas pipelines and gas networks of gas production companies
Current European gas market situation

In 2016, gas demand in Europe increased. This demand rise was due to higher prices for alternative energy sources (coal). Domestic gas production in the EU stood at a record low of 132.9 bcm (according to Eurostat), as the government of the Netherlands tightened gas production restrictions at the Groningen field from 27 bcm to 24 bcm. Against this background, imports of Russian gas to Europe reached a record high of 178.5 bcm, while imports from Norway stayed at the same level as in 2015 — at 108 bcm.

The main reason for rising imports from the Russian Federation was that Russian gas prices were attractive for European customers under long-term contracts with Gazprom as a sharp drop in prices for oil and oil derivatives in 2015 and early 2016 (which are mainly linked to the price of Russian gas) was fully reflected in the contract price as early as 2016. This allowed European importers to increase imports from

1 Given that coal prices were higher than gas prices, in 2016 there was a partial shift from coal to gas in North-West Europe. The use of coal in the UK for electricity generation decreased mainly due to constant exposure on the price for coal, as well as due to decommissioning of a number of coal power plants.

3 https://www.statoil.com/content/dam/statoil/documents/annual-reports/2016/statoil-2016-annualreport-20-F.pdf p. 16

The relative dynamics of energy prices since early 2016 (price as of January 1, 2016 is equal to 100%)
the east during the downturn in the oil market and reduce imports from other sources³.

Russian gas prices were more attractive than LNG prices, while in 2016 volumes of LNG supply to the global market increased by 7.5% but were lower than expected. The main consumers of LNG were China, India and the Middle East, which offset the decline in imports from Japan and Latin America.

The price for gas in 2016 was lower than previous periods due to seasonal factors, in particular due to the decrease in temperatures below the long-term normal temperature, and subsequent increase in gas demand. After a sharp contraction in the beginning of the year, Russian gas volumes rose sharply, but then gradually fell. The factors that contributed to such a temporary peak include low gas stocks in gas storage facilities in Western Europe and the failure of the UK’s largest Rough gas storage facility⁴.

Technical problems at the storage facility had a significant impact on the dynamics of gas prices throughout 2018 and raised concerns about future supplies. According to the latest data from Centrica Storage Limited operator, the gas storage facility will resume operations from May 2019. This factor will lead to higher gas prices in the UK during heating season 2017-2018.

late December, Gazprom continued to transport gas in January as it booked capacities for the next month (month ahead) in December. The chart below shows that OPAL’s utilization capacity significantly dropped on 1 February 2017 as the February auction for the sale of additional capacities could not be conducted due to inJurievel relief⁶.

Finally, in February 2017, Naftogaz appealed to the High Court of the European Court of Justice with a request for involvement in the case upon a claim filed by PGNiG ST appealing the EC decision. Naftogaz sent this request for involvement, after having grounded it by the previous practice of the court and indicating the potential negative consequences of the EC decision for the company. First of all, it poses a threat to the security of natural gas supplies to Ukraine after the termination of gas flows from Poland, a deterioration of the Naftogaz competitive position, an unexpected change in the regulatory and market environment of the company.

Involving Naftogaz in the case enables the Ukrainian company to submit additional arguments in the case and receive access to case files. Naftogaz request for leave to intervene in the case initiated by PGNiG ST is being considered by the court according to the procedure.

In addition to the request for involvement in the case as a third party¹, on 27 March Naftogaz filed a lawsuit in the High Court of the European Court of Justice against the European Commission for failure to fulfill obligations.

³ Russian gas prices were more attractive than LNG prices, while in 2016 volumes of LNG supply to the global market increased by 7.5% but were lower than expected. The main consumers of LNG were China, India and the Middle East, which offset the decline in imports from Japan and Latin America.

⁴ The price of gas in 2016 was lower than previous periods due to seasonal factors, in particular due to the decrease in temperatures below the long-term normal temperature, and subsequent increase in gas demand. After a sharp contraction in the beginning of the year, Russian gas volumes rose sharply, but then gradually fell. The factors that contributed to such a temporary peak include low gas stocks in gas storage facilities in Western Europe and the failure of the UK’s largest Rough gas storage facility.

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¹ Rough is the only gas storage facility in the UK used for seasonal gas storage. It accounts for about 70% of the UK’s current gas storage capacity.

During the rampant development of new Russian pipelines which provide alternatives to the Ukrainian route

The EC decision and subsequent auctions for sale of additional OPAL gas pipeline capacities increased to terminal level in December 2018. Consolidated annual report_GKPGNiG_2016.4 http://en.pgnig.pl/documents/18252/1757433/st.161

The number of private importers of natural gas to Ukraine at the end of each calendar year

Pipes are being built to transport gas to Turkey and South-Eastern European countries.

Dynamics of Russian natural gas volume sent via Ukraine and volumes of transit via Nord Stream, bcm/year

The number of private importers of natural gas to Ukraine at the end of each calendar year

Commission to cancel the decision of 28 October 2016. Adoption of the decision without consultation with Ukraine violates Article 23 of the Association Agreement between the EU and Ukraine, and the EU’s commitment under the Energy Charter Treaty and the Energy Community Treaty, since it strengthens the dominant position of Gazprom and associated companies.

Russia’s alternative pipeline projects

Further implementation of the Nord Stream 2 construction project, a new export gas pipeline running from Russia, would have a negative impact.

Nord Stream 2 is a new export pipeline from Russia to Europe via the Baltic Sea through Germany in the Greifswald district near to the exit point of the Nord Stream pipeline. The aggregate capacity of the two branches of Nord Stream 2 will be 55-60 bcm/y. In addition, Nord Stream capacity expansion was announced to 60 bcm. As a result, the total design capacity of Nord Stream and Nord Stream 2 will be 100-105 bcm/y.

In addition to the decrease in volumes of transit through Ukraine, construction of Nord Stream 2 threatens the energy security of the EU, strengthens Russia’s position in Europe, and is contrary to the principles of the Energy Community.

The Turkish Stream project will that run through the Black Sea and Turkey to Greece and have two branches with total capacity of 31.5 bcm/y threaten to stop transit through Ukraine to the south.

Volumes of Ukrainian transit will depend on the development of new Russian pipelines which provide alternatives to the Ukrainian route


Transport via Ukraine

Naftogaz data, taking account gas transit by RosUkrEnergo AG

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<tbody>
<tr>
<td>bcm</td>
<td>119.6</td>
<td>95.8</td>
<td>98.6</td>
<td>104.2</td>
<td>94.3</td>
<td>86.1</td>
<td>62.2</td>
<td>671</td>
<td>82.2</td>
</tr>
</tbody>
</table>

Transit via Nord Stream

[IEA web-site data]
Competition concerns:

Outcomes

- Industrial gas consumers in Central, Eastern and Southern Europe will become less competitive compared to their German counterparts, because this price increase in the region will include additional transmission costs.

- Energy security concerns:
  - The redirection of gas flows may lead to gas shortages in Central, Southern and Eastern Europe (SEE and SEE) due to existing gas transmission capacity bottlenecks within the EU.
  - Northern and Western Europe will become more dependent on Russian gas.
  - The EU will be dependent on the offshore NS and NS2 for Russian gas deliveries. Unlike in the case with traditional onshore routes, an emergency event could cause a halt of the entire 1200 km underwater pipeline for several weeks.
  - The failure of even one of the four pipelines will have detrimental effects on the EU security of gas supply.

Security concerns:

- To avoid the inevitable supply interruption risks, Russia, as the owner of the pipelines and the gas they transmit, may want to increase its military presence in the Baltic Sea to safeguard the key gas delivery route. This may potentially result in tensions among NATO members over security vs. gas supply issues.

Environmental concerns:

- Unlike in the case of the Nord Stream, the NS2 does not have an inherent Union interest. The project constitutes excessive and objectively unnecessary gas infrastructure whose function could be easily performed by already existing onshore facilities. In the same time, construction and operation of NS2 will inevitably affect the living conditions of animal and plant species and put the marine environment at risk. Realization of this project would unacceptably shift the balance between economic, private interests of the project promoter and environmental, public interests in favor of the former.

Geopolitical concerns:

- NS is an instrument of Russia’s “divide and conquer” strategy. D afflicted and SEE countries are already highly dependent on Russian gas. Having concentrated gas supply in its hands, Russia, which possesses the risk that the key gas transmission infrastructure may be used for non-commercial purposes.

Applicable legal regime dispute: “a legal void”

- There is a dispute between the project’s supporters and opponents over whether EU law is applicable to NS2. If EU energy and antitrust regulations are fully applied, the project is not likely to be built.

- The pipeline passes the territory of four EU member states (Finland, Sweden, Denmark and Germany). A formal clearance on environmental concerns is required from each country for the project to proceed.

- Germany and Gazprom insist that the project is a purely commercial deal that should only be governed by German law in its onshore part and that no EU law is applicable to the offshore section.

- Denmark and Sweden have asked the European Commission to have a formal clarification on whether the EU law should be fully applied to NS2.

- In its reply to the request of the Nordic countries, quoted by media, the EC confirmed that the rules for applying EU law, including the ‘Third Energy Package’, to gas pipelines built along the sea bottom are unclear. The commission also noted that NS2 should not be built and operated solely under the law of Russia or in a legal void.

- The European Commission has requested a mandate from member states to negotiate with Russia over objections to NS2. The Commission is reported to have a view that key principles of the European energy law should be applied to the project, including the offshore section.

- In April 2017, Denmark announced its plans to amend its national legislation so that the project could also be blocked on security or geopolitical grounds.

- By redrawing the European gas flows map, Russia will be able to offer gas discounts in D and SEE in exchange for political concessions, gaining a tool to influence EU decisions.

- Through NS2, Russia’s will have leverage in relation with Germany. Germany will be a host country of the key gas transit route to other EU member states. Russia has made considerable pressure on transit countries through consumer countries more than once.

- Furthermore, NS2 and its German section will be indirectly owned by Russia, which poses the risk that the key gas transmission infrastructure may be used for non-commercial purposes.

Nord Stream 2 and TurkStream – two main alternatives for Russia enabling it to terminate transit through Ukraine beginning in 2020

Ukraine–Poland interconnector

Natural gas imports to Ukraine

In order to increase gas imports to Ukraine from Europe through Poland and enable storage of European gas in Ukraine’s underground gas facilities, UK transgas continues to promote the construction of a complex gas transmission infrastructure. The new gas transmission system may create new interconnector capacity on both the Polish and Ukrainian sides is under development. UK transgas is interested in holding consultations with gas market participants. The Ukrainian and Polish sections of the interconnector are expected to be constructed simultaneously and ready by mid-2020.

In 2016, Ukraine did not import gas from the Russian Federation. By eliminating gas dependency on Russia, Naftogaz and other Ukrainian importers now have access to other sources of gas and can choose from several dozen suppliers. The joint efforts of numerous participants helped to organize gas supplies to Ukraine exclusively from the European route in quantities sufficient to meet the country’s needs. In 2016, gas imports decreased by 32% compared to the previous year, or from 164 bcm to 111 bcm. 10 years ago, Ukraine imported as much as 5 times more gas than now. The decrease in gas imports reduces the negative impact on Ukraine’s balance of payments and GDP.

The drop in Naftogaz’s share in imports in favor of private importers and industrial consumers is a crucial shift. Last year, independent importers brought 2.5 times more gas than in 2015 (2.1 bcm versus 11 bcm). The number of private importers in Ukraine doubled and exceeded three dozen. In 2016, Naftogaz imported 8.2 bcm of gas from the European market, which is 1 bcm (16%) less than in the previous year. Total gas imports by Naftogaz decreased by 47% compared to 2015. In the reporting period, Naftogaz cooperated with 15 suppliers. None of these companies had more than 10% of the total gas imports of the company. 

In 2016, Ukraine imported 43% of all gas from the European market, with Poland being the leading supplier. Poland has provided Naftogaz with 111.1 bcm (60% of its total gas supply). The second largest supplier was Norway (11.1 bcm, 6% of total imports). Import from the third country amounted to 13.3 bcm (7%). The remaining share was divided among 21 other countries.

In 2016, the situation with deliveries of gas from the European market was good. Naftogaz is interested in additional volumes of gas from the European market, which is 1 bcm (2.9 bcm versus 11 bcm). The number of private importers in Ukraine doubled and exceeded three dozen. In 2016, Naftogaz imported 8.2 bcm of gas from the European market, which is 1 bcm (16%) less than in the previous year. Total gas imports by Naftogaz decreased by 47% compared to 2015. In the reporting period, Naftogaz cooperated with 15 suppliers. None of these companies had more than 10% of the total gas imports of the company.
Thanks to reverse gas supplies from the EU instead of satisfying Gazprom’s ungrounded “take-or-pay” demands (dismissed by the Arbitration Tribunal’s separate award) in Q2–Q4 2016, Naftogaz saved over USD 4 billion. In January 2017, Gazprom sent Naftogaz an invoice of more than USD 5.3 billion for April–December 2016, while Naftogaz had paid Gazprom only USD 1.24 billion for the gas imported within the said period, which is 4.3 times less. According to Naftogaz estimates, if Naftogaz had paid Gazprom as much as it wanted, Ukraine’s GDP would have fallen by more than 2% instead of a 2.2% growth. It also would be logical to consider a considerable negative effect on the current account of the balance of payments, currency exchange rate and budget deficit.

**Natural gas production in Ukraine**

Based on the results for 2016, annual gas production was 201 bcm, which is 0.5% more than the previous year (199.9 bcm). UkrGazvydobuvannya increased gas production by 27 bcm to 146.6 bcm, which made up 73% of natural gas production in Ukraine in 2016. Last year, the company announced implementation of several ambitious investment projects covering the purchase of new drilling equipment and attracting contractors for hydraulic fracturing operations. The company also announced a tender for drilling 90 wells during 2017–2019.

However, due to financial problems including a tax debt, UkrMafta experienced a rapid decrease in natural gas production. By the end of 2016, its output result was 1.5 bcm, which is 14% or 205 bcm less than the previous year. The company is no longer the second largest gas production company in Ukraine.

Private companies increased production to 4.2 bcm, or 5.5% compared to 2015, significantly slowing down production growth compared to previous years (when growth amounted to +16–34% y-o-y). This lowest growth rate for the private segment over the past six years was due to lower investment and operational activity over the past two years. This situation was caused by several factors: firstly, a record collapse in market prices for gas (consistent with import parity), and secondly, high rates of rental payments for hydrocarbon extraction in the period 2014–2016.

However, 2016 began with a return to rates of rental payment for gas extraction for private companies to the previous level observed two years earlier: from 95% to 28% for mining to a depth of 5000 m and from 29% to 14% in production from wells deeper 5000 m. From the beginning of 2017, rental rates for UkrGazvydobuvannya were reduced to a similar level.

**Natural gas usage in Ukraine**

In 2016, natural gas usage in Ukraine decreased by 2% compared to 2015, falling to 33.2 bcm against 33.8 bcm in 2015.

In 2016, total final consumption of natural gas was 88.6% of its aggregate usage. The remaining gas (3.8 bcm and 3.5 bcm in 2016 and 2015, respectively) was used to meet industrial and technological needs, including the transportation and distribution of natural gas and production of liquefied natural gas. Minor declines in gas usage are associated primarily with increased consumption by regulated market segments. In particular, in 2016 households used 11.9 bcm of gas, which is 8.6 bcm more than in 2015 (+5%).

Lower volumes of natural gas used in 2016 compared to 2015 were due, in particular, to lower natural gas consumption by industrial consumers [against the background of some recovery in industrial production] by 11% (to 9.7 bcm against 11.0 bcm in 2015), given that growth was observed in the sectors that are traditionally energy-intensive and large gas volumes used, it may be indicative of some...
WHERE WE ARE NOW

Fluctuations in natural gas usage by consumer categories in 2016, bcm

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households, budgetary institutions and religious organizations</td>
<td>5.73</td>
<td>5.14</td>
</tr>
<tr>
<td>Industrial consumers</td>
<td>2.10</td>
<td>2.14</td>
</tr>
<tr>
<td>District heating companies</td>
<td>1.70</td>
<td>1.66</td>
</tr>
<tr>
<td>Industrial and technological needs</td>
<td>1.17</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Source: Naftogaz

*Excluding the ATO area and unallocated volumes

Main factors of fluctuations in natural gas supplies to meet direct needs of households (left) and dhc for household needs (right) in 2016, mcm

<table>
<thead>
<tr>
<th>Factor</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather factor</td>
<td>11.28</td>
<td>11.67</td>
</tr>
<tr>
<td>Increase in consumption rates</td>
<td>+0.39</td>
<td>+0.44</td>
</tr>
<tr>
<td>Other factors</td>
<td>+9.3</td>
<td>+9.7</td>
</tr>
</tbody>
</table>

To meet household needs in 2016, 17.6 bcm was used against 17.2 bcm in 2015, including 11.9 bcm used by households directly for their own needs (cooking, hot water and heating) and 5.7 bcm by heat generating companies providing services to households. Regionally, there are very noticeable geographical differences in volumes of gas usage by households - the northern and western regions of Ukraine increased volumes of natural gas consumption (excluding Kyiv region and the city of Kyiv), while the southern and eastern regions reduced them (except Luhansk region). This could be explained by temperature factors, in particular colder winters in the north.

The inert state regulation of natural gas supplies involved meeting the direct needs of the households, district heating companies (DHC) and religious organizations by Naftogaz at state‑regulated prices in line with its public service obligations (PSO). In 2016, these categories of consumers increased natural gas usage, and this increase was only partly due to low temperatures during the heating season. Households remained the main consumer of natural gas, with 17.6 bcm used to cover their needs (including gas consumption by DHC producing heat for the households).

The profits state regulation of natural gas prices for consumers in the context of PSO caused some delay in the regulated prices established in spring 2016 as import parity price from the current level of its market equivalent - this resulted in noticeable price differential, which at the end of 2016 had reached 40%. This situation creates the risk of structural imbalances in the economy and capital misallocation.

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According to independent experts, potential reduction in natural gas usage through energy efficiency enhancements and energy saving programs is seriously restricted by the current system of subsidies. This system needs to improve to preserve the motivation to save energy and engage in efficient use of natural gas. Monetization is one the main areas contributing to the efficiency of subsidy programs, with the inclusion of effective mechanisms aimed at motivating the prudent use of natural gas.

The combined effect of other factors (including changes in consumer behavior when using gas to meet their own needs) led to a slight decrease in overall natural gas consumption to meet household needs, including through energy saving projects.

Dynamics in the difference between market and regulated (in the framework of PSO) prices for natural gas, %

Source: Thomson Reuters, Naftogaz

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WHERE WE ARE NOW

Current programs are insufficient to adequately overcome low energy efficiency in Ukraine

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**Key energy efficiency initiatives**

<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Gas saving bcm</th>
<th>Investments USD billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHC</td>
<td>-11</td>
<td>2</td>
</tr>
<tr>
<td>Individual boilers</td>
<td>-3.5</td>
<td>4</td>
</tr>
<tr>
<td>Transportation and distribution</td>
<td>-0.7</td>
<td>2</td>
</tr>
<tr>
<td>Multi-storied buildings</td>
<td>-0.4</td>
<td>16</td>
</tr>
<tr>
<td>Family homes</td>
<td>-5.5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-12</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

**Energy efficiency programs in Ukraine**

- **“Warm credits”**: Launched in 2015, covered more than 750 thousand households.
- **IQ Energy**: Launched in May 2016.
- **Installation of meters**: -100% coverage of households with heat meters.
- **Energy Efficiency Fund**: Pending since 2017.
- **Programs for TEK**: Pending since 2017.

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**Global oil market**

2016 witnessed the lowest crude oil prices for the past 12 years, with the average Brent oil price at an average of USD 44 per barrel. Moreover, the price of oil throughout 2016 was quite volatile, fluctuating in the range of USD 26 to USD 55 per barrel.

In autumn 2016, representatives from OPEC members resolved during several meetings to reduce volumes of oil production to curb oversupply in the market. OPEC member countries seek to achieve a stable trend towards strengthening global oil prices through the transition from ‘sustainable mining to ‘supply-and-demand balance’ policies.

According to the World Bank and OPEC, oil demand in 2016 grew by 1.5 million barrels per day to 94.5 million barrels per day. OECD countries have demonstrated significant growth, adding 0.29 million barrels per day. China and India faced continued growth, each adding 0.37 million barrels per day. OPEC is expecting in 2017 the level of demand to grow to 176.6 million barrels per day and reach 185.6 million barrels per day.

In 2016, the demand and supply balance of oil stocks was not reached in the global market. If the parties to the agreement to cut oil production manage to execute it, this should decrease the negative balance in 2017 and reduce global commercial reserves.

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**Global oil demand and supply balance, million barrels per day**

**Brent oil prices, 2015-2016, USD/bbl**

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**Natural gas consumption by households in 2016 and change compared to 2015 (bcm/% y-o-y)**

**Source:** Naftogaz

*Excluding temporarily uncontrollable territories in Luhansk and Donetsk regions*

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**Dimensions:** 1190.5x841.9

**Image:** 279x109 to 355x298
Global oil demand and supply balance and oil price

**WHERE WE ARE NOW**

-0.5

1.0

1.5

Demand and supply balance (left scale)

Brent oil price (right scale)

Source: S&P Global Ratings, OPEC monthly oil market report; World Bank Group [Community Markets Outlook]

**RAPID RECOVERY**

- Rapid growth in global GDP (more than 3.2% per year)
- Growth in demand at 1.0% per year

**SLOW RECOVERY**

- Global GDP growth of 2.8% due to slowdown in the Chinese economy. Weak growth in demand (0.5% per year)

**UNDER-INVESTMENT**

- Global GDP growth of 2.8% due to slowdown of the Chinese economy. Weak growth in demand (0.5% per year)

**OVERSUPPLY**

- Global GDP growth of 2.8% due to slowdown of the Chinese economy (0.05% per year)

According to the OPEC Secretariat and the U.S. Energy Information Administration, commercial oil reserves in OECD countries have been declining steadily since summer 2016, while their level remained higher than the average over the last five years. High levels of reserves are maintained in the United States alone, where they exceeded the average of the past five years by about 30%. In late 2018, the oil storage facilities filling level in Europe fell below the 2015 level, while oil reserves in Japan fell to a multi-year low.

**The European market for oil and petroleum products**

The European oil refining capacity is about 10% of the global capacity. According to the European Petroleum Refiners Association (AISBL), refinery capacity utilization in Europe in the period 2007 through 2015 fell from 97% to 78% in the period between 2017 and 2018, about 17 refineries stopped operations (mainly in Italy, France, and the UK), and at the beginning of 2019 there were 80 refineries operating in Europe. Among the main reasons for lower capacity utilization of European refineries are the reduced demand for petroleum products, evolution of demand (lower petroleum consumption in favor of diesel fuel consumption), raising share of energy costs in refinery operating expenses with simultaneous reduction of oil refining margins. This leads to increased refinery sensitivity to changes in the cost of oil and petroleum products.

In 2015 and 2016, European refineries capacity utilization somewhat improved due to higher refining margins at refineries. According to EAABC Monthly Global Refiner Margin Indicators, the average oil refining margins at the refineries in the Northwestern Europe were approximately USD 5.6/bbl in 2015, while in 2016 they were USD 7.3/bbl and USD 4.2/bbl, respectively. Refining margins decreased in 2016 compared to 2015 due to increased global refinery capacity utilization levels.

The decline in European refineries capacity utilization levels compared to 2015 was due to increase in diesel fuel imports from Russia, the United States, and Asia. However, the European refineries capacity utilization level in 2016 was still significantly higher than in 2015. In 2018, the consumer price change trend for petroleum products corresponded to the global price change trend. In particular, the increase in oil prices in the period of January through December 2018 amounted to about 70% (from USD 31 to USD 54 per barrel), while at the same time, increase in petroleum product consumer prices in the EU amounted to 6% for gasoline and about 13% for diesel fuel.

**Oil and condensate extraction in Ukraine**

The decline in oil prices in 2014-2015 caused by excess supply probably reached its critical point in 2016. The US “Shale Revolution”, which became possible only under a new era of “cheap” oil, has borne fruit in the form of additional, excessive volumes of oil in the market and gradual technology development that led to a reduction in all extraction costs.

At the same time, lower prices caused by excess supply meant the fields with higher extraction costs could not survive. Moreover, rapid decline in oil prices led to oil companies rolling back investment programs for the development of new fields.

The decline in global oil prices has had some impact on Naftogaz Group companies – Ukrnafta and Ukrvzbyduvannya. Even the low level of investment in drilling of new wells and overhauls in previous periods against the backdrop of natural decline in fields productivity, the fall of global oil prices and significant tax burden in 2018, Ukrnafta reduced oil and condensate extraction by 10% and Ukrvzbyduvannya by 5%. In addition, volumes of oil and condensate production by private companies in Ukraine were reduced by 15%.

This trend can be explained primarily by the delayed response of the legislative authorities to changing market conditions and, therefore, insufficiently flexible taxation of hydrocarbon producers in Ukraine - rental rates were reduced only in January 2017. As a result, at a high taxation level in 2016 extracting companies were forced to operate under conditions of underfunded development programs. In future, in view of the lower tax burden on hydrocarbon production operations in Ukraine, volumes of drilling and hydrocarbon production, including oil and gas condensate, are expected to grow.

**EU-16 refineries capacity utilization level and Brent oil refinery margin**

**Brent oil price and EU-16 refineries capacity utilization**

**Global oil price and petroleum products’ consumer prices in EU**

1 A rise from 1 January 2017; the rental rate for oil and gas condensate extraction decreased from 40% to 25% of the commodity value for deposits above 5000 meters and from 20% to 14% for deposits below 5000 meters.

Source: S&P Global Ratings, weekly energy bulletins of the European Commission

Source: Creditsuisse, monthly oil market report (2014-2016); International Energy Agency (IEA), Global Refining Margin Indicators

Source: S&P Global Ratings, weekly energy bulletins of the European Commission

Source: S&P Global Ratings, OPEC monthly oil market report; World Bank Group (Community Markets Outlook)
WHERE WE ARE NOW

2005-2016 Dynamics of oil extraction in/imports to Ukraine,

Oil and condensate extraction in Ukraine, thousand t

Structure of oil and condensate extraction in 2016 by companies, %

Oil sales in Ukraine

Ukrnafta and Ukrigazdobuvannya account for approximately 80% of oil and gas condensate extraction in Ukraine (about 65% and 25%, respectively). Ukrigazdobuvannya is refining oil and gas condensate at its own production facilities. Ukrnafta is selling domestically produced oil and gas condensate exclusively at auctions in accordance with Article 41 of the law ‘On Oil and Gas’ and the procedure for organizing and holding exchange auctions for sale of domestically produced crude oil, gas condensate and LNG, approved by the Cabinet of Ministers of Ukraine Regulation No. 570 of 16.10.14.

Today, crude oil in Ukraine is refined by Kremenchuk refinery only, at volumes of about 70 million tons per year – this is mainly domestically produced oil and gas condensate. The other five domestic refineries do not process oil and it is unlikely that they will resume their operations in the short-term.

According to the rules of procedure and approved auction scheme, starting prices for domestically produced oil sales are usually calculated based on the Platts Crude Oil Marketwire publications on the mean prices of actual agreements on Urals oil sale (UralsMediterranean and UralsRotterdam quotations).

Oil refining and refined petroleum product market in Ukraine

The internal Ukrainian market is insufficiently saturated with domestically refined petroleum products due to falling domestic hydrocarbons extraction and refining, which in turn led to an increase in the share of petroleum product imports.

According to data from the State Fiscal Service of Ukraine for 2016, the total volume of imports into Ukraine under the UCG FEA (Ukrainian Classification of Goods of Foreign Economic Activity) 270 (oil and petroleum products) amounted to 74 million tons, while exports of petroleum products was 235.6 thousand tons.

The all-Ukrainian capacity of oil refineries is about 40 million tons of oil per year, or almost four times the demand for petroleum products in Ukraine. Despite sufficient refinery capacity in Ukraine, refinery capacity utilization is very low (approximately 7%). Today, only Kremenchuk and Shebelinskiy refineries carry out refining of mainly domestically produced hydrocarbons to the extent of about 2.7 million tons of hydrocarbons (2016).

In only 10 years, Ukraine underwent a transformation from a country with surplus refinery capacity and oil exporting country to a country that is more than 80% dependent on petroleum products imports. In 2015-2016, Kremenchuk oil refinery refined oil from Ukrainian oil fields together with CPC Blend oil and gas condensate imports. Beginning in Q1 2016, the refinery produces Euro 5 diesel fuel. According to the calculations and information available from public sources, Ukrtransnafta refined at Kremenchuk oil refinery about 21 million tons of raw materials and produced about 540 thousand tons of motor gasoline and 590 thousand tons of diesel fuel.
WHERE WE ARE NOW

Given that Ukraine is currently an import-dependent country, the price of petroleum products on the domestic market is formed on the basis of price quotations in the main European hubs of Southern and Northwestern Europe. As a result, an upward consumer price change trend has also been observed in the Ukrainian market: the price of gasoline increased by 22% and diesel fuel prices rose by approximately 22%. The larger increase in prices of petroleum products on the domestic market of Ukraine is primarily associated with the decrease in the exchange rate of the hryvnia against foreign currencies and the greater share of raw materials (petroleum product) in the final selling price.

Ukrainian gas production development concept

Ukrainian mineral resources offer significant potential for the increase in natural gas production both in the short- and medium-term from already discovered fields (28 bcm – balance sheet reserves) and in the long-term. The intensity of natural gas production is very low compared to other countries. Based on its current natural gas consumption levels, Ukraine has proven reserves for more than 20 years (compared to 10-15 years for comparable countries).

Adoption of the Ukrainian Gas Production Development Concept by the Cabinet of Ministers of Ukraine in December 2016 is an important event for the sector. According to this document, gas production in Ukraine is expected to increase to 28 bcm by 2030 as a result of the favorable environment in the industry and an expected increase in investment. The implementation of the program would enable Ukraine to completely stop importing gas, and even start exporting it in the future.

The list of activities to implement the concept shows that the government has planned to balance the tax burden on gas production by adopting the incentive royalty. It also aims to dezentralise tax revenues from oil and gas industry for the benefit of local budgets, while improving and simplifying authorization processes that are closely related to oil and gas production (regulation No 306).

Other goals include to improve production sharing agreements (PSA) as a tool of public and private cooperation (regulation No 3027) and to increase transparency in the extractive industry (regulation No 4846).

At the end of the year, the first steps to implement the concept were proposed to the government – draft regulation No 5152 “On amendments to the Tax Code of Ukraine”, which included introducing an incentive tax by reducing royalty for gas production from new wells drilled after 1 January 2017 to 12%.

The potential benefits of this innovation include increased investment attractiveness of Ukraine as a country with significant natural resources; improved investment and business activities in the mining industry; increased drilling works and production volume in the short- and medium-term. However, the government rejected the initiative and approved lower rates for oil production instead.

In the current regulatory environment, Ukraine compares poorly with other Eastern European countries in terms of attractiveness for international capital aimed at hydrocarbons production.

Tariffs for UGS services

In June 2016, as part of natural gas market reforms, the National Energy and Utilities Regulatory Commission (NEURC) approved methodology for determining and calculating tariffs for natural gas.

IMPOR TANT REGULATORY CHANGES IN 2016

Average tax burden on hydrocarbon production from different depths and using different technologies (%)
The tariffs for exit points for gas extracting (or energy units) per time unit in the points and exit points are determined as in September 2015 (after public discussion EU countries and adopted by the NEURC). Developed based on the experience of other, would make Ukrainian UGS facilities marginal cost for UGS provider, and on the one hand, would at least cover the marginal cost for UGS provider, and on the other, would make Ukrainian UGS facilities commercially attractive for gas traders including European companies.

Tariffs for point of entry to/exit from Ukrainian UGS facilities approved
Pursuant to the Law of Ukraine “On the Natural Gas Market”, on 29 March 2017, the NEURC approved Ukranegaztrans tariffs for natural gas transportation services to Ukrainian consumers for entry and exit points calculated using the new methodology. The methodology was developed based on the experience of EU countries and adopted by the NEURC in September 2015 [after public discussion by the market players since April 2015]. According to the methodology, the tariffs for natural gas transportation for entry points and exit points are determined as the cost of delivery in the planning period to the customer at the ordered volume in tcm (or energy units) per unit time in the points of entry to the GTS and in the points of exit from the GTS.

The commission approved two tariffs for entry points. UAH 2963.0/tcm per day for entry points for gas extracting companies, and UAH 0/tcm per day for the exit UGS points. The tariffs for exit point for consumers who are directly connected to the gas main pipelines set by the commission are UAH 523/tcm per day. For 43 virtual exit points out of GTS to regional gas distribution systems (gas distribution network (IDSN) operator), tariffs are different for the virtual exit point to different distribution systems, ranging from UAH 7.61/tcm per day to UAH 192.75/tcm per day.

The approved tariffs are effective from 1 April 2017. However, after the NEURC meeting on 10 April 2017, a decision was taken to hold further consultations with the public and the government to improve the proposed monthly fee mechanism.

Accordingly, the previous decisions of the NEURC on tariffs for the points of exit from the main pipelines and entry into the distribution networks were canceled. New tariffs for entering the GTS for the gas producing companies were not canceled, and from 1 April 2017 gas transportation tariffs paid by the end consumers of gas, effective since 1 January 2017 (close to the new tariffs for the points of exit from the main pipeline and entry into the gas distribution networks) are applicable.

The new tariffs for GTS entry and exit points are calculated using the methodology approved by the NEURC as far back as in September 2015, which was designed to cover the cost of the GTS transit section by the end of 2019 [before the current contract between Naigsprom and Naftogaz expires]. Given Naigsprom’s repeated public declarations of their intention to stop using Ukrainian GTS after 2019, and the active promotion of alternative pipeline projects that would allow Russia to abandon the Ukrainian route, a significant reduction in economic benefits is expected from the Ukrainian GTS by 2020. The reason was for the reduced estimated useful lives of the assets when calculating the tariffs. Taking the above-mentioned dynamics into consideration, and according to the NEURC methodology accelerated transit assets depreciation was applied. Tariffs are expected to significantly decline after 2019, including tariffs for domestic gas transmission, which would allow Ukraine to compete with other gas transmission routes and offer attractive gas transmission conditions both from east to west and from west to south to Russian and European gas suppliers.

It should also be noted that since January 2016, new tariffs are effective for the points of entry to and exit from the Ukrainian gas transmission system at the state border. The rate is UAH 1247/tcm, the exit tariff is different for different exit points, the average tariff is UAH 30.8/tcm. However, Naigsprom refuses to comply with the requirements of Ukrainian law and fails to pay the new tariffs for gas transportation services. Demands to remedy this situation are included in the Naftogaz lawsuit against Naigsprom in Stockholm. A decision is expected in 2017.

The company restructuring process
In the reporting period, the Company Restructuring Plan was adopted [Resolution of the Cabinet of Ministers of Ukraine dated 01.07.16 No 699]. To implement the plan, an action plan on corporate governance of the transmission system operator was approved, PSC Magistrati Gasprovoz Ukraniy (Ukrainian main pipelines) was incorporated, its article of association was approved, and the Ministry of Energy and Coal Industry of Ukraine was authorized to create and register the new established company [Resolution of the Cabinet of Ministers of Ukraine dated 16.11.16 № 837].

However, the Company Restructuring Plan activities are often implemented with delay, in particular with regard to development and submission for consideration of the regulations concerning:
- transferring power-generating state companies and the authority to manage the state corporate rights in their charter capital from the of Ministry of Energy and Coal Industry of Ukraine to another government authority which is a potential precaution for unbundling. Paragraph 4 of the Plan – responsible agencies: Ministry of Economic Development, Ministry of Energy and Coal Industry of Ukraine. Dealing with procedures and conditions for concession of the property that is used for natural gas transmission and storage (injection, withdrawal) and is not subject to the procedure in paragraph 5 of the Plan – responsible agencies: Ministry of Economic Development, Ministry of Energy and Coal Industry of Ukraine.

Improvement of secondary legislation
The secondary legislation governing the relationship between the subjects of the natural gas market, including the Gas Transmission System Code, the Gas Distribution System Code, the Natural Gas Supply Rules and other bylaws is improved.

Decentralization of royalty
As a step towards reforming the extracting sector, the Law of Ukraine “On the National Commission for state regulation in energy and utilities” of 22.02.16 № 944-VII established legal framework for the regulator operations.

Decrease in royalty for oil production
The Tax Code of Ukraine [Law of Ukraine of 20.03.16 № 113-VII-1] is amended to reduce royalty for oil production. For example, for oil deposits up to 5000 meters depth is reduced from 49% to 26% of the output value, and for deposits below 5000 meters – from 26% to 16%.

Positive development for the market
Regulator operation mechanism and standards are clearly determined.

Positive development for the market
Elimination, through customs clearance regulation, of the barriers to natural gas substitution (basically, which an important tool to increase the capacity of interstate gas transmission systems, market liquidity and the energy security of such transactions. In addition, the ability to carry out backhaul operations (with non-gas substitutes) is a requirement of EU legislation to the GTS operator.

Positive development for the market
Clarified provisions of the above regulations aimed at convergence with European regulations on the natural gas market.

Positive development for the market
Improved cooperation and sound grounds for establishing constructive relations between oil and gas companies and local authorities and communities. However, it should be noted that the decision to reallocate tax revenues shall be taken in a way that would balance funding the needs of the local authorities and communities with funding the needs of state budget. These are covered by the proceeds of rent payments for use of subsurface for the purpose of oil, natural gas and gas condensate extraction, namely household benefits and housing subsidies and subventions for repayment of the difference in tariffs
WHERE WE ARE NOW

Approval of economically justified tariffs for domestic routes of oil transportation

Oil transportation services in Ukraine are provided to consumers under tariffs approved by the NEURC. The rates established in 2007 remained unchanged until June 2015. Even after an increase in 2015, the rates do not cover the costs of oil transportation and corresponding route maintenance. The methodology for calculating tariffs for oil transportation to consumers in Ukraine used by the NEURC is effective since 1999 and contains a number of fundamental flaws that do not allow for efficient tariff policy in oil transportation within the country. In 2016, Ukrtransnafta developed and submitted an updated tariff calculation methodology. At the time of this report, the draft has not yet been adopted and is at the stage of public discussion.

Positive development for the company

The draft resolution of the NEURC “On approval of the procedure for calculating tariffs for oil and oil products transportation through the main pipelines” is designed to improve the oil (oil product) transportation tariff methodology for oil (oil product) transportation companies, which will allow:
- when the tariffs are calculated, to allocate costs by operational segments – oil (oil product) transit and oil transportation for Ukrainian consumers;
- to avoid reallocating the costs from domestic routes to transit routes based on turnover;
- to determine the actual costs and tariffs for domestic routes, calculate the tariffs based on actual costs for each route, and increase their efficiency, and to clearly define the procedures for establishing tariffs for oil (oil product) transportation services through pipelines;
A balanced tariff policy which would cover economically justified costs while ensuring competitive prices for services compared to other transport modes is one of the key factors to ensure the long-term reliable operation of the oil pipelines to satisfy the needs of Ukrainian consumers.

Other regulatory changes

Subsidy mechanism improved

The Resolution of the Cabinet of Ministers of Ukraine “On amendments to the procedure for transferring certain subsidies from the state budget to the local budgets for provision of benefits, subsidies and compensations” dated 10.03.2016 No 105 is adopted. The joint order of the Ministry of Energy and Coal Industry of Ukraine and the Ministry of Finance of Ukraine “On amendments to the Procedure for paying natural gas, heat and electricity bills” dated 16.03.2016 No TA/268 is registered with the Ministry of Justice on 22.03.2016 Ref. 423/28550.

The joint order of the Ministry of Energy and Coal Industry of Ukraine and the Ministry of Finance of Ukraine “On amendments to the Procedure for paying natural gas, heat and electricity bills” dated 16.03.2016 No TA/268 is registered with the Ministry of Justice on 22.03.2016.

Positive development for the company

The current household benefits and subsidies funding mechanism is improved. The sources of funding now include revenues from Naftogaz and Ukmtransgaz, value added tax, allowing for the proper performance of the social budget program as well as guaranteed settlement of accounts receivable of the heat and gas supply companies for the heat and gas provided to the households and sustainable financing of their expenditures.

District Heating Company (DHC) payment discipline relaxed

The Law “On measures designed to settle the debts of heat supply and heat-generating companies as well as district water supply and water treatment companies for consumed energy” of 10.03.2016 No 105/33-UH is adopted which provides for the introduction of a number of instruments to settle the relationship between the energy provider market players, including:
- moratorium on enforcement proceedings and enforcement of court rulings concerning DHC debts to the company for natural gas;
- ban on charging penalty, inflation charges, and interest for the improper fulfillment of the terms of contracts by company counterparts;
- writing-off DHC outstanding penalties, inflation charges, and interest with no sources to cover the losses incurred by the company.

Negative development for the company

Positive development for the company

Distribution of funds paid by heat consumers to DHC

The resolution of the Cabinet of Ministers of Ukraine “On amendments to the Resolution of Cabinet of Ministers of Ukraine of 16 June 2014 No 297” dated 18.03.2016 No 106 is adopted. The resolution introduced a new mechanism for distribution of funds received from heat consumers onto the special DHC accounts (i.e. the procedure for funds distribution has been changed fundamentally in order to ensure a fair and transparent funds distribution mechanism, and in order to balance the interests of all counterparts of the settlements—this list changed due to the Law of Ukraine “On the natural gas market”).

The updated funds distribution algorithm resulted in the following positive developments in 2016:
- improvement of DHC settlements for consumed natural gas supplied by the company;
- compliance with the requirements of the IMF Memorandum of Economic and Financial Policies with regard to adjusting coefficient restoration;
- guaranteed revenues to DHC accounts to finance labor costs, contributions for compulsory social insurance, and payment of taxes and fees;
- taking into account the benefits and subsidies;
- introduction of incentives for timely payment of natural gas bills;
- guaranteed revenues for new natural gas market players.

The interest of the government (the resolution of the Cabinet of Ministers of Ukraine dated 10.03.2016 No 105) on the restoration of the adjusting coefficient within the funds distribution mechanism is the main advancement introduced by resolution No 1086. The coefficient prevents evasion of timely and full payments by the DHC. The amendments in the regulations made it possible to reduce the amount of settlements between the DHC and the company or direct avoidance of the payments would be beneficial for the DHC only for a short period, since any decrease in payments by the DHC in a certain period, due to the adjusting coefficient, would result in an increase in payments to the company in the subsequent periods.

Following the introduction of Resolution No1086, the company has repeatedly observed attempts by enterprises and certain executive authorities to restore the old settlement mechanism and to amend the law in a way that would enable evasion of payments for the natural gas purchased from Naftogaz.

Despite the fact that Naftogaz has repeatedly prevented attempts by enterprises and certain executive bodies to make significant changes to the funds allocation procedure that would lead to a significant decline in the transfer of funds to the company, the separate accounts mechanism changed three times in 2016 alone. This allowed for an increase in the share of funds allocated to DHC and a reduction in payments to Naftogaz.

Regulatory changes

Reducing safety stock requirements

The Law of Ukraine “On amendments to Article 12 of the Law of Ukraine “On the natural gas market” of 22.03.2016 No 107/34-UH is adopted. Its provisions establish the gas safety stock at no more than 10% of the volume of natural gas supply to consumers planned for the next month and the percentage shall be determined annually by the decision of the government (the resolution of the Cabinet of Ministers of Ukraine of 16.03.2016 No 880 established the natural gas safety stock at zero level for 2016 and 2017).

The impact of changes on the company

Neutral development for the company

The company considers the current safety stock mechanism as being behind the development of the gas market, particularly after the introduction of the Law of Ukraine “On the natural gas market,” and recommends a change in mechanism. The company believes that in line with best EU practice, the suppliers of gas to protected customers should be solely responsible for creating and maintaining the gas safety stock (except for the gas supplied under special commitments). The volume of required safety stock should be determined by the Ministry of Energy and Coal based on analysis of the existing risks of gas supply failure.

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FIRST RESULTS OF GAS MARKET REFORM

Over the past three years, Naftogaz has been actively involved in promoting reforms in the energy sector. The military conflict in Eastern Ukraine has exacerbated the need for energy independence, which can only be achieved through drastic and sometimes painful reforms.

The year 2018 was significant for evaluating the effectiveness of the gas market reform. A competitive market environment has yet to be established, but some changes have occurred both in the Naftogaz group and in the gas sector as a whole.

Starting from 1 January 2016, all gas transmission rates have been set by the regulator. For cross-border points, rates were set based on the RAB (regulatory asset base) methodology, which is universally recognized and used to determine justifiable tariffs for natural monopolies in EU and other energy Community countries. The transition to RAB-based tariffs was expected to be complete in April 2017.

In April 2018, a supervisory board was set up. This independent body assumed a number of obligations, as defined by the law and performed by the government. At the same time, the supervisory board still lacks sufficiently broad authority and responsibilities to control the company’s board activities. As envisaged by the corporate governance action plan, starting from April 2017, a targeted charter was expected to come into force to grant to the supervisory board powers recommended by the OECD. Political interference in the Company’s activities was reduced, leading to greater confidence from international lenders and partners. Due to internal audit, risk management, compliance and transparent procurement, Naftogaz obtained effective and decisive safeguards against undesirable effects.

The unprecedented openness of, and market pricing in, the unregulated market is crucial for further market opening and expansion. The Energy Community Secretariat expressed surprise at the situation in the household gas supply segment. Naftogaz is ready to compete with regional gas supply companies and engage in natural gas to households bypassing intermediaries. In April 2017, the company submitted proposals to the government.

At the time of publication of this report, no secondary legislation, notably the Network Code (of the Gas Transmission Network of Ukraine which establishes the “rules of the game” in the market) that meets the EU standard network codes and the requirements of the Third Energy Package, including the Directive 2009/72 / EU “Concerning common rules for the natural gas market” and EU Regulation 75/2009 “On conditions for access to natural gas transmission networks” had been adopted. Naftogaz is drafting appropriate changes to legislation.

Final liberalization of natural gas prices

In 2018, full liberalization of natural gas prices is expected. Should the market price of gas available for Ukraine be higher than the regulated price, it is necessary, within the shortest time possible, to create appropriate mechanisms to reduce social tensions and ensure the irreversibility of necessary market reforms, including efforts to:

1. create conditions conducive to the emergence of at least one alternative supplier in the household gas sales segment, which would restrain price increases imposed by the dominant supplier;
2. make changes to secondary legislation in order to implement EU network codes, including daily balancing that will facilitate the emergence of new market participants and European companies, including in the end-use domestic consumers segment;
3. develop and implement mechanisms for setting the prices of thermal power companies for consumed natural gas and for ensuring their payment discipline, which will be acceptable at the initial stage after liberalization of natural gas prices;
4. introduce an effective mechanism governing relations between natural gas wholesalers and gas supply companies which will ensure the latter’s payment discipline;
5. improve the mechanism of granting duties to encourage energy efficiency and transparency of charging subsidies through partial monetization of saved costs, taking into account the seasonality of consumption, gradual reduction of social norms, and raising of the compulsory payment with due regard for real income growth, etc.

6. provide high-quality and timely implementation of the Law of Ukraine “On the National Commission for state regulation in the energy and public utilities sectors” No. TSO-VI of 09.22.2006, notably the provision on the rotation of regulatory members;
7. by means of continuous and timely implementation of measures envisaged by the approved Naftogaz corporate governance plan, ensure effective state control over company activities in a civilized manner;

During the designated initial phase, to continue using current accounts with a special reserve for transfer of funds received as payment for natural gas from the population and thermal power companies;

9. conduct information campaigns through the media, round tables, etc., to brief retail consumers about the possibility to change their gas supplier.

Separating functions of the (transmission system operator (TSO))

Today Ukraine’s TSO is Ukrtransgaz. As a member of the Energy Community, Ukraine has assumed responsibilities to unbundling and eliminating the risk of fraud and corruption prevention in accordance with EU energy legislation, in particular the Third Energy Package, having chosen the strictest ownership unbundling model (FOU).

The TSO unbundling process must take into account the economic interests of Ukraine. The transfer of assets to the new TSO is expected to begin following the decision of the Stockholm arbitration court.

The effective separation the TSO’s duties from Naftogaz is a prerequisite for establishing a free and competitive gas market. This process should include efforts to attract a qualified international partner, which will help Ukraine gain necessary experience, good governance standards, and European practices and competences.

In general, cooperation with a leading Western operator should improve the operational efficiency of Ukraine’s TSO (including through prompt detection of fraud and corruption prevention) and strengthen the credibility of the Ukrainian gas market with European gas companies, governments, institutions, etc. This should facilitate the transfer of gas transfer points from PSC “Gazprom” to European customers on the basis of a fair, non-discriminatory access to this market.

Among other things, the document aims to ensure the long-term stability of natural gas transmission through Ukraine’s territory according to the standards of European markets, safe and effective use of Ukraine’s GTS, as well as transparent and non-discriminatory access to this network for third parties in accordance with the applicable laws. As part of the memorandum, participating companies will have the opportunity to transfer assets and liabilities to the new TSO and access to the possibilities of using and upgrading the gas transmission network of Ukraine in order to ensure its efficiency and competitiveness.

Naftogaz corporate governance reform

In October 2015, the Cabinet of Ministers approved a proposal to improve the Naftogaz corporate governance action plan (hereinafter — NGAP), which provides for amendments to certain Ukrainian laws and regulations.

Naftogaz became the first state-owned company to implement OECD standards of corporate governance. Implementation of the NGAP will ensure effective separation of ownership and independent supervision of the company’s activities. As part of the reform, a system of effective internal control, which significantly limits opportunities for corruption, will be introduced at all company levels.

Unfortunately, in 2016 very important changes to the laws of Ukraine aimed at the implementation of this plan were not adopted. In addition, the unconditional implementation of measures provided by the NGAP is a key obligation and precondition which will allow Naftogaz to retain access to EBRD financing for purchases of natural gas from European suppliers. Failure to fulfill the NGAP may result in a requirement to repay its debt to the EBRD prior to the scheduled date and may put at risk not only the country’s energy security but also the implementation of planned gas sector reforms. Likewise, reform of corporate governance systems of state-owned enterprises is also a precondition for gaining access to other support programs available to Ukraine. According to experts, it takes about 4–5 years to fully implement of agreed reforms. This period is long enough for Ukraine’s energy security to take a serious hit and put at risk not only the country’s energy security but also the implementation of planned gas sector reforms.
Issues regarding ownership and/or operation of UGS and gas production facilities, including all related legislative and corporate reforms, shall be considered separately from the TSO unbundling and must not hamper the procedures needed for unbundling.*

Energy Community Secretariat, conditional approval, 06.05.2016

WHY ESTABLISH A NEW TSO?
Establishing a new company will create a TSO that would attract international partners. This will provide new opportunities to create an effective natural gas market in Ukraine, to counter the threat posed by Nord Stream 2 and similar projects, and to maximize the value of state-owned assets.

**UKRTRANSAGAZ AS TSO**
- UGS assets generate loss in both Ukraine and Europe as well as non-core assets of doubtful or even negative value for the shareholder
- Vague management structure complicating and slowing down the introduction of an effective corporate governance system according to OECD principles
- "Historical problems" of Ukrtransagaz, including disputes with Ukrnafta and Ukrigaz-Energo over 11.7 bcm and 7.7 bcm of gas respectively
- Overstaffing – tenfold more compared with some European peers
- High risk of due diligence failure

**NEW TSO**
- Only core assets that are used for gas transmission and create clear value for the shareholder and customers
- The Corporate Governance Action Plan stipulates the creation from scratch of an effective system that would be in line with OECD corporate governance principles. This will help avoid the old system’s resistance
- No historical problems
- The number of staff needed for efficient and secure performance of TSO functions
- Clean and transparent company

**FULL OWNERSHIP UNBUNDLING (FOU)**
Although the best practice is when a TSO owns assets, the following exception can be made: a TSO has rights that are close to ownership with full division of control over the operator and producer/supplier among different agencies.

**THE MECI MANAGING THE STATE’S SHARE IN MGU JSC**
MECI is a shareholder of MGU JSC but it cannot control energy generation/supply companies. For example, the MECI cannot be a shareholder of Ukrhidroenerho or Enerhoatom.

**A WESTERN PARTNER MAY BE ENGAGED IN GTS OPERATIONS**
The law offers the possibility to engage a partner from a member state of the Energy Community or the U.S. in GTS operations.

**UGS RESTRUCTURING IS NOT PART OF THE UNBUNDLING**
Restructuring/handling over of UGS facilities should be considered separately and based on the results of thorough analysis of the most effective usage.

**ESTABLISHING THE NEW TSO**
Creating a transparent and efficient company without the burden of UTG's historical problems and attractive to a Western partner.
The second phase of the initial risk assessment will result in a comprehensive initial risk assessment report for Naftogaz group. Going forward, Naftogaz group risk assessment will take place on a quarterly and annual basis, as well as in response to specific risk events.

The key identified risks that can cause serious adverse effects on production performance, cash flows, and the group's financial position are described below:

### Technical and operational delivery

#### Health, safety and environment

The operations of Naftogaz and its subsidiaries involve significant health, safety, and environmental hazards. The processes and chemicals used in extraction and production methods, as well as the transport and storage of gas and oil, may heighten the potential for a major incident and multiple fatalities, environmental hazards, and loss of business assets/operations. Outdated equipment and production technology and poor operational practices may lead to increased risk levels.

Mitigation measures include training, introducing modern methods of operations, diagnostics, reconstruction, and modernization of existing facilities.

#### Subsurface

Subsurface risks are inherent in the upstream oil and gas business and result in uncertainty about the levels of hydrocarbons that are present in exploration and production licensed areas. This problem is exacerbated in Ukraine by the relatively low quality of geological information available and out of date equipment and technologies of Ukrzasyvdyobuvannya and Ukraťna. These risks may lead to lower volumes of gas extracted and/or increased expenses for drilling and production, that in turn leads to a deterioration of one of the key strategic goals of Naftogaz to preserve and increase exploration and production abilities.

The group continuously cooperates with Ukrainian research and technical institutes to improve the quality of geological exploration. Ukrzasyvdyobuvannya has begun intensive upgrading of its equipment to reduce costs and improve the efficiency of drilling and gas extraction.

#### Investment program execution

Lack of access to capital, together with weak internal capability and supply chains can create challenges to the successful delivery of both ongoing maintenance activity and the growth investments planned for the Naftogaz group.

Due to insufficient liquidity, Naftogaz group is considering various ways of raising funds for investment projects, including by borrowing on international financial markets.

### Markets

#### Domestic market regulations

On 1 October 2015, the Government of Ukraine approved imposition of Public Service Obligations (PSO) on natural gas market participants, including Naftogaz, to ensure general public interests in the functioning of the gas market until 1 April 2017. On 22 March 2017, these PSO measures were given further effect until April 2018.

Inter alia, Naftogaz was obliged to supply, at regulated prices, directly to district heating companies and through regional suppliers to households, jointly representing over 50% and 60% of domestic consumption in 2016 and 2017 respectively.

In the absence of the approved compensation mechanism for selling at regulated prices, Naftogaz is forced to cross subsidize losses from regulated segments (such as district heating) with profits from other activities.

Moreover, by selling gas to counterparties with a financially unsustainable business model, such as district heating companies (BHC) and regional supply companies, Naftogaz bears high credit risks. As of 31 December 2016, the total DHC debts to Naftogaz had reached over UAH 28.3 billion.

As of 31 December 2016, the total DHC debts to Naftogaz had reached over UAH 28.3 billion. The inability to collect these debts represents a fundamental risk to Naftogaz. Without appropriate government action, this will seriously threaten the continued liquidity and sustainability of the company.

In order to improve the effectiveness of the Ukrainian gas market, Naftogaz initiates discussion of a number of amendments to regulations designed to reduce the risk of outstanding imbalances for the GTS operator, facilitate operations of network users, and ensure the fairness of the GTS operator’s actions to balance and reduce the financial burden on the suppliers.

### Improving efficiency of procurement

**Improving efficiency of procurement is a key priority**

To make procurement process more transparent and unified for the whole group, Naftogaz has adopted new group procurement policy in 2017. As part of design of upgraded procurement process, the Group plans the following steps:

- Strengthen internal control procedures in respect of purchases through introducing compliance and risk management functions, and strengthening finance control function at the group level.
- Implement category management at the group entities, and create standar procurement strategies.
- Introduce comprehensive risk control procedures in respect of contractors and avoid conflict of interest of group personnel.
- Improve competitiveness of procurement process, focus on direct contracts, minimise relations with intermediaries to reach more cost efficient price quotes from contractors.
- Implement analytical tools, including system analysis of markets and price benchmarking, creating databases of contractors, prices and types of works, as well as improve system of electronic document flow.
- Improve dialogue with market players and build long-term transparent and trustful relations with contractors.

Naftogaz takes all possible steps aiming to get quick wins in procurement process already in 2017.

### Main Risks

Following the approval of a new Naftogaz Charter in Cabinet of Ministers of Ukraine resolution No. 1002, an independent risk management service was established at Naftogaz in May 2016, and first commenced its operations in November 2016. The purpose of the office is to ensure that an effective risk management process and controls are in place to achieve the current and future strategic goals of Naftogaz and its subsidiaries.


In February 2017, an initial risk assessment began at Naftogaz group based on this revised methodology. The first phase of the assessment ended in March 2017 and identified the material risks inherent in the Naftogaz group. This built on previous risk management activities conducted within the company.
WHERE WE ARE NOW

Seasonal liquidity
The group’s activity is seasonal: volumes of natural gas and transmission services sold during the heating season comprise ca. 70% of annual volumes. During this peak period, the cash flow for sold goods and services significantly increases. In contrast, the summer period represents a period of low sales volumes and high gas purchases to prepare for winter demand. Because of these cash inflows and outflows, additional financial resources are required to finance the injection of natural gas into underground gas storage (UGS).

The group tries to attract additional loan proceeds on international financial markets at lower interest rates to cover the cost of pumping natural gas to underground gas storage.

Launch of Turkish Stream and Nord Stream 2
There are two gas pipeline projects in progress today with the expected launch in 2019 that would allow gas transportation from Russia to EU countries and Turkey while bypassing Ukraine:
1. The Turkish Stream project signed on 10 October 2016 between the governments of Russia and Turkey assumes gas transmission capacity of 3.5 bcm per year.
2. The Nord Stream 2 project signed in 2015 assumes gas transmission capacity of 55 bcm per year.

Project implementation may lead to a loss of Naftogaz income from gas transit from Russia to EU countries and Turkey starting from 2019. Total gas transit income of Naftogaz amounted to almost UAH 60 billion in 2016.

In order to diversify the consumers of the natural gas transportation and storage services, Naftogaz facilitates the organization of a single East European gas hub. The company also promotes the creation of integrated infrastructure and commercial gas space between Ukraine, Poland, Slovakia, Hungary and Romania.

Macroeconomics

Foreign exchange
Naftogaz group carries out its operations in Ukraine and its dependence on the foreign exchange risk is due mainly to the need to purchase natural gas from foreign suppliers whose proposals are denominated in EUR or USD. The Naftogaz group debt in foreign currency on 31 December 2016 amounted to USD 2.1 billion.

Naftogaz’s ability to hedge the risk in the local market is limited due to the nature of the Ukrainian hedging market in particular:
1) foreign exchange forwards market volume cannot meet the needs of the company and activity in the market may cause significant fluctuations of the national currency,
2) limitations of the legal and regulatory framework.

Since the Law of Ukraine “On the natural gas market” entered into force on 1 October 2015, the company has independently established prices for industrial and commercial consumers that are not subject to PSO.

Naftogaz continuously monitors the Ukrainian currency market and, depending on the market conditions, decides on the foreign currency to maintain its bank account balances (with regard to the regulations of the National Bank of Ukraine on the issue).

Local economic environment
Any increase of foreign exchange rates together with the local inflationary environment have the potential to seriously impact on the population’s purchasing power and the ability of customers to pay prices for consumed gas which are in line with import costs.

Depending on the stabilization of the economic and political situation in the country, growing GDP and government actions increasing household purchasing power, Naftogaz would be able to shift to a market-based approach to pricing and thus reduce the impact of risk.

Corporate governance reform

Corporate Governance Action Plan (CGAP) implementation
Non-delivery of the CGAP approved by the government on 5 December 2015 will result in an outdated and ineffective system of governance at Naftogaz. Whilst good progress has been made in implementing the company’s obligations under this plan, the implementation of an effective governance system consistent with international standards requires active steps from the government in compliance with the CGAP.

In addition to its impact on corporate governance, the delay in the CGAP implementation creates a significant risk for the liquidity of Naftogaz through the potential impact on FR loans totaling around UAH 380 million. To mitigate this risk, the company has repeatedly raised the issue of implementation of efficient corporate governance with the government.

Corporate structure and development

TSO unbundling
In July 2016, the government of Ukraine approved an Unbundling Plan to separate natural gas transmission from production and supply, as required by the EU “Third Energy Package” and the Law of Ukraine “On the natural gas market”. Good faith implementation of this plan is one of the crucial components of gas market liberalization and its further integration into the EU natural gas market.

As of the date of this report, there are significant delays and lack of compliance with respect to the plan’s implementation. There is a tangible risk that the observed deviation from the approved unbundling concept will prevent the establishment of an important, professional and highly efficient gas transmission systems operator fully compliant with the requirements of EU energy legislation. In addition, the situation may not allow engagement of a reputable Western partner to operate the gas transmission system.

This may lead to a situation where the operator will not be capable of securing non-discriminatory third party access and gain the trust of network users both in Ukraine and abroad. This would directly endanger gas market reform.

Possible separation of Ukrgasvydobuvannya
Naftogaz’s strategy anticipates an integrated approach through which each of the component parts of the company can benefit from the combined skills and balance sheet of Naftogaz group.

Naftogaz is committed to contribute to the energy independence of Ukraine, inter alia, through exploiting the benefits of large scale as well as the synergy arising from both vertical and horizontal integration.

In the event that Ukrgasvydobuvannya is separated from Naftogaz group, there will be material risks that the investment program and associated gas production growth will not be delivered. Moreover, Naftogaz will likely bear additional costs and risks for selling gas to fulfill public service obligations imposed by the Ukrainian government.

Naftogaz communicates at all levels within the group to identify, assess, and minimize potential disagreements among its subsidiaries. In addition, the management draws shareholder attention to the issue.

Situation in Eastern Ukraine and Crimea

Conducting ATO in the east of Ukraine
The hostilities in the eastern regions of Ukraine [ATO area] impair the capability of Naftogaz group companies to sustain critical operations, provide essential products and services, and cause the company to incur additional operating costs.

The consequences of the annexation of Crimea by Russia
In March 2014, the illegal authorities of the occupied Crimea decided to nationalize the property of Chornomornaftogaz, which subsequently became a part of the authorized capital of the illegally established company Crimean Republican Enterprise (CRE) “Chernomornaftogaz.” Prior to the occupation of Crimea by the Russian Federation, Chornomornaftogaz performed the full range of activities, from search and exploration of new deposits to hydrocarbon extraction, processing and delivery to end users.

In August 2014, Chornomornaftogaz was re-registered in Kyiv. Currently, the company controls the Strikove gas field located in Arabat Spit near Strikove village, Genichesk district, Kherson region. The company provides gas to the households of Henichesk district, and is involved in gathering evidence of Russian aggression.

The continued existence of Chornomornaftogaz as a legal entity after the illegal seizure by Russia of Naftogaz assets in the Crimea was one of the key objectives of the company in 2016. Naftogaz managed to avoid the bankruptcy of this subsidiary and to promote development of national draft regulation on the stabilization of its operations.

Despite the fact that Crimea is under Russian occupation and the substantiated force majeure event, lenders still lodge suits against Chornomornaftogaz, which paralyzes its operations. As of December 2016, Chornomornaftogaz stood defendant in 105 lawsuits with total claims of UAH 550 million. Chornomornaftogaz is a debtor under 50 enforcement proceedings initiated by external creditors and totaling about UAH 292 million, of which 33 resulted in funds and property freezing orders. At the same time, 95% of the total Chornomornaftogaz payables (over UAH 12 billion) are attributed to Naftogaz.
On 18 May 2017, the Verkhovna Rada of Ukraine adopted the draft law “On amendments to Ukrainian legislation to stabilize Chornomornaftogaz SJSC in the context of the temporary occupation of Ukraine’s territory.” The document stipulates the following:

- debt payment moratorium till 1 January 2019
- suspension of enforcement proceedings and cancellation of all previous cash and property seizures
- extension of special permits in the occupied territory of the Crimea until the end of the temporary occupation

Arbitrations regarding contracts with Gazprom at the Arbitration Institute of the Stockholm Chamber of Commerce

Gas supply and transit arbitrations were initiated by Naftogaz in the Arbitration Institute of the Stockholm Chamber of Commerce following unsuccessful efforts to reach agreement with Gazprom via negotiations. Gazprom launched counter claims in response to the Naftogaz claims.

Naftogaz retroactive monetary claims amount to USD 18.0 billion and USD 12.3 billion for sales and transit cases respectively. Gazprom retroactive monetary claims total around USD 47.1 billion and USD 7 billion for transit (all figures as of 29 May 2017 including interest, penalties and fines).

Whilst Naftogaz representatives and legal advisors believe in the strength of their cases, as with all arbitration cases, there is a risk of an adverse finding in either case. An adverse ruling could negatively affect Naftogaz financial operations and business as well as the gas market reform in Ukraine.

The Stockholm Arbitration Tribunal rejected on 31 May 2017 Gazprom’s “take-or-pay” claim and satisfied Naftogaz claim to make the contract price market-reflective.

Furthermore, the tribunal has lifted the ban on gas re-export, which was part of the contract.

Risk of a claim for early repayment of a loan from Gazprombank JSC

Satisfying the claim requirements of Naftogaz against Gazprom at the Arbitration Institute of the Stockholm Chamber of Commerce concerning transfer of rights and obligations to the Contract on volumes and terms of transit of natural gas through the territory of Ukraine for the period from 2009 until 2019 No. TKGU dated 19 January 2009 to MAHISTRALNI GAZOPROVODY UKRAINY PJSC, may lead to a situation where Gazprombank JSC will have the right to demand early full repayment of the loan provided to Naftogaz in 2012, including accrued interest on the loan and penalties.

As of 31 December 2016, loan liabilities of Naftogaz to Gazprombank JSC were USD 835.3 million, to be repaid by the end of June 2018.

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The Stockholm Arbitration Tribunal rejected on 31 May 2017 Gazprom’s “take-or-pay” claim and satisfied Naftogaz claim to make the contract price market-reflective.

Furthermore, the tribunal has lifted the ban on gas re-export, which was part of the contract.

Risk of a claim for early repayment of a loan from Gazprombank JSC

Satisfying the claim requirements of Naftogaz against Gazprom at the Arbitration Institute of the Stockholm Chamber of Commerce concerning transfer of rights and obligations to the Contract on volumes and terms of transit of natural gas through the territory of Ukraine for the period from 2009 until 2019 No. TKGU dated 19 January 2009 to MAHISTRALNI GAZOPROVODY UKRAINY PJSC, may lead to a situation where Gazprombank JSC will have the right to demand early full repayment of the loan provided to Naftogaz in 2012, including accrued interest on the loan and penalties.

As of 31 December 2016, loan liabilities of Naftogaz to Gazprombank JSC were USD 835.3 million, to be repaid by the end of June 2018.

Arbitrations regarding contracts with Gazprom at the Arbitration Institute of the Stockholm Chamber of Commerce

Gas supply and transit arbitrations were initiated by Naftogaz in the Arbitration Institute of the Stockholm Chamber of Commerce following unsuccessful efforts to reach agreement with Gazprom via negotiations. Gazprom launched counter claims in response to the Naftogaz claims.

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Naftogaz and Gazprom at SCC

Summary of claims and counterclaims as at 29 May 2017

<table>
<thead>
<tr>
<th>AMOUNT OF RETROSPECTIVE COMPENSATION CHARGED BY PARTIES AND Arbitration</th>
<th>USD</th>
<th>TRANSITION ($ billion)</th>
<th>TOTAL ($ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY</td>
<td>18.0</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>TRANSIT</td>
<td>12.3</td>
<td>12.3</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>30.3</td>
<td>32.6</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>AMOUNT OF RETROSPECTIVE COMPENSATION CHARGED BY NAFTOGAZ</th>
<th>USD</th>
<th>TRANSITION ($ billion)</th>
<th>TOTAL ($ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY</td>
<td>18.0</td>
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<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>30.3</td>
<td>32.6</td>
<td></td>
</tr>
</tbody>
</table>

USD 30.3 billion

Arbitration Institute of the Stockholm Chamber of Commerce

Arbitration Institute of the Stockholm Chamber of Commerce

Arbitration Institute of the Stockholm Chamber of Commerce

Arbitration Institute of the Stockholm Chamber of Commerce

Arbitration Institute of the Stockholm Chamber of Commerce
OPERATING REVENUES AND ASSETS

2016, UAH billion

Operating revenues

**262.1**

- **Upstream**
  - Oil and gas condensate production: 63.5 billion
  - Gas production: 52.0 billion
  - Crude oil transportation: 34 billion
  - Gas transmission: 777 billion
  - Gas storage: 1.0 billion
  - Refining crude oil and gas condensate: 15.8 billion
  - Wholesale and retail gas trading: 99.8 billion

- **Midstream**
  - Gas transmission: 777 billion
  - Gas storage: 1.0 billion
  - Refining crude oil and gas condensate: 0.9 billion

- **Downstream**
  - Wholesale and retail gas trading: 488.4 billion
  - Gas transmission: 283.8 billion

- **Other**
  - Adjustment for inter-group transactions (elimination): -694 billion

Assets

**704.6**

- **Upstream**
  - Oil and gas condensate production: 82.8 billion
  - Crude oil transportation: 18.4 billion
  - Gas transmission: 99.8 billion

- **Midstream**
  - Gas storage: 1.0 billion

- **Downstream**
  - Wholesale and retail gas trading: 93.5 billion
  - Public sector: 262.1 billion

- **Other**
  - Non-core assets: 39.9 billion
“For the first time in the last 5 years, the group has made a profit and did not receive funding from the state budget. Starting from 2016, Naftogaz has transformed from the state budget recipient into its donor, becoming the biggest taxpayer in Ukraine.”

Chief financial officer
Sergiy Konovets

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main group results</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales revenue of the group, UAH million</td>
<td>192,764</td>
<td>132,267</td>
<td>80,715</td>
<td>54.5%</td>
</tr>
<tr>
<td>Gross profit (loss), UAH million</td>
<td>70,980</td>
<td>8,457</td>
<td>7,307</td>
<td>62.5%</td>
</tr>
<tr>
<td>Net profit (loss), UAH million</td>
<td>22,532</td>
<td>(35,062)</td>
<td>(88,403)</td>
<td>11.1%</td>
</tr>
<tr>
<td>Capital investment, UAH million</td>
<td>6,367</td>
<td>6,523</td>
<td>3,672</td>
<td>58.3%</td>
</tr>
<tr>
<td>Assets, UAH million</td>
<td>704,589</td>
<td>560,895</td>
<td>506,620</td>
<td>42.1%</td>
</tr>
<tr>
<td>Working capital, UAH million</td>
<td>63,070</td>
<td>73,707</td>
<td>51,796</td>
<td>100.8%</td>
</tr>
<tr>
<td>Equity, UAH million</td>
<td>459,108</td>
<td>438,475</td>
<td>349,298</td>
<td>26.5%</td>
</tr>
<tr>
<td>Loans, UAH million</td>
<td>70,844</td>
<td>79,764</td>
<td>63,281</td>
<td>17.9%</td>
</tr>
<tr>
<td><strong>Net cash inflow from activities, UAH million</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net cash inflow from operating activities, UAH million</td>
<td>47,305</td>
<td>6,195</td>
<td>(58,912)</td>
<td>100.8%</td>
</tr>
<tr>
<td>Net cash inflow from investing activities, UAH million</td>
<td>(5,238)</td>
<td>(4,656)</td>
<td>(4,325)</td>
<td>11.7%</td>
</tr>
<tr>
<td>Net cash inflow from financing activities, UAH million</td>
<td>(30,567)</td>
<td>8,329</td>
<td>64,411</td>
<td>19.1%</td>
</tr>
<tr>
<td>Rate of return on financial result</td>
<td>11.7%</td>
<td>(26.9%)</td>
<td>(109.6%)</td>
<td>-26.9%</td>
</tr>
<tr>
<td>ROE</td>
<td>4.9%</td>
<td>(8.0%)</td>
<td>(25.5%)</td>
<td>-11.7%</td>
</tr>
<tr>
<td>ROA</td>
<td>3.2%</td>
<td>(5.3%)</td>
<td>(17.9%)</td>
<td>-11.7%</td>
</tr>
<tr>
<td>Liquidity coverage ratio</td>
<td>106.2%</td>
<td>181.8%</td>
<td>74.9%</td>
<td>19.1%</td>
</tr>
<tr>
<td><strong>Total loans/equity ratio</strong></td>
<td>15.4%</td>
<td>16.6%</td>
<td>17.5%</td>
<td>-2.7%</td>
</tr>
<tr>
<td><strong>Results of the natural gas, gas condensate and crude oil segment (Upstream)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross production of natural gas, mcm</td>
<td>15,904</td>
<td>16,030</td>
<td>15,120</td>
<td>2.6%</td>
</tr>
<tr>
<td>Gross production of crude oil and gas condensate, thousand t</td>
<td>1,619</td>
<td>1,695</td>
<td>1,212</td>
<td>265.1%</td>
</tr>
<tr>
<td>Sales of own natural gas, mcm</td>
<td>15,395</td>
<td>15,111</td>
<td>13,412</td>
<td>2.6%</td>
</tr>
<tr>
<td>Sales of oil and condensate, thousand t</td>
<td>1,675</td>
<td>1,668</td>
<td>1,472</td>
<td>6.5%</td>
</tr>
<tr>
<td>Sales revenue, UAH million</td>
<td>63,485</td>
<td>59,107</td>
<td>48,217</td>
<td>29.3%</td>
</tr>
<tr>
<td>Financial result, UAH million</td>
<td>8,532</td>
<td>(4,543)</td>
<td>(4,443)</td>
<td>183.4%</td>
</tr>
<tr>
<td>Capital investment, UAH million</td>
<td>6,595</td>
<td>4,995</td>
<td>2,642</td>
<td>185.1%</td>
</tr>
<tr>
<td>Assets, UAH million</td>
<td>82,800</td>
<td>94,477</td>
<td>48,217</td>
<td>71.0%</td>
</tr>
<tr>
<td>ROA</td>
<td>10.0%</td>
<td>1.0%</td>
<td>-7%</td>
<td>-8.0%</td>
</tr>
<tr>
<td><strong>Results of the natural gas, gas condensate and crude oil segment (Midstream)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural gas transit volumes, mcm</td>
<td>82,200</td>
<td>67,080</td>
<td>62,197</td>
<td>15.0%</td>
</tr>
<tr>
<td>Volumes of natural gas transmitted to consumers in Ukraine, mcm</td>
<td>29,591</td>
<td>30,400</td>
<td>38,122</td>
<td>-11.9%</td>
</tr>
<tr>
<td>Crude oil transportation volumes, thousand t</td>
<td>75,228</td>
<td>73,900</td>
<td>71,363</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Sales revenue, UAH million</td>
<td>82,148</td>
<td>54,817</td>
<td>27,675</td>
<td>72.5%</td>
</tr>
<tr>
<td>Financial result, UAH million</td>
<td>26,257</td>
<td>20,660</td>
<td>5,577</td>
<td>127.0%</td>
</tr>
<tr>
<td>Capital investment, UAH million</td>
<td>2,490</td>
<td>1,565</td>
<td>443</td>
<td>137.1%</td>
</tr>
<tr>
<td>Assets, UAH million</td>
<td>488,420</td>
<td>488,037</td>
<td>405,899</td>
<td>9.7%</td>
</tr>
<tr>
<td>ROA</td>
<td>5%</td>
<td>4%</td>
<td>1%</td>
<td>-6%</td>
</tr>
<tr>
<td><strong>Results of the natural gas and refinery products segment (Downstream)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales of natural gas pursuant to imposed special obligations, mcm</td>
<td>18,164</td>
<td>17,159</td>
<td>22,140</td>
<td>-9.4%</td>
</tr>
<tr>
<td>Sales of natural gas at non-regulated prices to other consumers (including sales to group companies), mcm</td>
<td>18,674</td>
<td>17,159</td>
<td>22,140</td>
<td>-9.4%</td>
</tr>
<tr>
<td>Sales of natural gas at non-regulated prices to other consumers (excluding sales to group companies), mcm</td>
<td>4,447</td>
<td>6,171</td>
<td>9,088</td>
<td>-20.0%</td>
</tr>
<tr>
<td>Sales of refinery products, thousand t</td>
<td>782</td>
<td>570</td>
<td>359</td>
<td>426%</td>
</tr>
<tr>
<td>Sales of LNG, mcm</td>
<td>332</td>
<td>271</td>
<td>181</td>
<td>85.4%</td>
</tr>
<tr>
<td>Sales of compressed natural gas (to automobile CNG filling stations), mcm</td>
<td>49</td>
<td>65</td>
<td>97</td>
<td>-29.2%</td>
</tr>
<tr>
<td>Sales revenue, UAH million</td>
<td>115,582</td>
<td>75,257</td>
<td>58,461</td>
<td>60.8%</td>
</tr>
<tr>
<td>Financial result, UAH million</td>
<td>(1,752)</td>
<td>(50,193)</td>
<td>(79,216)</td>
<td>85.1%</td>
</tr>
<tr>
<td>Capital investment, UAH million</td>
<td>1,468</td>
<td>543</td>
<td>1,461</td>
<td>166.6%</td>
</tr>
<tr>
<td>Assets, UAH million</td>
<td>93,535</td>
<td>46,947</td>
<td>33,354</td>
<td>167.5%</td>
</tr>
<tr>
<td>ROA</td>
<td>-2%</td>
<td>-107%</td>
<td>-238%</td>
<td>-11.7%</td>
</tr>
<tr>
<td><strong>Other activities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales income, UAH million</td>
<td>944</td>
<td>1,816</td>
<td>448</td>
<td>45.1%</td>
</tr>
<tr>
<td>Financial result, UAH million</td>
<td>(725)</td>
<td>(2,194)</td>
<td>(274)</td>
<td>62.7%</td>
</tr>
<tr>
<td>Capital investment, UAH million</td>
<td>548</td>
<td>491</td>
<td>205</td>
<td>44.3%</td>
</tr>
<tr>
<td>Assets, UAH million</td>
<td>4,391</td>
<td>13,970</td>
<td>10,968</td>
<td>-60.7%</td>
</tr>
</tbody>
</table>

1 including sales to other segments
2 the group assesses performance indicators of the operating segments based on the size of net operating profit/(loss) before tax

For the first time in the last 5 years, the group has made a profit and did not receive funding from the state budget. Starting from 2016, Naftogaz has transformed from the state budget recipient into its donor, becoming the biggest taxpayer in Ukraine.

Chief financial officer
Sergiy Konovets

SUMMARY OF ANNUAL RESULTS
WHAT WE HAVE ACHIEVED

47.3 billion of UAH 22.5 billion and posted a positive net profit 5 years, Naftogaz has received a net profit of UAH 14.7 billion in income tax. Naftogaz Group received no direct support from the state in the form of subsidies. For the first time since 2006, the company as a tax payer, has covered its entire tax obligations from its own cash flows. Net contributor to the state budget

EFFICIENCY

Reliable borrower

In 2016, Naftogaz confirmed its reputation as a reliable borrower both on domestic and foreign markets. Twice during the year, in January and July-September, imported gas was paid for using an EBRD revolving credit line of USD 100 million, obtained under state guarantees at the end of 2015. In the reporting period there were no cases of delayed or incomplete implementation of commitments. Despite the rising cost of borrowing for Ukrainian companies on domestic and international financial markets, Naftogaz was able to reduce the weighted average effective interest rate on financial liabilities from 13.5% to 12.1%. In 2016, Naftogaz fulfilled debt service obligations of UAH 49.2 billion, and attracted more than UAH 42.0 billion of borrowing. On 22 April 2016, Fitch Ratings (London) confirmed the company's credit rating in foreign and local currency for the period from 25 May 2015 to 24 May 2016 at CCC.

Efficient participant of stock and currency markets

In 2016, Naftogaz extended its bond terms amounting to UAH 4.8 billion at 10% per annum (the cheapest borrowing in local currency) and was an active player in the stock market. Gains from securities transactions amounted to UAH 110.6 million. Due to efficient liquidity management and use of credit lines, the company did not put pressure on the Ukrainian currency market, despite repayment of more than USD 5 billion of its liabilities in foreign currency.

Transparent buyer

New procurement methodology allowed the Naftogaz group to save UAH 15 billion in 2016, which is a record. For each purchase, whether it is carried out through ProZorro or two-stage bidding, detailed analytical materials are created. Subsequently, the document is used as a benchmark for repeat purchases. As a result, we can trace the dynamics of quotations and keep statistics of the tender participants and winners. To prevent dubious companies participating in tenders, Naftogaz introduced stringent qualification requirements. Priority is now given to producing companies and their authorized dealers. Before each tender, procurement specialists study the market and send invitations to producing companies. By eliminating the collateral value mechanism, the group removed the artificial barrier that previously discouraged many potential bidders and was used to manipulate bidding.

The new methodology is an effective instrument to control not only price but also quality. The group reserves the right to perform an independent inspection and technical audit of the provider at any stage of procurement, i.e. Naftogaz or its affiliate representatives may pay a visit to any counterparty and check availability of the required production facilities, warehouses etc. All enterprises of the group set up special conflict committees to resolve any issues related to the counterparties and bidders.

Naftogaz also established a working commission for below-threshold procurement to obtain greater savings on purchases that are not in the scope of the law On public procurement.

Changes in pricing policy

Since 1 May 2016, the price of natural gas supplied to residential customers and for heating and hot water supply services to households provided by heat energy producers became equal to the price of imported gas. 76% of Naftogaz sales of gas in 2016 belonged to the above-mentioned categories of customers. The change in the price resulted in additional state budget revenues, which are used to pay housing subsidies.

Naftogaz is actively involved in the development and improvement of secondary legislation necessary to implement the law "On natural gas market." The company’s specialists participated in developing the new NGURC methodologies to calculate tariffs for natural gas storage in line with European legislation.

The new tariff for gas storage is based on the value of the booked capacity, expressed in units of energy/cubic meter per time unit. Furthermore, the calculation uses coefficients that take into account the space of gas storage facility booked for a year or a month along with individual services and the services provided on an occasional basis. With the new gas storage tariff, we expect our storage segment to become profitable.

Collection of receivables

In 2016, total gas settlement by all categories of consumers made 76%, which is 2% less compared with 2015. Gross trade accounts receivable increased by 34.5%. The debt for gas consumed under PSD grew due to lower gas payments by consumers who do not receive utility subsidies as well as to the shortage of subsidy funds: actual subsidy expenses exceeded the budget target. As of 31 December 2016, the debt for subsidized gas supplies to households and DHCs was UAH 21.6 billion. If the subsidies had been funded in full, gas payments would have reached 80%, which is not much different from the historical data.

Significant accounts receivable generated by consumers under Naftogaz PSD remains an urgent challenge to the group’s liquidity management.

Non-core assets

In 2016, a single database of non-core assets of Naftogaz group enterprises was created. According to the restrictions imposed by Article 7 of the law "On Pipeline Transport", transfer of the management of property that is not used in transmission through main pipelines or in storage in underground storage facilities to other entities is prohibited.

Said property (fixed assets) can be sold upon the agreement with the Cabinet of Ministers of Ukraine. Company experts submitted to the Cabinet of Ministers of Ukraine more than 10 packages of documents for the disposal of non-core assets at market prices on a competitive basis. The ownership of non-core assets is being transformed in compliance with the law. In 2016, the group took measures to decrease the maintenance costs of non-core assets. Funding was provided for socially important non-core assets.
ANALYSIS OF NATURAL GAS AND OIL PRODUCTION SEGMENT RESULTS (UPSTREAM)

The group is the largest group of companies in Ukraine in terms of oil and gas reserves. According to a valuation performed by Ryder Scott and by DeGolyer and MacNaughton, the Naftogaz group’s reserves of natural gas (proved & probable) in Ukraine are 304.9 bcm and of oil and gas condensate (proved & probable) are 47.2 million t.

1 According to PRSM (Petroleum Resources Management System) classification.

Natural gas reserves of Naftogaz group in Ukraine

<table>
<thead>
<tr>
<th>Region</th>
<th>Natural gas, bcm</th>
<th>Oil, thousand t</th>
<th>Gas condensate, thousand t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chernihiv</td>
<td>527</td>
<td>138</td>
<td>28</td>
</tr>
<tr>
<td>Donetsk</td>
<td>432</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Volyn</td>
<td>28</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>Cherkasy</td>
<td>53</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Poltava</td>
<td>11 939</td>
<td>190 560</td>
<td>2 304</td>
</tr>
<tr>
<td>Lviv</td>
<td>12 161</td>
<td>2 172</td>
<td>7 211</td>
</tr>
<tr>
<td>Sumy</td>
<td>1 651</td>
<td>70</td>
<td>85 690</td>
</tr>
<tr>
<td>Ivano-Frankiv</td>
<td>2 304</td>
<td>577</td>
<td>577</td>
</tr>
<tr>
<td>Donetsk</td>
<td>7 938</td>
<td>5 449</td>
<td>530</td>
</tr>
<tr>
<td>Others</td>
<td>304 441</td>
<td>39 171</td>
<td>6 878</td>
</tr>
</tbody>
</table>

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<thead>
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<td>1 651</td>
<td>70</td>
<td>85 690</td>
</tr>
<tr>
<td>Ivano-Frankiv</td>
<td>2 304</td>
<td>577</td>
<td>577</td>
</tr>
<tr>
<td>Donetsk</td>
<td>7 938</td>
<td>5 449</td>
<td>530</td>
</tr>
<tr>
<td>Others</td>
<td>304 441</td>
<td>39 171</td>
<td>6 878</td>
</tr>
</tbody>
</table>

1 Ukrzrozdobuvannya’s reserves as of 31.12.2016, Ukrnafta’s reserves as of 01.07.2016, Ukrnafta’s reserves do not include production between 01.07.2016 and 31.12.2016: 719 thousand t of oil and 645 mcm of natural gas.

NATURAL GAS PRODUCTION SEGMENT

Main results

In 2016, Naftogaz group produced about 80% of all natural gas produced in Ukraine. The clear leader in natural gas production among the Ukrainian companies is Ukrzrozdobuvannya, with a 75% share in the total production in Ukraine, followed by Ukrnafta, with a 7% share.

Nearly 0.5% of the group’s production is generated by activities within the concession agreement carried out on the territory of the Arab Republic of Egypt, which was signed between Naftogaz, the Arab Republic of Egypt and the Egyptian General Petroleum Corporation (EGPC). The project is implemented by the joint venture Petrosannan Company, set up by Naftogaz and EGPC with equal shares in the authorized capital.

In Ukraine, natural gas is mostly produced in the Poltava, Kharkiv, Sumy, Dnipropetrovsk, Lviv, and Zakarpattya regions. Exploration works are carried out mainly in the Carpathians and the Donbass region.
The group’s natural gas, oil and gas condensate reserves as of 31.12.2016

<table>
<thead>
<tr>
<th></th>
<th>Natural gas, bcm</th>
<th>Oil and gas condensate, million t</th>
<th>Natural gas (million barrels of oil equivalent)</th>
<th>Oil and gas condensate (million barrels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naftogaz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proven developed</td>
<td>0.33</td>
<td>0.10</td>
<td>1.95</td>
<td>0.73</td>
</tr>
<tr>
<td>proven undeveloped</td>
<td>0.00</td>
<td>0.23</td>
<td>0.00</td>
<td>1.67</td>
</tr>
<tr>
<td>probable</td>
<td>0.16</td>
<td>1.56</td>
<td>0.95</td>
<td>11.36</td>
</tr>
<tr>
<td>Resources as of 31.12.2016</td>
<td>0.49</td>
<td>1.89</td>
<td>2.90</td>
<td>15.76</td>
</tr>
<tr>
<td>Resources as of 01.01.2016</td>
<td>4.39</td>
<td>2.01</td>
<td>238.99</td>
<td>14.60</td>
</tr>
<tr>
<td>Ukrnafta</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proven developed</td>
<td>255.70</td>
<td>3.52</td>
<td>1 513.02</td>
<td>25.63</td>
</tr>
<tr>
<td>proven undeveloped</td>
<td>11.13</td>
<td>0.18</td>
<td>65.86</td>
<td>1.91</td>
</tr>
<tr>
<td>probable</td>
<td>23.91</td>
<td>0.59</td>
<td>141.48</td>
<td>4.30</td>
</tr>
<tr>
<td>production of hydrocarbons in 2015-2016</td>
<td>27.07</td>
<td>0.92</td>
<td>163.73</td>
<td>6.67</td>
</tr>
<tr>
<td>increase in hydrocarbons reserves in 2015-2016</td>
<td>8.14</td>
<td>0.37</td>
<td>48.74</td>
<td>2.71</td>
</tr>
<tr>
<td>Resources as of 31.12.2016</td>
<td>271.21</td>
<td>3.75</td>
<td>1 604.77</td>
<td>27.27</td>
</tr>
<tr>
<td>Resources as of 01.01.2016</td>
<td>152.37</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukrnafta</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proven developed</td>
<td>14.52</td>
<td>14.48</td>
<td>85.89</td>
<td>105.39</td>
</tr>
<tr>
<td>proven undeveloped</td>
<td>17.50</td>
<td>16.66</td>
<td>44.58</td>
<td>70.31</td>
</tr>
<tr>
<td>probable</td>
<td>10.72</td>
<td>16.28</td>
<td>63.46</td>
<td>118.50</td>
</tr>
<tr>
<td>production of hydrocarbons in 2015-2016</td>
<td>0.69</td>
<td>0.72</td>
<td>3.82</td>
<td>5.23</td>
</tr>
<tr>
<td>Resources as of 31.12.2016</td>
<td>32.10</td>
<td>39.69</td>
<td>189.91</td>
<td>288.97</td>
</tr>
<tr>
<td>Resources as of 01.01.2016</td>
<td>18.84</td>
<td>84.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proven developed</td>
<td>0.30</td>
<td>0.47</td>
<td>1.75</td>
<td>3.41</td>
</tr>
<tr>
<td>proven undeveloped</td>
<td>0.12</td>
<td>0.35</td>
<td>0.69</td>
<td>2.57</td>
</tr>
<tr>
<td>probable</td>
<td>0.18</td>
<td>0.31</td>
<td>1.09</td>
<td>2.26</td>
</tr>
<tr>
<td>production of hydrocarbons in 2015-2016</td>
<td>0.37</td>
<td>0.65</td>
<td>2.19</td>
<td>4.60</td>
</tr>
<tr>
<td>Resources as of 31.12.2016</td>
<td>0.23</td>
<td>0.50</td>
<td>1.35</td>
<td>3.64</td>
</tr>
<tr>
<td>Resources as of 01.01.2016</td>
<td>0.06</td>
<td>0.36</td>
<td>0.38</td>
<td>2.63</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proven developed</td>
<td>270.84</td>
<td>18.57</td>
<td>1 602.62</td>
<td>135.75</td>
</tr>
<tr>
<td>proven undeveloped</td>
<td>18.81</td>
<td>10.38</td>
<td>111.33</td>
<td>75.56</td>
</tr>
<tr>
<td>probable</td>
<td>35.16</td>
<td>19.06</td>
<td>208.07</td>
<td>138.76</td>
</tr>
<tr>
<td>production of hydrocarbons in 2015-2016</td>
<td>28.31</td>
<td>1.64</td>
<td>167.54</td>
<td>11.91</td>
</tr>
<tr>
<td>increase in hydrocarbons reserves in 2015-2016</td>
<td>8.36</td>
<td>0.87</td>
<td>49.49</td>
<td>6.55</td>
</tr>
<tr>
<td>Total reserves as of 31.12.2016</td>
<td>354.87</td>
<td>47.24</td>
<td>1 803.95</td>
<td>345.91</td>
</tr>
<tr>
<td>Resources as of 01.01.2016</td>
<td>211.71</td>
<td>98.88</td>
<td>1 252.44</td>
<td>719.1</td>
</tr>
</tbody>
</table>

1 Group reserves do not include 1870 bcm of gas and 127.1 million t of oil located in the temporarily annexed territory of the Autonomous Republic of Crimea (Crimean Tatar oil and gas). Naftogaz (46.2 bcm of gas and 2.0 million t of oil) and Naftogaz resources located in the Azov Sea (68.8 bcm of gas and 19.2 million t of oil), oil and gas volumes are converted to barrels using a factor of 238.8 tcm/bbl. Natural gas volumes are converted to oil equivalent using a factor of 369 cubic metres per 1 tcm. Source: Report as of 15 Dec 2016 on estimation of Naftogaz proven, probable and possible hydrocarbon reserves (NPJ-PMM) by Ryder Scott Company. Report as of 1 Jul 2016 on estimation Ukrnafta reserves and revenue and contingent resources of certain deposits by Deloitte and M. Mackaugh.

Gross production of natural gas, mcm

<table>
<thead>
<tr>
<th>Year</th>
<th>Natural gas, mcm</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>15 412</td>
</tr>
<tr>
<td>2015</td>
<td>15 185</td>
</tr>
<tr>
<td>2016</td>
<td>15 083</td>
</tr>
</tbody>
</table>

1 The volume of sale of the profit share of Naftogaz.

In 2016, the production of natural gas under the concession agreement in Egypt declined due to a gradual fall in the production capacity of gas condensate wells and delays in the construction of gas compressor units.

Sales volumes of natural gas increased by 1.9% in 2016 compared to 2015 due to increased natural gas production of Ukrzhydovobuvannya. During 2014-2016, Ukrzhydovobuvannya carried out the sale of the entire volume of commercial natural gas produced by Naftogaz. According to the Law of Ukraine “On the natural gas market”, the Cabinet of Ministers of Ukraine approved the “Regulation on imposing special obligations on the subjects of the natural gas market” (Regulation), under which Ukrzhydovobuvannya was determined as a subject of the natural gas market charged with a special obligation to sell the entire volume of Naftogaz’s commercial gas to form a natural gas resource for domestic consumers and producers of thermal energy for domestic consumers. The sales procedure and the natural gas price are determined by this Regulation.

Gas produced by Ukrnafta is used for ammonia production (see section “Crude oil and gas condensate processing and trade in petroleum products”). The sale of natural gas produced by Ukrnafta is carried out exclusively through company joint activities.

Natural gas produced under the concession agreement is sold by the Egyptian General Petroleum Corporation (EGPC). The terms of the concession agreement provide for the following distribution of production:

- 25% of the hydrocarbons extracted and accumulated from all production areas are quarterly directed to Naftogaz to compensate it for all costs of exploration and development (the compensation part).
- 75% of the hydrocarbons extracted and accumulated from all production areas are distributed depending on production volumes. The Naftogaz share ranges from 15% to 19% [the revenue part].

The difference in the volumes of production and sales of natural gas is the gas volume used by producing companies for in-process losses and expenses together with internal needs as well as gas volumes produced within the framework of cooperation agreements.

The group’s revenue generated by the natural gas production segment includes proceeds from natural gas sales and proceeds from the provision of services in natural gas production. The segment’s total revenue increased by 165% in 2016 compared to 2015, mainly due to an increase in the sale price and volume of natural gas sold by Ukrzhydovobuvannya. The increase in price for over-produced gas, bringing it to the level of import price parity, occurred within the reform of the gas market. As a result, the price of gas sold by Ukrzhydovobuvannya increased from UAH 1 590/tcm excluding VAT, to UAH 4 849/tcm excluding VAT1 as of 1 May 2016.

8 Amendments to the Regulation on imposing special obligations No. 274 as of 20 February 2016.

1 Cabinet of Ministers of Ukraine Regulation No. 758 (as amended) of 01 October 2015. The amount includes compensation and revenue of Naftogaz (see p. 124 of the description of Project Egypt). According to the project, gross production of natural gas amounts to 100 bcm in 2015 and 178 bcm in 2016.

WHAT WE HAVE ACHIEVED

In 2016, the volume of natural gas production decreased by 0.9% compared to 2015, due to a decline in Ukrnafta production, which resulted from a high level of depleted and hard-to-recover reserves as well as the production capacity of gas condensate wells, and delays in the construction of gas compressor units.

The terms of the concession agreement provide for the following distribution of production:

- 25% of the hydrocarbons extracted and accumulated from all production areas are quarterly directed to Naftogaz to compensate it for all costs of exploration and development (the compensation part).
- 75% of the hydrocarbons extracted and accumulated from all production areas are distributed depending on production volumes. The Naftogaz share ranges from 15% to 19% (the revenue part).

The difference in the volumes of production and sales of natural gas is the gas volume used by producing companies for in-process losses and expenses together with internal needs as well as gas volumes produced within the framework of cooperation agreements.

The group’s revenue generated by the natural gas production segment includes proceeds from natural gas sales and proceeds from the provision of services in natural gas production. The segment’s total revenue increased by 45% in 2016 compared to 2015, mainly due to an increase in the sale price and volume of natural gas sold by Ukrzhydovobuvannya produced by Ukrzhydovobuvannya. The increase in price for over-produced gas, bringing it to the level of import price parity, occurred within the reform of the gas market. As a result, the price of gas sold by Ukrzhydovobuvannya increased from UAH 1 590/tcm excluding VAT, to UAH 4 849/tcm excluding VAT as of 1 May 2016.
The reduction in gas volumes sold by Ukrnafta had a negative impact on the segment’s revenues, which led to a decrease in revenue generated by the segment by UAH 1 027 million, and the lowering of the gas sales by Ukrgazvydobuvannya by UAH 1046 million. [Ukrnafta’s revenue for 2015 was included after the region of control, i.e. from 22 July 2015 to 31 December 2015. If Ukrnafta’s figures were included in the consolidated financial statements of the group for the entire 2015, then revenue decrease would amount to UAH 1 994 million.]

Revenue from natural gas sales, UAH million

<table>
<thead>
<tr>
<th>Year</th>
<th>Ukrgazvydobuvannya (UAH)</th>
<th>Ukrnafta (UAH)</th>
<th>Concession Agreement in Egypt (UAH)</th>
<th>excluding sales to other segments within the group (UAH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>7 496</td>
<td>31 415</td>
<td>2 327</td>
<td>51 021</td>
</tr>
<tr>
<td>2015</td>
<td>21 846</td>
<td>10 415</td>
<td>42.1%</td>
<td>56 490</td>
</tr>
<tr>
<td>2016</td>
<td>11 111</td>
<td></td>
<td>57.0%</td>
<td>38 240</td>
</tr>
</tbody>
</table>

In 2016, the natural gas production segment showed a profit of UAH 15 298 million, which is almost 7 times higher than the 2015 result.

The growth in prices and sales volumes of natural gas produced by Ukrgazvydobuvannya improved the segment result by UAH 30 819 million. At the same time, the increase in selling prices and the corresponding increase in subsoil royalty charges reduced the segment result by UAH 15 281 million.

As of 1 April 2016, subsoil royalty charges for gas decreased from 70% to 50% of the gas selling price. However, due to an increase in the gas selling price for Ukrgazvydobuvannya in 2016, the subsoil royalty charges for 1 tcm increased by 118% compared to 2015 (from UAH 1 113/tcm to UAH 2 424.5/tcm).

The growth in depreciation charges because of the revaluation of fixed assets as of 12 December 2015 also reduced the segment result by UAH 2 624 million.

Impact on segment results, UAH million

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth rates</th>
<th>Growth rates price</th>
<th>Growth rates segment</th>
<th>Growth rates depreciation changes</th>
<th>Other 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2 218</td>
<td>1555</td>
<td>14 125</td>
<td>74 159</td>
<td>10 920</td>
</tr>
<tr>
<td>2015</td>
<td>2 390</td>
<td>2365</td>
<td>10 219</td>
<td>52 624</td>
<td>11 215</td>
</tr>
<tr>
<td>2016</td>
<td>11 286</td>
<td>11 286</td>
<td>11 286</td>
<td>11 286</td>
<td>11 286</td>
</tr>
</tbody>
</table>

Assets

In 2016, the group’s assets in the natural gas production segment decreased by 12.5% compared to 2015. About 11% of the entire decrease was due to a reduction in the value of fixed assets compared to 2015, and a reduction in the amount of tax prepayments by 1.3%. A change in the book value of fixed assets mostly took place due to increase in accumulated depreciation.

The segment’s RODA increased by 20% in 2016 compared with 2015. The increase was mostly due to significant improvement in the segment’s financial results arising from the growth in selling prices and lower assets value in 2016 caused by the increase in accumulated depreciation.

Segment results, UAH million

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>31 415</td>
<td>10 415</td>
<td>38 240</td>
</tr>
<tr>
<td>EBIT</td>
<td>2 327</td>
<td>42.1%</td>
<td>57.0%</td>
</tr>
</tbody>
</table>

CRUDE OIL AND GAS CONDENSATE PRODUCTION SEGMENT

In 2016, the Naftogaz group produced about 90% of all oil and gas condensate in Ukraine. The group’s leading enterprise for oil and gas condensate production is Ukrgazvydobuvannya, with a 68% share of Ukraine’s total production. Ukrgazvydobuvannya ranks second in Ukraine in terms of production of oil and gas condensate with a share of more than 21%.

In Ukraine, the production of oil and gas condensate is carried out by group companies in the fields located in the Poltava, Chernihiv, Sumy, Kharkiv, Dnipropetrovsk, Lviv, Ivano-Frankivsk and Chernivtsi regions.

The group also receives about 3% of oil which it produces in the territory of the Arab Republic of Egypt under the concession agreement.

Main results

The results for 2016 of the segment of oil and gas condensate production show a general downward trend in output. In general, the production of oil and condensate decreased by 7.5% within the group, due to a decrease in the condensate content at the major gas condensate fields under development and water flooding at existing wells.

The largest reduction in oil and condensate production, reaching 91%, was registered by Ukrgazvydobuvannya due to the natural depletion of wells and insufficient investment in maintenance, modernization of equipment, and drilling. Ukrgazvydobuvannya also suffered a decline in oil and condensate production. The company directs produced oil and gas condensate into the production of refinery products using its own production facilities. The results of the production and sale of Ukrgazvydobuvannya’s refinery products are shown in the segments of crude oil and gas condensate processing and trade in petroleum products.

Gross production of oil and gas condensate, thousand t

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>1 671</td>
<td>982</td>
<td>1 518</td>
</tr>
<tr>
<td>Oil</td>
<td>2 522</td>
<td>2 015</td>
<td>1 671</td>
</tr>
<tr>
<td>CAGR</td>
<td>-9.1%</td>
<td>3%</td>
<td>10%</td>
</tr>
</tbody>
</table>

* In order to correctly display the trend in production the production volumes of Ukrgazvydobuvannya are given for the entire period of 2014–2016.

** This amount includes compensation and revenue of Naftogaz. According to the project, gross production of crude oil amounts to 265 mcm in 2014, 315 mcm in 2015, and 355 mcm in 2016.
Sales volumes of oil and gas condensate have increased by 120% compared to 2015 due to the inclusion of Ukrnafta’s indicators in the consolidated results starting 22 July 2015. If Ukrnafta’s figures were consolidated starting from 1 January 2015, the decrease in sales for the segment of crude oil and condensate production would amount to 4.6%.

Sales of oil and gas condensate, thousand t

<table>
<thead>
<tr>
<th>Year</th>
<th>Ukrnafta</th>
<th>Concession Agreement in Egypt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>27</td>
<td>1 479</td>
</tr>
<tr>
<td>2015</td>
<td>814</td>
<td>1 726</td>
</tr>
<tr>
<td>2016</td>
<td>3 424</td>
<td>3 374</td>
</tr>
</tbody>
</table>

Sales of oil and gas condensate, thousand t

- In 2016, revenue generated by the crude oil and gas condensate production segment increased by 83.3%, compared to 2015 due to the inclusion of Ukrnafta’s indicators in the consolidated financial statements from the date of control regain. If Ukrnafta’s figures were included for the whole of 2015, the group’s revenue would decrease by 16.8% as the result of a reduction in oil selling price by 12.2% and in production volumes by 4.2%.

- The significant drop in oil prices led to a reduction in Ukrnafta’s revenue and a deficit in cash flow from the operating activity needed to cover production costs associated with the production of oil as well as compulsory payments and subsoil royalty charges for oil.

The deficit of working capital and actions of the previous management of Ukrnafta resulted in the accumulation of tax debt and penalties in 2015-2016 (losses due to penalties amounted to UAH 2,798 million in 2016). Furthermore, impairment charges made in provision for doubtful receivables, which accrued to the amount of UAH 6 810 million in 2014-2015, also contributed to the formation of the segment loss in 2016. Accounts receivable had been mostly generated by Ukrnafta before Naftogaz regained control over the company. Ukrnafta and Naftogaz have limited ability to collect these accounts receivable.

In addition, high rates of subsoil royalties charges (charged at a rate of 45% for volumes extracted from reservoirs that fully or partially lie at a depth of up to 5,000 meters and 21% for volumes extracted from a depth of more than 5,000 meters) negatively affected the group’s ability to profit from this segment.

At the end of 2016, the Tax Code was amended regarding the level of subsoil royalties for oil, effective as of 1 January 2017, which set the subsoil royalty charges for oil at a rate of 29% for the extraction of oil from reservoirs that are fully or partially lie at a depth of up to 5,000 meters, and 14% for the extraction of oil from a depth of more than 5,000 meters. However, the subsoil royalties for the extraction of gas condensate have not been changed. It remains at 45% for volumes extracted from reservoirs lying at a depth of up to 5000 meters and 21% for volumes extracted from a depth of more than 5000 meters.

In 2016, the group’s assets in the crude oil and gas condensate production segment decreased by 10% compared to 2015. The main reason for the overall decrease was the reduction in trade receivables by 41% compared to 2015 due to the accrual of allowance for doubtful debts. The segment’s ROA decreased by 58% in 2016 compared with 2015. The decrease was due to the impaired financial results arising from lower oil sales revenue caused by drop in global oil prices. Meanwhile, the decrease in trade receivables as a result of accrual of impairment provision [see above] had positive impact on ROA.

Impact on segment results, UAH million

- Growth in sales
- Decrease in sales price
- Provisions for doubtful receivables and penalties
- Charges on other

In 2016, the average price of oil sold by Ukrnafta in 2016 amounted to UAH 7 592.9 per ton excluding VAT, or UAH 1 043 per barrel (equivalent to USD 40.82), which is by UAH 1 577 or 21% less than the average price in 2015 (UAH 9 113 per ton or UAH 1 252 per barrel, equivalent to USD 57.3). The significant drop in oil prices led to a reduction in Ukrnafta’s revenue and a deficit in cash flow from the operating activity needed to cover production costs.
HOW GAS IS PRODUCED

EXPLORATION, PRODUCTION AND PROCESSING OF GAS

1. GEOLOGICAL EXPLORATION
Geological studies are conducted to identify areas where there may be new deposits. Seismic studies account for as much as 90% of the geological exploration budget.

2. EXPLORATORY DRILLING
On average, only one in three exploratory wells finds a new deposit. The cost of an exploratory well is between USD 2-3 million but sometimes it may cost more than USD 10 million.

3. PRODUCTION DRILLING
Production wells are drilled to develop an explored field. The cost of a well depends on its depth and ranges from USD 2-3 million to USD 10 million.

4. WELL REPAIR
Wells are regularly checked and repaired to ensure uninterrupted and accident-free production.

5. PRODUCTION ENHANCEMENT
Booster compressor stations (BCS) maintain the pressure necessary for production at the final stage of field development. Most of the fields in Ukraine are significantly depleted.

6. DEVELOPMENT OF THE FIELD
A mixture of gases (methane, ethane, propane, etc.), gas condensate, stratum water and other mineral impurities comes to the surface through a well. Subsequently, this mixture is purified and separated.

7. GAS TREATMENT
The final products of the mixture processed by a complex gas treatment plant (CGTP) are dry natural gas and gas condensate.

8. GAS TRANSMISSION
Gas is transmitted from the production site to consumers through gas trunk pipelines.
In 2018, Ukrgazvydobuvannya recommenced its hydrofracturing fleet, which took six months. The company repaired equipment, recruited a team of qualified specialists from East European countries, and used additional equipment to carry out operations in accordance with best international practices.

In September 2016, the first successful fracturing operations were carried out. Some wells produced around 50 tcm of gas a day. Once the wells were cleaned, they would produce about 80-100 tcm a day, which would allow for an increase in annual production volume of 30-36 mcm from a single well in the future.

In 2018, Ukrgazvydobuvannya developed and approved its investment concept for 2016-2020. The company finalized its investment program for 2017 and began developing an investment management model based on an economic feasibility assessment.

Until 2020, the company plans to invest USD 3 billion for purchasing and modernizing drilling lathes as well as hiring external service companies to drill 90 wells during 2017-2019 and to carry out appropriate works at gas fields.

The program involves purchasing 30 new drilling lathes (by 2020), upgrading 32 available lathes (in 2016-2018) and drilling lathes (by 2020), upgrading the hydrofrac fleet, which took six months. The replacement and purchases of new rigs and use of modernization of the fleet of lathes, in 2017. Drilling rates will increase due to modernization of the fleet of lathes.

Ukrgazvydobuvannya intends to increase production volume of work including a complete overhaul of wells and coil-tubing operations, hydraulic fracturing operations, boring, and seismic and geophysics tasks.

In terms of increased gas production, the application of coil-tubing technology has brought Ukraine an additional 87 bcm of gas. By the end of 2017, it is expected to result in another 365 bcm of gas.

In 2016, coil-tubing and hydraulic fracturing fleets were repaired and put into operation. The company began upgrading its own fleet of drilling lathes while tenders for 100 HF operations were conducted (the winners were Toscam and Byelarunyrt). The practice of outsourcing drilling services was initiated, opening the market for international companies. A drilling fleet development strategy was developed and a center of drilling competence was set up and manned by specialists from international companies. Additionally, restrictions on gas extraction at Shebelynskyi field were lifted and gas production volumes including a complete overhaul of existing infrastructure were generated.

In 2016, Ukrgazvydobuvannya increased its engineering works by 25 thousand meters to 188 thousand meters (+14% compared to 2015), 70 new wells were built (+11% compared to 2015), 15 new licenses were obtained (for the first time in recent years), coil-tubing complexes (zero in 2016), 235 complete overhauls of wells and 120 coil-tubing operations were carried out; more than 7 bcm of reserves and more than 11 bcm of resources were generated; 1 new booster compressor station was built and construction of 4 new booster compressor stations is nearing completion. The key elements of ground infrastructure were repaired, a 3D field modeling program was launched.

Oleg Prokhorenko, CEO Ukrgazvydobuvannya

In 2016, Ukrgazvydobuvannya increased its engineering works:
- Meterage drilled increased by 25 thousand meters to 188 thousand meters (+14% compared to 2015),
- 70 new wells were built (+11% compared to 2015),
- 15 new licenses were obtained (for the first time in recent years),
- 166 wells were drilled by 2020 (up to 2020 60 mini-compressors will be installed)
- New booster compressor stations will be built and 4 booster compressor stations will be upgraded
- Organic expenses for maintaining the existing infrastructure
- 2016-2020, bcm

Source: UKR GAZVY DOBUVANNA

“International experts confirm the feasibility of the company’s 20/20 strategy objectives”

“...and the corporate governance reform enabled us to create a powerful managerial team, improve staff selection, launch enhancement, overhaul and re-equipment programs as well as to start increasing our production...”
Ukrzhydobuvannya has initiated several measures to deregulate the oil and gas industry. In the area of natural gas production, a number of regulatory documents remain in force even though they have long become obsolete and are hindering the development of the industry. One example is the “pricelist for geophysical works and services in wells for oil and gas”, which was published by Naftogaz and approved in the mid-2000s. This features prices set when the UAH/USD exchange rate was 5 to 1 have become economically outdated. This results in a situation where Ukrzhydobuvannya cannot contract third-party contractors of geophysical works at market prices. The situation is even worse if one takes into account the outdated capacities of Ukrzhydobuvannya branches that are currently undergoing upgrades. This hinders the development of the industry since contractors are reluctant to update or import equipment. As a result, existing state geophysical enterprises such as Ukrgeofizyka and Poltava Geophysical Works Department are slowly dying.

Ukrzhydobuvannya came up with a proposal for the Cabinet of Ministers to cancel this “Pricelist”. This will help the company create a new market for geophysical services. This will attract investment, significantly increase the volume of geophysical works, and increase the speed and efficiency of operations.

Company plans for 2017

Key Ukrzhydobuvannya tasks in 2017:

1. Increase gas production by 400-600 mcm to 15-15.2 bcm.
2. Launch a full-scale program for intensifying production (including HF)
3. Receive 49 licenses for new areas
4. Launch a full-scale program of deepening drilling depths (upgrading of its own drilling fleet, engaging international drilling contractors, etc.)
5. Fully implement the capital investment program for 2017

Urgent legislative problems related to Ukrzhydobuvannya and possible solutions

1. Considerable land allocation time periods (up to 2 years)
   - Delay of the time of drilling due to lack of authorization for removal of fertile soil - loss of 43 million cubic meters in 2015

2. The approval of issued special permits by regional councils
   - Recognition of the approval of drilling permits
   - Decentralization of rent - enactment of the provisions of Bill No. 3598 on the transfer of 5% of rent to local budgets

3. Because of joint activity agreements in 2016, the company sustained a loss 359 million cubic meters
   - Support for further termination of contracts on joint activities

4. Outdated rules, mechanisms and rules for mining that do not meet modern realities
   - Development of an updated Code of Mineral Resources and adoption of the revised rules governing field development
UGV FIELDS that produced over 300 mcm of gas in 2016, bcm (more than 2/3 of total production)

- Production in 2016, bcm
- Remaining reserves as of 31 December 2016, bcm
- % extracted from reserves
- Licensed fields
- Fissure (Dnipro-Donets Rift)

Gas deposits deeper than 5000 m
Naftogaz estimates based on reserves calculated by Ryder Scott Company
UKRNAFTA

Ukrnafta, one of the largest oil and gas companies in the country, is engaged in the exploration, production, sale, and processing of hydrocarbon gas. The company also owns a chain of retailing stations and provides oil-field services in Ukraine. The company consists of six production units, three exploration and drilling units, three gas processing plants, research and support units, and 557 refueling stations. In 2016, Ukrnafta employed 23,117 people.

Production results in 2016

In 2016, Ukrnafta reduced the volume of production of oil and condensate by 9.2%, as well as curtailing its gas output by 15.4%. Production cuts resulted from the natural depletion of wells and insufficient investments in maintenance and modernization of equipment and drilling operations. Due to a critical shortage of financial resources, drilling volumes decreased by 89% compared to 2015 figures. However, despite the difficult situation with oil prices and limited investment, the company managed to stabilize production at existing wells, and the long-term goal of doubling the company's output over the next 10 years. This has been possible due to a series of technical and urgent production problems, difficulties of financial resources, drilling volumes decreased by 89% compared to 2010 figures. In 2016, Ukrnafta reduced the volume of natural depletion of wells and insufficient production of oil and condensate by 9.2%.

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INVESTMENT PROJECTS IN EGYPT

Exploration, infrastructure development and production of oil and gas in the Alam El Shawish East area, Western Desert

In 2018, Naftogaz, the Arab Republic of Egypt (ARE) and the Egyptian General Petroleum Corporation (EGPC) signed a concession agreement for the exploration and exploitation of oil and gas in the Alam El Shawish East area, Western Desert, which was the first step towards practical implementation of the company’s investment projects in Egypt.

Pursuant to one of the projects, commercial production of hydrocarbons began in 2010, which led to the setting-up of Petrosovann Company, a joint venture that provides operational management of the project under the annual work program approved by the shareholders (Naftogaz and EGPC).

In 2016, two appraisal wells were drilled for additional exploration of reservoirs in the concession area, as a result of which new oil deposits were discovered. Accordingly, crude oil production was increased by 58 thousand barrels (76 thousand t) compared to 2013, and commercial production of oil and gas condensate reached 2.5 million barrels (313 thousand t) in 2016.

By the end of 2016, 46 wells were drilled in the concession area thanks to Naftogaz investment, 38 of which revealed oil and gas accumulations. In total, 9,886 million barrels [1,362 million t] of commercial oil with gas condensate and 14,864 billion cubic feet (420 mmc) of gas have been produced since the beginning of exploitation of reservoirs in the concession area.

South Wadi El Mahareeth and Wadi El Mahareeth investment projects

Investment projects are underway pursuant to concession agreements on the exploration and further development of hydrocarbon reservoirs, signed on 7 February 2012 between the Arab Republic of Egypt, Ganoob El-Wadi Holding Petroleum Company (GANOPE) and Zakordonnaftogaz, a subsidiary of Naftogaz. These agreements relate to the Wadi El Mahareeth (WM) and South Wadi El Mahareeth (SWM) blocks located in the Eastern Desert of Egypt. The project is at the stage of geological exploration.

Goals for 2017

The main goals for 2017 are the stabilization of oil production based on the mechanical operation of wells and construction of oil and gas infrastructure to improve business performance. In addition, the company faces the following objectives in 2017:

- To complete the interpretation of 2D seismic prospecting data;
- To identify the most promising sites and locations of 4 wells in the concession blocks;
- To construct 4 wells [2 wells in each block].

Fulfillment of concession conditions in 2016

- 2D seismic prospecting and data processing [3,000 linear km] are complete;
- The study of the low-velocity layer by means of the uphole drilling method is complete [19 uphole wells were drilled; 7 wells for the WM block and 9 wells for the SWM block];
- Interpretation of 2D seismic prospecting data has started.

Factors that impede the implementation of foreign projects

- Untimely and incomplete funding of works by the Egyptian side because of a currency crisis in the country;
- Overdue accounts payable accrued by Petrosovann Company and possible punitive sanctions on the part of contractors;
- A lengthy procedure of approval with the Egyptian authorities, the Egyptian armed forces and GANOPE.
NATURAL GAS TRANSPORTATION AND DISTRIBUTION

The main component of Ukraine’s gas transmission system is the network of gas trunk pipelines and branch pipelines owned by Ukrtransgaz, which is a single technological complex that operates in continuous operating mode. The total length of gas pipelines operated by Ukrtransgaz is 38.55 thousand km, including 22.16 thousand km of trunk lines and 16.39 thousand km of branch pipelines. As of 31 December 2016, the number of gas distribution stations was 1,455. The company’s fleet of gas compressor plants consists of 702 units located at 72 compressor stations.

Gas volumes that enter the gas transmission system of Ukraine are measured by gas metering stations. The infrastructure facilities are equipped with modern high-precision automatic meters and automatic instruments for determining the physicochemical properties of natural gas.

Main results

The total volume of natural gas transported in 2016 equaled 111,791 mcm, which is by 14.7% greater than the figure for 2015, and is the result of an increase in the volume of transit of natural gas through the territory of Ukraine via the contract with Gazprom.

In 2016, the volume of natural gas transit increased by 22.5% compared to 2015 and reached 82,200 mcm. The main reason for the increase in the volume of natural gas transit through the territory of Ukraine was the shutdown of the Nord Stream gas pipeline for technical repairs in August 2016 and higher demand in the EU.

In 2016, the volume of natural gas transportation for consumers in Ukraine decreased by 2.7% compared to the previous year, as a result of a decrease in the consumption of natural gas by industrial consumers.

Since early 2016, Ukrtransgaz has been providing two new types of services: balancing service (physical balancing and commercial balancing) and transmission capacity distribution service (cross-border points).

Pursuant to the Code of the gas transmission system, Ukrtransgaz provides the customer with one or several components of natural gas transportation services (capacity distribution order, natural gas transportation order, balancing service). Customers who ordered transportation services pay the operator of the gas transmission system the cost of the services received.

The system balancing service includes:

- commercial balancing – activity of the gas transmission system operator which consists of identifying and adjusting the imbalance that arises from the difference between the volumes of natural gas entering through the entry points and the volumes of natural gas exiting through the exit points in the context of the customers who ordered transportation services, whereas such activity is carried out on the basis of data received through the allocation procedure, and
- physical balancing – measures taken by the operator of the gas transmission system to ensure the integrity of the system, namely the necessary ratio between natural gas volumes that have physically entered through entry points and natural gas volumes that have physically been removed through exit points.
WHAT WE HAVE ACHIEVED

Due to the increase in transit volumes and the devaluation of the hryvnia against the US dollar in 2016, the results of the natural gas transportation and distribution segment increased by UAH 1 704 million. At the same time, the increase in the price of natural gas for production and technological needs negatively affected the segment’s results in 2016, reducing it by UAH 8 185 million. Furthermore, as of 1 January 2016, natural gas transportation services by cross-border gas pipelines are subject to VAT at a rate of 20% (which resulted in an increase in the overall segment costs in 2016). Concurrently, the rental payment for the transportation services by cross‑border gas pipelines are subject to VAT at a rate of 20%. Consequently, the rental segment for the transport of gas through the territory of Ukraine was cancelled, which resulted in an increase in the overall segment costs in 2016 and reduced the segment result by UAH 6 289 million.

Impact on segment results, UAH million

Starting from 1 October 2016, Ukrtransgaz, as the operator of the gas transmission system, is responsible for adjusting the system’s imbalance that arises from the difference between the volumes of natural gas entering through the entry points and the volumes of natural gas drawn at the exit points in the context of the customers who ordered transportation services carried out on the basis of data received through the allocation procedure.

During 2016, revenues from commercial balancing services amounted to UAH 6 242 million. In the meantime, as of 31 December 2016, accounts receivable for services provided for balancing natural gas volumes amounted to UAH 6 653 million, of which UAH 1 941 million was repaid during January–March 2017. Repayment of debts was carried out through execution and delivery of protocol resolutions pursuant to the decisions of the Cabinet of Ministers of Ukraine. As present, the group is in the process of clamping and related works for the recovery of debts for balancing services which accrued during 2016. To balance the system, Ukrtransgaz used 936 mmcm, which was more than three times greater than initially planned.

Assets

The value of assets in the natural gas transportation and distribution segment decreased by 2% in 2016 compared to 2015. The greatest impact on the change was made by a drop in the fixed assets value in 2016 compared to 2015, which was due to an increase in depreciation charges.

This change was partially offset by an increase in trade receivables in 2016 owing to the inclusion of accounts receivable for balancing services to the natural gas transportation and distribution segment in 2016. The segment’s ROA improved by 2% in 2016 compared to 2015. ROA was equally influenced by the increase in the segment’s financial results due to the transit growth and lower assets value in 2016 caused by the increase in accumulated depreciation.

NATURAL GAS STORAGE

Ukrtransgaz manages one of the largest gas storage networks in Europe. It is an important integral technological part of the Ukrainian gas transmission system. Today 12 storage facilities are in operation, two of which are based on water-bearing structures. The rest are based on depleted gas fields. The total capacity of the gas storage facilities is about 31 bcm.

The storage facilities are multi-purpose objects. They are used to ensure the smooth and efficient delivery of natural gas to consumers, reliable gas transit through Ukraine to the EU, and to serve as long-term gas emergency reserves.

The group provides gas storage services in its storage facilities to both gas suppliers and consumers.

Revenue from the provision of services for the transit of natural gas increased by 48.7% compared to 2015, mainly due to an increase in the volume of natural gas transit (+UAH 9 065 million), devaluation of the hryvnia against the USD (+UAH 10 552 million).

Revenue from the provision of gas transportation services for Ukrainian consumers in 2016 decreased by 15.5% in 2016 compared to 2015, through the provision of new types of services and an increase in the price and volumes of natural gas transit, along with UAH to USD devaluation, as the transit tariff is calculated in USD.
Main results
The volume of natural gas pumped into underground gas storage facilities in 2016 compared to 2015 decreased by 32.8% because the amount of natural gas stored in the facilities was sufficient for the heating season 2016-2017 (at the beginning of the heating season the inventories totaled 14,718 mcm).

The volume of gas withdrawn from the underground storage facilities during 2016 was larger than in 2015 by 20.4% because of the early beginning of the heating season in 2016-2017: active withdrawal of gas from the underground storage facilities began on 12 October 2016, compared to 30 October 2015 in the previous heating season.

**UGS injection/withdrawal, bcm**

<table>
<thead>
<tr>
<th>Year</th>
<th>Gas injected into UGS</th>
<th>Gas withdrawn from UGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>9.776</td>
<td>6.968</td>
</tr>
<tr>
<td>2015</td>
<td>12.271</td>
<td>8.393</td>
</tr>
<tr>
<td>2016</td>
<td>9.503</td>
<td>6.388</td>
</tr>
</tbody>
</table>

The losses of the segment decreased in 2016 compared to 2015 by UAH 598 million, mainly due to changes in provisions for possible liabilities to storage users of the gas storage facilities.

The negative segment result is evidence of the currently economically unfeasible tariffs for natural gas storage. In the future, the group expects to transfer to RAB tariff calculation methodology for gas storage that will ensure fair returns from the regulatory asset base and improve the segment result.

**Assets**

The total value of assets in the natural gas storage segment increased in 2016 compared to 2015 by 2.9%. This change was driven by an increase in the cost of cushion gas as a result of revaluation as of 31 December 2016.

The segment’s ROA insignificantly changed in 2016 compared with 2015 (+ 0.4%). Negative ROA was mainly explained by low tariffs on storage.

**Financial results of gas storage segment, UAH million**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenues from storage of natural gas segment, UAH million</th>
<th>Financial results of gas storage segment, UAH million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1,450</td>
<td>(2,986)</td>
</tr>
<tr>
<td>2015</td>
<td>1,553</td>
<td>(2,176)</td>
</tr>
<tr>
<td>2016</td>
<td>987</td>
<td>(1,578)</td>
</tr>
</tbody>
</table>

The total revenues from sales of natural gas storage services decreased in 2016 compared to 2015 by 36.4% as a consequence of the decrease in the volume of natural gas pumped into underground gas storage facilities. This resulted in reduced segment revenue by UAH 566 million.

**Revenues from storage of natural gas segment, UAH million**

<table>
<thead>
<tr>
<th>Year</th>
<th>UAH million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
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<tr>
<td>2015</td>
<td>1,553</td>
</tr>
<tr>
<td>2016</td>
<td>987</td>
</tr>
</tbody>
</table>

**Assets, UAH million**

<table>
<thead>
<tr>
<th>Year</th>
<th>Assets, UAH million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>186,209</td>
</tr>
<tr>
<td>2015</td>
<td>180,935</td>
</tr>
<tr>
<td>2016</td>
<td>186,308</td>
</tr>
</tbody>
</table>

The losses of the segment decreased in 2016 compared to 2015 by UAH 598 million, mainly due to changes in provisions for possible liabilities to storage users of the gas storage facilities.

The negative segment result is evidence of the currently economically unfeasible tariffs for natural gas storage. In the future, the group expects to transfer to RAB tariff calculation methodology for gas storage that will ensure fair returns from the regulatory asset base and improve the segment result.
Gas underground storage management

Given the fact that Ukraine stopped gas imports from Russia in November 2015, the year 2016 was the first when Ukraine did not use Russian gas while preparing for the heating season, instead refilling its underground storage facilities with gas acquired in reverse flow from Europe. As a result, the country started the heating season with gas reserves of 16.7 bcm, which is about 2 bcm less than in the previous two years.

This sparked expressions of “concern” from the Russian side regarding “insufficient gas levels in” of Ukrainian underground storage facilities. However, due to proper planning and forecasting, Naftogaz managed to pass the heating season while ensuring the security and continuity of gas supplies to Ukrainian consumers and uninterrupted gas transit to European countries. During the 2016-17 heating season, 8.7 bcm of natural gas was withdrawn from storage facilities, which is 27% less than the same period of the previous year. In the first quarter of 2017, 1.9 bcm of natural gas was withdrawn from the UGS, which is 16 bcm less than the previous year and can be attributed to increased gas imports from EU countries. Since March 2017, natural gas supplies are rising at the storage facilities with more than 150 mcm accumulated by early April.

According to the Naftogaz Restructuring Plan, the UGS are subject to comprehensive analysis with the assistance of international experts that will include legal, economic and technical evaluation to determine the most efficient operational management model. Based on the results of this analysis, an action plan will be developed and submitted to the Secretariat of the Energy Community to ensure efficient technical evaluation to determine the most efficient operational management model. Based on the results of this analysis, an action plan will be developed and submitted to the Secretariat of the Energy Community to ensure efficient operation and management. According to the restructuring plan, it is scheduled for completion by July 2017.

Tariffs for the transportation of gas to Ukrainian consumers

The National Energy and Utilities Regulatory Commission set tariff rates for transporting gas to Ukrainian consumers at UAH 219 per 1,000 cubic meters with VAT.

Cancellation of the purchase of equipment for compressor station reconstruction in 2016

Because of the risks posed by the implementation of the Turkish Stream project, at the end of 2016 the board of Naftogaz rejected to agree on the purchase by Ukrtransgaz of equipment and works from SC-Suryi Machine Building Research and Production Association for the reconstruction of compressor stations Anariev, Zadneprivski and Pridneprivzavodzka. The cost of this equipment was estimated at more than UAH 4 billion. The equipment Ukrtransgaz was going to purchase was based on a feasibility study and was intended for reconstruction of compressor stations involved in transmitting gas towards Turkey. It could not have been used for other compressor stations.

Given the agreement between Russia and Turkey on the Turkish Stream project, which aims to replace Russian gas transit through Ukraine to Turkey, this investment was deemed inappropriate. The Naftogaz recommendation to the Board of Ukrtransgaz is to purchase universal equipment and related works for the reconstruction of compressor stations that transmit gas in different directions and avoid becoming dependent on equipment produced by specific manufacturers.

Targets for 2017:

- increase the company’s efficiency and transparency and integrate into the European Network of Transmission System Operators for Gas (ENTSOG);
- implement energy saving technologies under the energy efficiency program for 2017 and the energy resources saving plan for 2017.
The system of oil trunk lines of Ukraine includes 19 oil pipelines with a diameter of up to 1,220 mm, with a total length of 3,518.6 km, oil pumping stations and the Pivdennyi oil terminal, tank farms, systems of power supply, corrosion protection, remote control, engineering communications, firefighting facilities and erosion control structures.

The entry capacity of the system is 114.5 million t per year, while the exit capacity is 56.3 million t per year. The combined nominal capacity of the tank farms of the system of oil trunk lines amounts to 1,083 tcm.

The Pivdennyi oil terminal is designed for receiving, shipping, and transporting oil through the oil trunk lines of Ukraine. The capacity of the terminal is 14.5 million t per year, with the possibility of expanding it to 45 million t per year. Tanker deadweight is up to 150,000 tons with a maximal draft of 13.8 meters. Tank farm capacity is 200 tcm.

Main results
Ukraine’s considerable oil-trunk pipeline system is not currently used to capacity

The volume of oil transit through Ukraine in 2016 compared to 2015 decreased by 8.8%. Given the historical features and technological connectivity of the systems, the volume of oil transit largely depends on the policy of the Russian Federation as a major supplier of oil to Central Europe and the main customer of oil transportation services through Ukraine. The strategic priorities of Russia in favor of developing its own pipeline and port facilities have led to a significant reduction of oil transit through the territory of transit countries including Ukraine.

Russia is persistently doing away with intermediary transit countries, and therefore oil transit through Ukraine has decreased dramatically in recent years. In 2002, Russia built Sukhodilna-Rodionivska oil pipeline (28 million tons/year), which directly linked two Russian oil pipelines, bypassing Ukraine: Samara-Lyubachansk and Lyubchansk-Tykhetorsk. In 2008, Russia finally decided to channel all its oil flows bypassing transit countries, and in 2012 completed construction of the Baltic Pipeline System (BPS-1 and BPS-2) with a total capacity of 80 million tons per year. In addition, since 2004 the Caspian Pipeline Consortium has connected oil fields of Kazakhstan and Russia with terminal operations in Novorossiysk, bypassing Ukraine.

These Russian efforts mean that in 2015 oil transit through Ukraine to three countries (Czech Republic, Hungary and Slovakia) totaled only 15 million tons. Compared to 2015, transportation volumes in 2016 decreased by 9.1%. This is primarily due to reduced oil transit volumes to Slovakia and the Czech Republic, where the overhaul of local oil refineries (OR) was performed in the first half of 2016.

Another factor influencing oil transit volumes through Ukraine was increased competition and redistribution of the oil market between the major oil-producing countries in response to low crude oil prices. In such circumstances, Russian Urals oil was partially ousted by Middle East oil due to both competitive pressure from the Middle Eastern suppliers and the raw material diversification policy of oil refineries.

In 2016, foreign partners voiced both positive and negative signals that can affect Ukraine’s pipeline system capacity utilization volumes. On 1 July 2016, the Czech company Unipetrol operating refineries in the Czech Republic extended long-term contracts with the Russian party to supply oil. However, the most negative news was the signing of a framework agreement between UNIPETROL and the Croatian operator of the Jadranski Naftodug oil-trunk pipelines on cooperation and transportation of oil to the Czech Republic via the Adria oil pipeline, which is an alternative to traditional supplies via the Druzhba and TAL-IKL pipelines.

The forced shutdown of most domestic refineries and underutilized capability of Kremenchuck Refinery - the only one currently operating- prevent any significant increases in pipeline capacity to supply oil to Ukraine’s refineries.

Oil supplies via pipelines to refineries in Ukraine decreased from 22.9 million tons in 2003 to 14 million tons in 2016. In 2016, oil transportation volumes to refineries in Ukraine declined by 12.5% or 200.8 thousand tons.

The unresolved situation with the replacement of Urals oil in Odessa/Pivdenny-Kremenchuk Refinery pipeline section directly impacted the financial result of the crude oil transportation segment, UAH million
affected the use of the pipeline capacity towards Kremenchuk Refinery in 2016. Under these circumstances, Kremenchuk Refinery management opted for using more expensive railroad to transport the imported oil from Odesa.

In March 2017, Urals oil was removed from the pipeline section and transported by railroad to Brody in order to refit the second branch of Druzhba oil pipeline. This enabled transportation of Azeri oil to Kremenchuk refinery.

Total net income from crude oil transportation services increased in 2016 compared to 2015 by UAH 179 million or 4.8%, mainly due to the devaluation of the hryvnia against the euro, which resulted in growth of revenue from sales of transport services by UAH 458 million, since the tariff for transit of oil is set in the euro. However, due to the decrease in sales, revenues decreased by UAH 299 million.

The financial result of the segment decreased in 2016 compared to 2015 by 0.5%. Devaluation of the hryvnia against the euro fully offset the negative impact of the decline in oil transportation volumes and increased depreciation costs due to increased value of fixed assets as a result of revaluation as of 31 December 2015.

**Assets**

The total value of the crude oil transportation segment increased slightly in 2016 compared to 2015 (+ 3%). The main change was due to the change in the value of inventories and fixed assets. The segment’s ROA decreased insignificantly (−0.3%) in 2016 compared with 2015. The change was mostly caused by the growth in inventories and fixed assets as a part of total assets.

**UKRTRANSNAFTA**

Transportation of oil via trunk pipelines is carried out by Ukrtransnafta - a part of the Naftogaz Group. Ukrtransnafta includes affiliates, such as Druzhba oil-trunk pipelines, Prydyhoprovsko oil-trunk pipelines, and PMODENNY oil-trunk pipelines. In 2016, Ukrtransnafta transferred Russian Urals oil through Ukraine and transported domestically produced oil from production sites to refineries. At the beginning of 2017, Ukrtransnafta started transporting Azeri Light oil to Kremenchuk refinery.

**Contract for reviving Odesa-Kremenchuk Refinery route in 2017**

In late 2016, Ukrtransnafta and Ukrtatnafta signed a contract for transportation beginning in 2017 to Kremenchuk Refinery of at least 1.3 million tons of Azeri Light grade oil per year, with further increases up to 1.9 million tons per year. To obtain approval for the transfer of Urals grade oil, which previously occupied the Odesa-Kremenchuk pipeline section, from fixed assets to reserves, and its replacement with Azeri Light oil to fill the specified pipeline section, Ukrtatnafta developed a new transport standard (Standard of Ukrainian Companies) in 2016. This allowed the company to distinguish between the existing oil in the pipeline system and the ‘oil for industrial and technological needs’, and ‘oil inventory’.

**Increasing tax and compulsory payments by 64%**

Ukrtatnafta paid taxes and all compulsory payments totaling UAH 2.2 billion in 2016, which is 64.8% more than in 2015 and represents the largest total since the establishment of the company.

This significant increase in payments to the state budget is associated with a surcharge on income tax based on performance in 2015 (UAH 242.7 million), a significant increase in this tax payment in 2016 (UAH 439.5 million) based on performance in Q1-Q3, and payment of dividends based on performance in 2015 to the amount of UAH 102 million.

Net profit of the company for 2016 amounted to UAH 15 billion, which is 18.5% or UAH 237 million more than the planned target.

The efficiency of the company in the reporting period is demonstrated by the 4.9% profitability of operations and EBITDA margin of 57.2%. Return on assets was 8.8% and return on equity - 8.4%.

**Procurement system reform**

In April 2016, the company joined the ProZorro public procurement system. Ukrtransnafta introduced unified internal regulations that were developed using Naftogaz standards, namely the procedure for procurement of goods, works and services, tender committee regulation, procurement monitoring procedures, local competition commission regulations, and the procedure for interaction of structural units in the purchase of goods, works and services.

A company order of 2016 approved guidelines for operation under standard contracts. As a result, 98% of transactions are now concluded through standard contracts. Performance-based payment as the basic form of contract payment within 10 calendar days was introduced. This can significantly reduce risks and losses from delays or the poor performance of contractual obligations by unscrupulous contractors, while also preventing corruption risks in payment settlement.

**Joining the International Association of Oil Transporters (IAOT)**

In December 2016, Ukrtransnafta became a member of the International Association of Oil Transporters (IAOT). Membership in this association will promote the priorities of the Ukrainian oil transportation system in Central and Eastern Europe, especially transportation of various grades of oil via Pivdenna Druzhba pipeline.

Before joining the association in May and November 2016, Ukrtatnafta participated in IAOT meetings as a guest.

**Storing process oil in the tank farms of other enterprises**

The previous management of Ukrtatnafta signed a series of economically unfavorable tank lease agreements with JSC SPC-Galicia, JSC Neftehimik Carpathians, and JSC Ukrtransnafta as illegal and denying claims for the recovery of Ukrtransnafta debts amounting to UAH 237 million. In response to PJSC Ukrtransnafta, JSC SPC-Galicia, and JSC Neftehimik Carpathians, the court ruled in favor of Ukrtransnafta debts amounting to UAH 1.3 billion for tank storage services.

**Key objectives for 2017**

1. Increased transportation volumes to Ukrainian refineries

In 2017, Ukrtransnafta is planning to increase oil transportation to Ukrainian refineries to 2.7 million tons [compared to 1.4 million tons in 2016].

2. Modernization of oil-trunk pipelines

2017 targets provide for overhaul works, construction, reconstruction, technical inspection and maintenance to increase efficiency and ensure reliability of Ukrtransnafta oil pipelines.

3. Approval of economically grounded tariffs

The company has developed and forwarded to NGUR a new draft tariff methodology for oil transportation via Ukraine’s main pipeline networks.

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**What We Have Achieved**

Europe, especially transportation of various grades of oil via Pivdenna Druzhba pipeline.

The cost of services provided under these contracts to Ukrtransnafta was estimated as many times greater than the market value of oil storage in Ukraine.

Court rulings confirmed the Ukrtransnafta position, recognizing agreements with JSC SPC-Galicia, JSC Neftehimik Carpathians, and JSC Ukrtransnafta as illegal and denying claims for the recovery of Ukrtransnafta debts amounting to UAH 144.9 million.

In response to PSC Ukrtransnafta, JSC SPC-Galicia, and JSC Neftehimik Carpathians, claims for the recovery of Ukrtransnafta debts amounting to UAH 1.3 billion for tank storage services, Ukrtransnafta filed a countersuit against the above contractors for oil return and the collection of fines for overdue obligations amounting to UAH 672.9 million.

As of the date of the report, the litigation regarding the storage of process oil has not finished.

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**ANNUAL REPORT 2016**

Ukrtransnafta CEO Mykola Havrylenko

“Regardless of the overall crisis in the oil refining industry and lower demand for oil transportation services, Ukrtransnafta can boast its performance. In 2016, we managed to resume transportation through Odesa-Kremenchuk pipeline section, which had been out of service for five years. We also filled the first branch of Myzyr-Brody oil trunk pipeline, which had been mothballed for three years. Ukrtransnafta’s last year performance looks encouraging in terms of oil transportation revival in Ukraine.”

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**Ukrainian oil pipelines map**

- existing oil pipelines
- planned oil pipelines
- oil refineries
- existing oil pumping stations
- planned oil pumping stations

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**WHAT WE HAVE ACHIEVED**

**ANNUAL REPORT 2016**

Ukrtransnafta CEO Mykola Havrylenko

“Regardless of the overall crisis in the oil refining industry and lower demand for oil transportation services, Ukrtransnafta can boast its performance. In 2016, we managed to resume transportation through Odesa-Kremenchuk pipeline section, which had been out of service for five years. We also filled the first branch of Myzyr-Brody oil trunk pipeline, which had been mothballed for three years. Ukrtransnafta’s last year performance looks encouraging in terms of oil transportation revival in Ukraine.”

Ukrtransnafta CEO Mykola Havrylenko
1. Abolition of rent payment for oil transportation via oil-trunk pipelines

The Tax Code of Ukraine fixed rental rates for oil transportation via trunk pipelines at the amount of USD 0.56 per one ton. Additionally, this rent is not actually associated with the utilization of underground of other natural resources, and does not depend on the value of the property used in transportation. Therefore, it is problematic to determine an economically grounded rent payment. Lack of correlation between rent size and the taxpayer’s performance is a key drawback. The current procedure requires rent payment even when the entity is operating at a loss. In its present form, rent for oil transportation is a tax that is included in the cost of oil transportation services. As such, it influences Ukrtransnafta financial and business operations. As a result, the cost of oil transportation is excessively high relative to the economic realities of the current technological process and production features of the oil-trunk pipeline system. Applying rent payment reduces the competitiveness of the Ukrtransnafta pipeline system compared with companies offering alternative routes and ways of oil transportation (e.g. by railway transport) that do not have taxation mechanisms similar to rent. It should be noted that in international practice, especially in European countries, rent payments for pipeline services are not applied. In 2018, Ukrtransnafta prepared draft amendments to the Tax Code of Ukraine on abolishing rent for oil transportation via oil-trunk pipelines and agreed it with Naftogaz. This draft is under consideration by the Ministry of Economic Development and Trade of Ukraine.

2. Prohibition of alienation and lease of Ukrtransnafta fixed assets

Current legislation deprives Ukrtransnafta of the possibility of effectively using fixed assets that are not involved in the oil transportation process. Article 7 of the Law of Ukraine ‘On Pipeline Transport’ prohibits the alienation of assets of enterprises engaged in trunk pipeline transportation operations, the transfer of assets between balance sheet accounts, concession, rent, lease, mortgage, etc. Alienation of fixed assets that are not involved in oil transportation is permitted only with the approval of the Cabinet of Ministers. However, this authorization is a complex and lengthy procedure. These legal constraints make it practically impossible to improve the operation of non-core assets, including hotels, catering, meat products, leather goods, and tailoring enterprises. The company bears the cost of maintaining these facilities while having no alternative ways of using these properties. Free non-core asset management would help attract investors, develop additional business, and consequently have a positive impact on the cost-effectiveness of Ukrtransnafta operations.

3. Failure to implement capital investment plan

The prohibition of all types of capital investments as per the Cabinet of Ministers of Ukraine Regulation of 3 December 2012 (No.899) is currently blocking some of the key activities of public sector enterprises, namely ensuring the reliable, safe and efficient use of state assets placed at their disposal. Over the last seven years, the final version of the company’s financial plan was approved only twice, and each time approval took place in the second half of the year. This lead to poor performance on investment plans. In 2018, the total volume of Ukrtransnafta capital investments amounted to UAH 385.4 million, which is 28% of the target sum. The main investment target in the reporting period was the overhaul repair of line sections of the Brody-State Border pipeline, which is a part of the main oil transit route across Ukraine to the EU, with investments amounting to UAH 169.5 million. According to the Corporate Governance Action Plan, the company’s financial plan shall be approved by the supervisory board.

4. Strengthening penalties for damage to oil pipelines

Abusers illegally interfering in the operation of oil-trunk pipelines for the purpose of stealing oil cause damage to state property and significant losses to Ukrtransnafta. Organized crime groups have years of experience in this criminal field, including well-functioning sales and agent networks, excellent technical equipment, and their own vehicles specially reequipped for oil transportation. On 17 September 2015 at the initiative of Ukrtransnafta, a group of MP’s registered draft law No. 3129 ‘On amendments to the Criminal Code of Ukraine regarding strengthening responsibilities for damage to facilities of trunk or industrial oil, gas, condensate and oil product pipelines.’ This draft law proposes punishment with imprisonment for a term of three to eight years for damage to or destruction of pipelines and bypassing pipelines and their technologically related facilities, if these actions have led to the disruption of pipelines or created a danger to life. Earlier punishment for this offense was a fine of one hundred to a thousand times the untaxed minimum income. The same actions committed repeatedly or by a group of persons by prior collusion are punishable by imprisonment of five to ten years. The harshest punishment of ten to twelve years in prison applies if the actions envisaged by parts one or two of this article have caused deaths or led to accidents, fires, significant pollution or other serious consequences.

On 26 November 2015, draft law No. 3129 was adopted as a basis (Regulation No.3129/P) and submitted to the Law Enforcement Legislative Support Committee. Adoption of the draft law has currently been postponed for an indefinite term.
WHAT WE HAVE ACHIEVED

ANNUAL REPORT 2016

ANALYSIS OF NATURAL GAS SALE AND SUPPLY AND OIL PRODUCTS PROCESSING (DOWNSTREAM)

NATURAL GAS SALE AND SUPPLY

Breakdown by consumers

The Regulation of the Cabinet Ministers of Ukraine imposed special public service obligations (PSO) on Naftogaz. They envisage procuring domestic natural gas from UkrGasvydobuvannya and selling natural gas to suppliers to households, religious organizations, and DHCs to generate heat for households, religious organizations. Starting from 23 December 2016, they also included an obligation to supply gas to DHCs to generate heat for the public sector institutions, as well as supplying natural gas to JSC "Odesa Port Plant" from 11 October 2016 until 31 December 2016.

For consumers not covered by the said regulation, imported natural gas is sold at prices determined independently by natural gas market participants who sell the gas to such consumers, including Naftogaz.

Main results

Sales of natural gas to perform special obligations (PSO) Sales of natural gas at unregulated prices to other customers

<table>
<thead>
<tr>
<th>Regional gas distribution companies to resell gas to households</th>
<th>DHCs to households</th>
<th>DHCs to public sector</th>
<th>Odesa Port Plant</th>
<th>Industrial consumers</th>
<th>Industrial and technological needs</th>
<th>Regional gas distribution companies to resell to other consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales, mcm</td>
<td>2014</td>
<td>2015</td>
<td>2016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DHCs to households</td>
<td>22,022</td>
<td>22,554</td>
<td>22,668</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DHCs to public sector</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odesa Port Plant</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial consumers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial and technological needs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional gas distribution companies to resell to other consumers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sales to consumers not covered by PSO decreased by 27.7% in 2016 compared to 2015. The main decrease occurred in the category of industrial and other consumers accounting for 17.4% of total changes. In part, the decrease in gas sales to industrial customers and gas consumed for technological needs of gas distribution companies was due to the overall reduction in natural gas consumption in Ukraine, and partly because of a change of supplier by such companies and, correspondingly, Naftogaz market share decline. The group share in total gas sales in Ukraine in 2016, including sales under the PSO, was nearly 71%.

In the unregulated segment of industrial consumers (excl. companies of the group), Naftogaz share amounted to approximately 10% of the total volumes sold.

Total sales of natural gas to consumers in Ukraine decreased by 3.1% mainly due to the decrease in sales to industrial enterprises in 2016 compared to 2015. Sales of natural gas to consumers under PSO increased by 5.9% in 2016 compared to 2015. The main sales gain occurred in gas distribution companies to resell gas to households – increase in this category is 3.5% of the total growth in sales under PSO. Gas consumption by households increased due to the colder winter season of 2015/2016 compared with the previous year. In addition, in Q4 2016, this category included gas sold to DHCs to produce heat for the public sector, which increased total sales under special obligations by 2%. Supply to Odesa Port Plant under PSO added 3% to total increase.

Naftogaz share in gas supply in Ukraine

<table>
<thead>
<tr>
<th>Year</th>
<th>Mcm</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>42,485</td>
<td>44%</td>
</tr>
<tr>
<td>2015</td>
<td>33,157</td>
<td>45%</td>
</tr>
<tr>
<td>2016</td>
<td>32,351</td>
<td>45%</td>
</tr>
</tbody>
</table>

ANNUAL REPORT 2016
WHAT WE HAVE ACHIEVED

Gas sales volume 31 220 23 330 22 610 (720) -3.3% -16.9%

including gas sales to group entities 1 989 1 534 2 896 1 162 75.7% 16.4%

Sales under PSO 22 140 17 159 18 147 988 5.8% 2.8%

Regional gas distribution companies to resell gas to households 16 075 11 298 11 879 581 5.1% 2.5%

DHCs to households 7 065 5 861 5 758 (103) -1.8% -9.7%

DHCs to public sector - - 338 338 - -

Odesa Port Plant - - 172 172 - -

Sales at unregulated prices to other customers 9 080 6 171 4 463 (1 708) -27.7% -16.9%

Regional gas distribution companies to resell to other consumers 666 331 102 (229) -69.2% -44.5%

DHCs to other consumers 1 519 1 167 760 (407) -34.8% -29.2%

Industrial and other consumers, including sales of gas to group companies for technological needs and own needs 6 895 4 673 3 601 (1 072) -22.9% -27.7%

Segment revenue, UAH million

Segment revenue, UAH million

CAGR 36.9%

100000

80000

60000

40000

20000

0

2014

2015

2016

including sales to other segments within the group

Sales pursuant to special obligations (PSO) 3 987 1 591

Regional gas distribution companies to resell gas to households 4 215 1 800

DHCs to households 3 278 1 188

DHCs to public sector 6 680 -

Odesa Port Plant 6 654 -

Sales at unregulated prices to other customers 6 153 6 342

Regional gas distribution companies to resell to other customers 6 458 7 003

DHCs to other consumers 6 283 6 510

Industrial and other consumers including gas sales to group entities for technological and own needs 6 123 6 253

Revenue from sales of natural gas, UAH million

Revenue 53 257 66 881 99 772 32 891 49.2% 36.9%

including gas sales to group entities 7 764 9 616 16 712 7 096 73.8% 31.8%

Sale pursuant to special obligations (PSO) 12 731 27 313 72 412 45 109 115.2% 218.5%

Regional gas distribution companies to resell gas to households 7 598 20 340 50 140 29 800 164.5% 160.5%

DHCs to households 5 341 6 963 18 871 11 908 171.0% 88.0%

DHCs to public sector 2 259 2 259

Odesa Port Plant 1 146 1 146

Sales at unregulated prices to other customers 40 526 39 578 27 360 (11 772) -30.9% -16.9%

Regional gas distribution companies to resell to other consumers 2 580 2 318 548 (2 140) -78.4% -52.0%

DHCs to other consumers 5 653 7 594 4 763 (2 831) -37.3% -8.2%

Industrial and other consumers (including gas sales to group entities for technological and own needs) 32 483 29 666 22 049 (7 617) -25.7% -13.8%

The natural gas sales and supply segment loss decreased by 93.4% in 2016 compared to 2015, resulting from the continued implementation of natural gas market reform to bring selling prices into line with import parity levels. At the same time, the decrease in sales of natural gas to consumers in Ukraine and increase in weighted average cost of gas due to UAH devaluation had a negative impact on segment results. Due to the seasonality of natural gas sales and the need to purchase it during the season of low gas sales, the group finances the purchase of imported natural gas with borrowed funds received from foreign financial institutions. As at the end of 2016, the foreign currency portion of the group loan portfolio corresponded to UAH 45 529 million (63% of the group loan portfolio). The devaluation of the national currency in 2016 against the USD by 8% and against the euro by 5% had a negative impact on the overall segment result. At the same time, the fall of the national currency and fluctuations in UAH exchange rate in the currency market were less pronounced in 2016 than in 2015, when the fall in the UAH exchange rate against the USD was 48% and 37% against the euro. The decrease in losses from conversion differences had a positive impact on the segment result of UAH 16 079 million.

At the same time, sales of natural gas to DHCs for households remain loss making. The loss before tax was formed in this category mostly because of non-operational costs (financial costs and foreign exchange loss).
## Segment results, UAH million

<table>
<thead>
<tr>
<th>Segment</th>
<th>2015</th>
<th>2016</th>
<th>2016/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas sale and supply</td>
<td>(52,257)</td>
<td>(3,472)</td>
<td>-93.4%</td>
</tr>
<tr>
<td>Sales to consumers under PSO</td>
<td>(47,478)</td>
<td>(1,142)</td>
<td>-97.6%</td>
</tr>
<tr>
<td>Regional gas distribution companies to resell gas to households</td>
<td>(11,239)</td>
<td>3,819</td>
<td>-53.0%</td>
</tr>
<tr>
<td>DHCs to households</td>
<td>(36,239)</td>
<td>(3,779)</td>
<td>-89.6%</td>
</tr>
<tr>
<td>DHCs to public sector</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odessa Port Plant</td>
<td>(1,310)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales to consumers not under PSO</td>
<td>(4,779)</td>
<td>(2,330)</td>
<td>-51.2%</td>
</tr>
<tr>
<td>Regional gas distribution companies to resell to other consumers</td>
<td>(74)</td>
<td>(37)</td>
<td>-50.0%</td>
</tr>
<tr>
<td>DHCs to other consumers</td>
<td>(2,452)</td>
<td>(119)</td>
<td>-95.1%</td>
</tr>
<tr>
<td>Industrial and other consumers (including gas sales to group entities for technological and their own needs):</td>
<td>(2,253)</td>
<td>(2,174)</td>
<td>-3.5%</td>
</tr>
</tbody>
</table>

### Impact on segment results, UAH million

- **Volume change:** 2015 (52,257), 2016 (3,472)
- **Price change:** Natural gas sale and supply +42,672
- **Other:** +1,367, -6,402

### Assets, UAH million

- **2014:** 22,367
- **2015:** 36,947
- **2016:** 76,485

### Assets, ROA

- **2015:** 76%
- **2016:** 97%

## Settlements for gas supplied by Naftogaz to all consumer categories

### Revenue from sales of natural gas

- **2015:** 50,346
- **2016:** 29,346

### Gross trade accounts receivable

- **2015:** 21,796
- **2016:** 14,143

### Settlements for gas supplied by Naftogaz to gas distribution companies to resell gas to households

### Revenue from sales of natural gas

- **2015:** 32,690
- **2016:** 32,906

### Gross trade accounts receivable

- **2015:** 33,754
- **2016:** 34,290

### Settlements for gas supplied by Naftogaz to DHCs to produce heat for households

### Revenue from sales of natural gas

- **2015:** 13,101
- **2016:** 12,907

### Gross trade accounts receivable

- **2015:** 12,402
- **2016:** 12,907

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**Part 7, Article 11, Law of Ukraine “On Gas Market”**

The total value of assets in the natural gas sale and supply segment increased by 97% in 2016 compared to 2015. More than half of this addition, UAH 20,377 million, is an increase in trade accounts receivable compared to 2015. Nearly 30% of the addition was due to the increased value of gas in 2016 compared to 2015, related mainly to growth in purchase prices for gas produced by Ukrgasvydobuvannya and change in the ratio of imported gas to domestically produced gas in the reserve (see Working Capital section).

Naftogaz, as a participant of the natural gas market with public service obligations, has the right to compensation for economically justified costs, reduced by income received in performing the special obligations and subject to acceptable profit levels. It is assumed that the procedure for calculating such compensation must be approved by the Cabinet of Ministers of Ukraine. At present, neither the list of economically justified costs nor the determination of acceptable profit levels has been approved by the government. No adjustments for possible compensation are included in the actual results of 2016.

In 2016 the level of settlements for natural gas was 76% in general for all categories of consumers, that is 21% less than the level of settlements in 2015 (the level of settlements was 97% in 2015 and 94% in 2014). The deterioration of payment discipline, together with the increase in prices, has led to increase in the group’s accounts receivable on natural gas sales segment by 1.8 times.
Gas is partly paid in advance, which makes the price lower.

Settlements for gas supplied by Naftogaz to Odesa Port Plant
Revenue from sales of natural gas

A provision for the whole debt was made, as Naftogaz has no assurance about the repayment.

In November 2016, a law \(^{27}\) was adopted which sets up the procedure for debt settlement for heat-supplying and heat-generating companies as well as centralized water supply and disposal utilities for consumed energy.\(^{28}\)

The law provides for, among other things, the writing-off of liabilities of enterprises and entities of fines, penalties, forfeits for late payment of debts for gas consumed, as well as debt restructuring for consumed natural gas.

The group expects additional losses in 2017 and in subsequent years related to the settlement procedure in the form of writing-off a certain amount of accounts receivable, and loss of rights to collect fines, penalties, and forfeits for late payment of debts for gas consumed. At present, the amount of additional losses cannot be accurately estimated.

The segment’s ROA increased by 130% in 2016 compared with 2015. The increase arose from the significant improvement in the segment’s financial results due to bringing selling prices into line with import parity levels. At the same time, the growth in assets value caused by the increase in accounting receivable due to increased prices and worsening of payment discipline.

**CRUDE OIL AND GAS CONDENSATE PROCESSING AND TRADE IN PETROLEUM PRODUCTS**

Oil and gas processing

**Production of petroleum products and LPG by Naftogaz\(^{29}\) group**

**Main results**

The overall change in output of oil products and LPG in 2016 compared to 2015 is related to the inclusion of Ukrnafta results in the analysis. If Ukrnafta figures were included from 1 January 2015, the change in output would have been -1%.

Total production of petroleum products and LPG increased in 2016 compared to 2015 by 2.9%. The increase in 2016 was due to increases in production volumes of petroleum products and LPG by 17 thousand t and 24 thousand t, respectively.

Ukrnafta has the equipment and facilities for the production of ammonia; the change in output in 2016 compared to 2015 is 15 thousand t.

**Trade in petroleum products and LPG by Naftogaz group, thousand t**

\(^{27}\) The Naftogaz regained control over Ukrnafta on 22 July 2015 and included its performance into the group’s consolidated indicators, which changed the production of oil products and LPG.

\(^{28}\) See Section ‘Significant Regulatory Changes’.
Sales of petroleum products and LPG increased in 2016 compared to 2015 by 73%. The main increase was in the category of LPG, which increased in 2016 by 22.2% compared to 2015.

**Naftogaz group revenue from sale of petroleum products and LPG, UAH million**

<table>
<thead>
<tr>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 122</td>
<td>4 640</td>
</tr>
</tbody>
</table>

Impact on revenue, UAH million

<table>
<thead>
<tr>
<th>Change in volume</th>
<th>Change in price</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 032</td>
<td>2 432</td>
<td>4 640</td>
</tr>
</tbody>
</table>

In 2016, Ukrnafta accrued an allowance for doubtful accounts both in volume and in price, reducing it by UAH 6 537 million due to an increase in the inputs of purchased products. This negatively affected the result of the segment in 2016.

**WHAT WE HAVE ACHIEVED**

**ANNUAL REPORT 2016**

**Impact on segment results, UAH million**

<table>
<thead>
<tr>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 224</td>
<td>6 336</td>
</tr>
</tbody>
</table>

The total value of assets in crude oil and gas condensate processing and trade in petroleum products increased in 2016 by 138% mainly due to revenue from the sale of petroleum products. If Ukrnafta’s performance was included for the full 2015 calendar year, the decrease in income from the sale of petroleum products and LPG would have been 2%.

The financial result of the crude oil and gas condensate processing segment and trade in petroleum products decreased in 2016 by 17% compared to 2015.

**ANALYSIS OF OTHER ACTIVITIES**

**IMPLEMENTATION OF PROJECTS UNDER THE GENERAL AGREEMENT BETWEEN NAFTOGAZ AND CHINA DEVELOPMENT BANK**

On 25 December 2012, Naftogaz and China Development Bank (CDB) signed a general loan agreement to finance projects in the amount of up to USD 3.65 billion aimed towards the substitution of natural gas for domestically produced coal. The loan has sovereign state guarantees. No funds have been drawn so far.

Initially, the parties agreed to finance construction of coal gasification facilities and modernization of the power stations. In 2015, the parties backed by the Ministry of Energy of Ukraine and the Ministry of Commerce of China have preliminarily agreed on extension of scope of the credit facility to include procurement of drilling rigs and energy modernization projects for households.

Accordingly, in late 2015, Naftogaz submitted four projects to the Ministry of Economics for review and inclusion into the state register of investment proposals. Obtaining this official status from the Ministry of Economics as well as delivery of the notice of support of the projects from the Ministries of Energy and Finance to CDB was then pre-requisite for proceeding with further application to CDB. As of the date of this report, the Ministries have not formalized their views on the submitted projects. In 2016, the initial credit facility deadlines were extended by the parties for one year. Subject to new deadlines the projects should be submitted for CDB review before 25 June 2017.

**IMPLEMENTATION OF INTERNATIONAL HYDROCARBONS EXPLORATION AND PRODUCTION PROJECTS**

Zakordonnaftogaz activities include implementation of international hydrocarbons exploration and production projects outside Ukraine. Today this company is implementing oil and gas exploration and production projects on the concession blocks South Ward Ei Mahaweth and Ward Ei Mahaweth in the Arab Republic of Egypt.

In 2016, 2D field seismic works were completed, the data was processed, and the company started interpreting findings to ensure fulfillment of the company’s obligations for the first three-year exploration phase under the terms of the concession agreements for oil exploration and production in Egypt.

**TRANSPORTATION OF HYDROCARBON GASES**

Ukrpetrostransgaz is engaged in transportation of liquefied hydrocarbon gases using their own rail tank cars. The company provides services to Ukrnafta’s gas refineries, to Ukrzayavydobuvannya’s gas and gas condensate processing units and a number of external companies.

In 2016, the company used its own railway cars to transport 146.6 thousand tons of liquefied petroleum gas, which is 27% less than in 2015.

**CAPITAL investments, UAH million**

<table>
<thead>
<tr>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 917</td>
<td>6 537</td>
<td>7 205</td>
</tr>
</tbody>
</table>

Naftogaz group capital investments increased in 2016 compared to 2015 by 48.6% (average annual growth was 62.5% for 2014-2016). If Ukrnafta indicators were included in the consolidated data from 1 January 2015, the increase in capital investments in 2016 would have been 35.2%.

Gas production remains the priority for capital investments.

**ANNUAL REPORT 2016**

**CAPITAL investments in other segments in 2016 were over UAH 1 billion and amount to more than 48%.

Dublin, 2016 Naftogaz has expanded its operations in the field of exploration and development, and its scientific support, exploration of geological structure and evaluation of hydrocarbon potential, and development of regulations to ensure production processes in the energy and fuel complex.

During 2016, Naukanaftogaz carried out exploration and research, design and development works totaling UAH 38 million.

In 2016, Naukanaftogaz performed works for Naftogaz group companies and external counterparties.

**CAPITAL**

**total value of Naftogaz group capital investments increased in 2016 compared to 2015 by 48.6% (average annual growth was 62.5% for 2014-2016). If Ukrnafta indicators were included in the consolidated data from 1 January 2015, the increase in capital investments in 2016 would have been 35.2%.

Gas production remains the priority for capital investments.

**ANNUAL REPORT 2016**

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Gas production remains the priority for capital investments.
In 2016, Naftogaz became a net contributor to the state budget from a net recipient in 2015. Total amount of taxes paid by the entities of Naftogaz group increased by almost 54% in 2016 compared to 2015. Ukrgazvydobuvannya and Naftogaz paid the largest shares of the total group taxes, 53.3% and 22.1%, respectively.

VAT was the largest tax by volumes paid. Its amount increased in total group taxes, 53.3% and 22.1%, respectively.

Ukrgazvydobuvannya and Naftogaz paid the largest shares of the payment of taxes by natural gas selling price to Ukrainian consumers. However, the actual funding need of benefits and subsidies to the consumers in 2016 comprised UAH 33.4 billion was compensated in part by an increase in rental payments for oil production.

In 2016, the rental payments for gas production increased by UAH 10.1 billion or by 75.4%, due to increased natural gas selling prices for Ukrgazvydobuvannya starting from 1 May 2016. Increase in income tax payments in 2016 by UAH 6.6 billion or 77.5% is explained by the increase in gas selling prices for Ukrgazvydobuvannya and payment by Uktrantransgaz of income tax in installments. Payments for other taxes decreased, mainly due to the fact that in 2016 the rental payment for pipeline transit of natural gas through the territory of Ukraine was cancelled, compensated in part by an increase in rental payments for oil production.

For more information, please refer to Section "Natural gas distribution: companies reselling gas to households" and "Heat-producing entities to the households" would have been 77% and 74%, respectively (see Section "Natural gas sale and supply").

The structure of loans by source is roughly equal between private and public banks. In 2016 the amount of loans from state-owned banks increased by 6.6%. The portion of loans from private banks decreased by 9.2%, mostly due to the repayment of a loan to Gazprombank that was partly compensated for by an increased share of cheaper international financing in the group's portfolio.

The total amount of group loans decreased to UAH 0.9 billion or by 1.3% for the period 2015-2016 and comprised UAH 70.8 billion. Total change of loans in 2016 was as follows:

**Payment of taxes to the budget, UAH million**

<table>
<thead>
<tr>
<th>Tax Type</th>
<th>2016 / 2015, %</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT</td>
<td>69.3%</td>
<td>55.4%</td>
<td>41.7%</td>
<td>38.1%</td>
</tr>
<tr>
<td>Subsoil royalty charge for gas</td>
<td>75.4%</td>
<td>73.2%</td>
<td>73.0%</td>
<td>71.9%</td>
</tr>
<tr>
<td>Income tax</td>
<td>77.3%</td>
<td>76.3%</td>
<td>75.6%</td>
<td>75.6%</td>
</tr>
<tr>
<td>Other</td>
<td>-41.7%</td>
<td>5.9%</td>
<td>5.9%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Subsoil royalty charge for oil</td>
<td>59.4%</td>
<td>52.6%</td>
<td>52.6%</td>
<td>52.1%</td>
</tr>
<tr>
<td>Security contributions</td>
<td>1.8%</td>
<td>1.3%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Subsoil royalty charge for condensate</td>
<td>-23.4%</td>
<td>1.1%</td>
<td>1.1%</td>
<td>1.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>55.1%</td>
<td>75.7%</td>
<td>75.7%</td>
<td>75.7%</td>
</tr>
</tbody>
</table>

**SUBSIDIES**

In total, UAH 47.08 billion were provided in state budget estimates for 2016 for granting privileges and housing subsidies to the population to pay for electricity, natural gas, district heating, water supply and wastewater collection and treatment, housing rent (maintenance of buildings and housing areas), removal of domestic waste and liquid sewage. However, the actual funding need of benefits and subsidies to the consumers in 2016 comprised UAH 59.88 billion (of which subsidies comprised UAH 52.15 billion and benefits comprised UAH 7.73 billion). The actual expenses for subsidies exceeded the planned budgetary expenditures for 2016 by 22.1%.

Overall, in 2016 the companies of Naftogaz group formalized general protocol decisions for consumed natural gas with regard to privileges and subsidies for UAH 4.01 billion, of which UAH 3.04 billion was received in funds. The average percentage of settlements for subsidies in 2016 was almost 82.2%. Subsidies of UAH 6.7 billion, underfunded in 2016, were carried forward and financed by the government in the first quarter of 2017 if the subsidies were funded in 2016 in full, the percentage of payment for gas in categories "Regional gas distribution: companies reselling gas to households" and "Heat-producing entities to the households" would have been 77% and 74%, respectively (see Section "Natural gas sale and supply").

**Regional statistics on benefits and subsidies**

In December of 2016, Naftogaz and the Ministry of Finance of Ukraine on the one hand, and the International Bank for Reconstruction and Development (IBRD) and two commercial non-resident banks, on the other hand signed a loan documentation package to raise financing of Euro 4.76 billion (equivalent to UAH 50.0 billion) against a guarantee from the World Bank. Full loading of this credit line, beginning from the first quarter of 2017 will increase the share of loans denominated in foreign currency by more than 5% (excluding other changes).
**WHAT WE HAVE ACHIEVED**

**WORKING CAPITAL**

One of the most important tasks of the group’s management is to ensure adequate working capital.

Working capital in 2016 increased by 88.9% compared to 2015 and amounted to UAH 63,677 million, which was possible through improved planning.

A significant rise in the value of inventories in 2016 compared to 2015 took place mainly due to the increased value of natural gas. This increase was due to an increase in the portion of remaining inventories of imported gas (in absolute figures, remaining inventories of imported natural gas increased in 2016 by more than 2 bcm compared to 2015). However, total remaining inventories of active gas in UGS facilities decreased by almost 1.4 bcm. Turnover of inventories improved significantly in 2016 compared to 2015, mainly due to optimization of the quantity of natural gas inventories in UGS facilities.

The growth of accounts receivable was due to an increase in current accounts receivable for natural gas (see Section “NATURAL GAS SALE AND SUPPLY”). Increase in the turnover of accounts receivable in 2016 compared to 2015 reflects also growth trends in selling prices.

Prepayments and other current assets increased mainly due to increased prepayments for natural gas imports delivered in the first quarter of 2017.

Accounts payable decreased by 15% in 2016 and amounted to UAH 16,234 million as of 31 December 2016. This decrease occurred primarily due to a decrease in obligations under the joint activities agreements of Ukrnafta resulting from a decline in activity compared to 2015. Turnover of accounts payable did not change significantly in 2016 compared to 2015.

Advances received and other short-term liabilities increased by 30% and amounted to UAH 5,796 million as of 31 December 2016. The lion’s share of this growth is related to the accumulation of liabilities under rental payments, which increased by UAH 5,215 million in 2016, and almost equally divided between Ukrzhydobuvannya and Ukrnafta. Ukrzhydobuvannya has no rental payment overdue, with the overall amount of liabilities at the end of 2016 fully repaid in the first quarter of 2017. At the same time, Ukrnafta continued to accumulate debt for rental payment, which comes out of 2016 and the preceding years. In addition, VAT liabilities of group entities increased. They were timely settled in January of 2017.

**Turnover by type of working capital in days**

![Graph showing turnover by type of working capital in days]

- Calculated as the average stock divided by total cost of sales
- Calculated as the average accounts receivable before deducting the allowances for doubtful debts divided by revenue from the sales
- Calculated as the average accounts payable divided by value of purchases

**Structure of working capital, UAH million**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventories</td>
<td>47%</td>
<td>182%</td>
<td>50,244</td>
<td>34,769</td>
<td>32,11%</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>48%</td>
<td>79%</td>
<td>49,209</td>
<td>33,208</td>
<td>15,489</td>
</tr>
<tr>
<td>Prepayments and other current assets</td>
<td>24%</td>
<td>20%</td>
<td>19,875</td>
<td>36,764</td>
<td>15,570</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>-15%</td>
<td>28%</td>
<td>-19,102</td>
<td>-19,102</td>
<td>-11,872</td>
</tr>
<tr>
<td>Advances received and other short-term liabilities</td>
<td>31%</td>
<td>11%</td>
<td>[31,615]</td>
<td>[26,312]</td>
<td>[11,505]</td>
</tr>
<tr>
<td>Total working capital</td>
<td>89%</td>
<td>113%</td>
<td>63,677</td>
<td>35,707</td>
<td>15,796</td>
</tr>
</tbody>
</table>
MANAGEMENT COMMENTS ON THE AUDITOR’S OPINION

The independent auditor expressed a qualified opinion on Naftogaz financial position and financial performance for 2016. Major part of the modifications in the auditors' report does not have significant impact on the financial statements 2016 and relate to comparability of the current year and the corresponding figures.

### Auditor's qualification (the qualification number in the auditor's report indicated in brackets)

<table>
<thead>
<tr>
<th>Auditor’s qualification</th>
<th>Effect on:</th>
<th>Management comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statement of financial position as of 31 December 2016</td>
<td>Statement of profit or loss 2016</td>
</tr>
<tr>
<td>Financial information of “Ukrnafta” PJSC:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of sufficient evidence that supports recognition and measurement of of Ukrnafta's transactions regarding:</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>- sales of petroleum products by the joint operation in 2016,</td>
<td>[1% of assets]</td>
<td>[35% of net profit]</td>
</tr>
<tr>
<td>- trade accounts receivables related to sales of crude oil,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- prepayments made for the purchases of oil products in 2015 and their classification,</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>as well as impact of these transactions on other operating expenses, finance costs, finance income and deferred tax assets as at 31 December 2016 and 2015 and for the years then ended. (1a, b)</td>
<td></td>
<td>Major part of petroleum products sales transactions was executed prior to the date of regaining the control</td>
</tr>
<tr>
<td>Unconfirmed quantities and valuation of inventories owned by the joint operation of Ukrnafta as of 31 December 2015 (1c)</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Technical accounting issues:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of different accounting policies by the group and the group's associates and joint operations; lack of audited financial information of joint operations [2]</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>[less than 1% of assets]</td>
<td>[less than 1% of net profit]</td>
</tr>
<tr>
<td>Presentation and accuracy of the consolidated financial statements:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature of certain expenses may not be reflected in their legal form. Exposure to this issue amounts to UAH 6.2 billion for 2016 and UAH 14 billion for 2015 [3]</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>[1% of assets]</td>
<td>[15% of net profit]</td>
</tr>
<tr>
<td>Matters related to prior periods that affect comparability of the current year and the corresponding figures:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement of fair value of property, plant and equipment as at the date of control transfer (1d)</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Auditors comments relate to previous reporting periods and do not impact the financial results and financial position of 2016</td>
</tr>
</tbody>
</table>
PUBLIC JOINT STOCK COMPANY “NAFTOGAZ OF UKRAINE”

CONSOLIDATED FINANCIAL STATEMENTS
AS AT AND FOR THE YEAR ENDED
31 DECEMBER 2016
We were unable to obtain sufficient and appropriate audit evidence regarding: a. Recognition and measurement of revenue, cost of sales, prepayments made and trade accounts receivable related to sales of petroleum products by the joint operation of Ukrnafta in 2016 and sales of crude oil and prepayments made for the purchases of oil products by Ukrnafta in 2015, as well as impact of these transactions on other operating expenses, financial costs, finance income and deferred tax assets at 31 December 2016 and 2015 and for the years then ended; b. Classification of prepayments for the purchases of oil products made to Ukrtransnafta OJSC; c. Quantities and valuation of inventories owned by the joint operation of Ukrnafta and held by a third party at 31 December 2015, as we could not observe the counting of physical inventories or satisfy ourselves by alternative means concerning the inventory quantities as of that date; d. Measurement of the fair value of property, plant and equipment as at the date of control transfer and the related loss or remeasurement of the group’s previously held interest in Ukrnafta.

As a result, we were unable to determine whether any adjustments to the following amounts related to Ukrnafta were necessary: Line item in the consolidated financial statements 31 December 2016, UAH million 31 December 2015, UAH million Consolidated statement of financial position as at: Deferred tax assets 3,768 – Prepayments made and other current assets 2,952 5,640 Trade accounts receivable – 3,394 Inventories – 1,191 Consolidated statement of profit or loss for the year ended: Revenue 4,377 2,668 Cost of sales (1,662) – Other operating expenses (9,601) (1,523) Finance income 2,811 701 Finance costs – (839) Share of after-tax results of associates and joint ventures – (1,244) Remeasurement of previously held interest on transfer to subsidiary – (1,430) 2) Investments in associates and joint operations As discussed in Notes 7 and 27 to the consolidated financial statements, the group has investments in associates and joint operations. These investments are accounted for using the equity method of accounting and proportional consolidation, respectively.

a. Obtain sufficient and appropriate audit evidence regarding recoverability of trade and other receivables of the group’s associate “Ukrtransnafta” PJSC as at 31 December 2015 with the group’s share amounting to UAH 817 million included in the carrying amount of investments in associates.

b. Obtain sufficient and appropriate audit evidence regarding the group’s share in assets, liabilities, revenue and expenses of joint operations, where other parties in the joint arrangements with the group subsidiary “Ukrugrodybvyannya” PJSC are responsible for maintaining accounting records, since we were unable to obtain access to their audited financial statements and financial information prepared in accordance with IFRS as at 31 December 2016 and for the year then ended as presented below: Line item in the consolidated financial statements 31 December 2016, UAH million Property, plant and equipment 1,940 Other non-current assets 3 Inventories 130 Trade accounts receivable 60 Cash and bank balances 74 Prepayments made and other current assets 58 Borrowings 91 Provisions 111 Trade accounts payable 50 Advances received and other current liabilities 139 Consolidated statement of profit or loss for the year ended: Revenue 1,732 Cost of sales (1,422) c. Determine the effect of the departure from IFRS 11 “Joint Arrangements” as the group’s investments in joint operations were accounted for using the equity method. These investments were stated at UAH 40 million and UAH 2 million as at 31 December 2016 and 2015, respectively. In our opinion, these investments should be accounted for as joint operations, that requires separate recognition by the group of its share in each category of assets and liabilities of the joint operations as at 31 December 2016 and 2015 and its share in the joint operations’ revenues and expenses for the years then ended.

d. Determine the effect of the departure from uniform accounting policy of the group to use the revaluation model for measurement of property, plant and equipment by “Ukrtransnafta” PJSC and the joint operations of “Ukrugrodybvyannya” PJSC, Misen Enterprises AB and LLC “Carpathgyal”.

3) Purchases classification and presentation As discussed in Note 27, the following expenditures were incurred by “Ukrtransgaz” PJSC during the year ended 31 December 2016:

- Capital expenditures included into property, plant and equipment amounting to UAH 1,872 million; and
- Expenditures for purchases of services and inventories amounting to UAH 4,279 million.

Additionally, “Ukrtransgaz” PJSC, “Ukrugrodybvyannya” PJSC and “Ukrtransnafta” OJSC incurred capital expenditures and expenditures for purchases of services and inventories amounting to UAH 473 million and UAH 967 million, respectively, during the year ended 31 December 2015.

As stated in Note 27, the substance of these expenditures may differ from their legal form according to the primary documents. We were unable to obtain sufficient and appropriate audit evidence to satisfy ourselves as to the amounts and nature of the above expenditures and their classification in the consolidated financial statements for the years ended 31 December 2016 and 2015. Consequently, we were unable to determine whether any adjustments to these amounts were necessary.

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”), and we have fulfilled our other ethical responsibilities in accordance with 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 draw 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.

Ongoing litigations

We also draw your attention to Note 22 to the consolidated financial statements, which describes material uncertainty with regard to the claim in the Arbitration Institute of the Stockholm Chamber of Commerce issued by the Company to JSC “Gazprom” and countersuit from JSC “Gazprom” to the Company.

Retrospective restatement

We further draw your attention to Note 5 to the consolidated financial statements which describes the restatement of corresponding figures for the year ended 31 December 2015. Our opinion is not modified in respect of these matters.

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 IFRS, 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 in preparing the consolidated financial statements.
FINANCIAL STATEMENTS

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 scepticism throughout the audit. We:

- 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 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.

PJS Deloitte and Touche
4 May 2017

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2016

PUBLIC JOINT STOCK COMPANY “NATIONAL JOINT STOCK COMPANY “NAFTOGAZ OF UKRAINE”

In millions of Ukrainian hryvnias

<table>
<thead>
<tr>
<th>Note</th>
<th>31 December 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
<th>31 December 2016 (as restated, Note 3)</th>
</tr>
</thead>
</table>

**ASSETS**

- **Current assets**
  - Inventories
  - Trade accounts receivable
  - Cash and bank balances
  - Restricted cash

- **Non-current assets**
  - Property, plant and equipment
  - Investments in associates and joint ventures
  - Prepaid corporate income tax
  - Deferred tax assets
  - Other non-current assets

**EQUITY**

- **Share capital**
- **Revaluation reserve**
- **Unregistered contributed capital**
- **Cumulative exchange difference**
- **Accumulated deficit**

**LIABILITIES**

- **Current liabilities**
  - Trade accounts payable
  - Advances received and other current liabilities
  - Corporate income tax payable

**TOTAL LIABILITIES AND EQUITY**

Chairman of the Executive Board
Sergiy Konovets
Deputy Chairman of the Executive Board

Andriy Kobolyev
### PUBLIC JOINT STOCK COMPANY “NAFTOGAZ OF UKRAINE”
#### CONSOLIDATED STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2016

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Note</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>4</td>
<td>102.74</td>
<td>130.260</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>17</td>
<td>(21.586)</td>
<td>(121.610)</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td></td>
<td>79.960</td>
<td>98.647</td>
</tr>
<tr>
<td>Other operating income</td>
<td></td>
<td>2.627</td>
<td>3.911</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>18</td>
<td>(47.752)</td>
<td>(18.541)</td>
</tr>
<tr>
<td>Operating profit/(loss)</td>
<td></td>
<td>31.835</td>
<td>5.975</td>
</tr>
<tr>
<td><strong>Finance costs</strong></td>
<td></td>
<td>(9.581)</td>
<td>(11.521)</td>
</tr>
<tr>
<td>Finance income</td>
<td>20</td>
<td>4.572</td>
<td>1.804</td>
</tr>
<tr>
<td>Share of after-tax results of associates and joint-ventures</td>
<td>7</td>
<td>(99)</td>
<td>(627)</td>
</tr>
<tr>
<td>Remeasurement of previously held interest on transfer to subsidiary</td>
<td>7, 23</td>
<td>(1 430)</td>
<td></td>
</tr>
<tr>
<td><strong>Net foreign exchange loss</strong></td>
<td></td>
<td>(5.790)</td>
<td>(19.934)</td>
</tr>
<tr>
<td>Profit/(Loss) before income tax</td>
<td>21</td>
<td>21.037</td>
<td>(36.781)</td>
</tr>
<tr>
<td><strong>Net profit/(loss) for the year</strong></td>
<td></td>
<td>22.532</td>
<td>(35.062)</td>
</tr>
<tr>
<td><strong>Net profit/(loss) attributable to</strong></td>
<td></td>
<td>22.532</td>
<td>(35.062)</td>
</tr>
<tr>
<td>Equity holders of the Company</td>
<td></td>
<td>26.652</td>
<td>32.702</td>
</tr>
<tr>
<td>Non-controlling interest</td>
<td>(4.120)</td>
<td>(2.770)</td>
<td></td>
</tr>
<tr>
<td><strong>Net profit/(loss) for the year</strong></td>
<td></td>
<td>22.532</td>
<td>(35.062)</td>
</tr>
</tbody>
</table>

### PUBLIC JOINT STOCK COMPANY “NAFTOGAZ OF UKRAINE”
#### CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2016

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Share capital</th>
<th>Reval-</th>
<th>Unreg-</th>
<th>Cumu-</th>
<th>Accu-</th>
<th>Total</th>
<th>Non-con-</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>capital</td>
<td>uation</td>
<td>istered</td>
<td>lative</td>
<td>ulated</td>
<td></td>
<td>troling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>reserve</td>
<td>reserve</td>
<td>contributed</td>
<td>exchange</td>
<td>deficit</td>
<td></td>
<td>interest</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>capital</td>
<td>difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Balance at 31 December 2014 (as restated, Note 3)</strong></td>
<td>59.997</td>
<td>335.527</td>
<td>104.610</td>
<td>14405</td>
<td>(153.241)</td>
<td>348.298</td>
<td>20</td>
<td>349.318</td>
</tr>
<tr>
<td><strong>Loss for the year</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(32.792)</td>
<td>(32.792)</td>
<td>(2.270)</td>
<td>(35.062)</td>
<td></td>
</tr>
<tr>
<td>Other comprehensive income/(loss) for the year</td>
<td>-</td>
<td>94.682</td>
<td>681</td>
<td>[223]</td>
<td>95.091</td>
<td>1042</td>
<td>96.135</td>
<td></td>
</tr>
<tr>
<td><strong>Total comprehensive income/(loss) for the year</strong></td>
<td>-</td>
<td>94.682</td>
<td>681</td>
<td>(33.064)</td>
<td>62.299</td>
<td>(1228)</td>
<td>61.071</td>
<td></td>
</tr>
<tr>
<td><strong>Acquisition of subsidiary (Note 23)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7.127</td>
<td>-</td>
<td>7.127</td>
</tr>
<tr>
<td><strong>Transfer of revaluation reserve</strong></td>
<td>-</td>
<td>(705)</td>
<td>-</td>
<td>(705)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>State treasury bonds received (Note 13)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>29.700</td>
<td>-</td>
<td>29.700</td>
<td>-</td>
<td>29.700</td>
</tr>
<tr>
<td><strong>Redemption of shares (Note 15)</strong></td>
<td>104.610</td>
<td>-</td>
<td>104.610</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Profit share payable to the State Budget and dividends declared (Note 13)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(2.822)</td>
<td>(2.822)</td>
<td>(652)</td>
<td>(3.454)</td>
<td></td>
</tr>
<tr>
<td><strong>Balance at 31 December 2015 (as restated, Note 3)</strong></td>
<td>164.607</td>
<td>430.525</td>
<td>29.700</td>
<td>2.086</td>
<td>186.421</td>
<td>438.475</td>
<td>5.287</td>
<td>443.762</td>
</tr>
<tr>
<td><strong>Profit/(loss) for the year</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>26.652</td>
<td>26.652</td>
<td>(1.021)</td>
<td>22.532</td>
<td></td>
</tr>
<tr>
<td><strong>Other comprehensive income for the year</strong></td>
<td>-</td>
<td>7.176</td>
<td>-</td>
<td>1.078</td>
<td>(101)</td>
<td>100</td>
<td>(100)</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total comprehensive income/(loss) for the year</strong></td>
<td>-</td>
<td>7.176</td>
<td>-</td>
<td>1.078</td>
<td>26.564</td>
<td>34.818</td>
<td>(4.223)</td>
<td>30.595</td>
</tr>
<tr>
<td><strong>Transfer of revaluation reserve</strong></td>
<td>-</td>
<td>(163)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>163</td>
<td>-</td>
<td>163</td>
</tr>
<tr>
<td><strong>Provision for dividends payable to the State Budget (Notes 13 and 15)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(15.254)</td>
<td>(15.254)</td>
<td>-</td>
<td>(15.254)</td>
<td></td>
</tr>
<tr>
<td><strong>Profit share payable to the State Budget and dividends declared (Note 13)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(1.021)</td>
<td>(1.021)</td>
<td>-</td>
<td>(1.021)</td>
</tr>
<tr>
<td><strong>Balance at 31 December 2016</strong></td>
<td>164.607</td>
<td>437.510</td>
<td>29.700</td>
<td>3.164</td>
<td>175.873</td>
<td>459.108</td>
<td>1.164</td>
<td>460.272</td>
</tr>
</tbody>
</table>
###CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2016

####In millions of Ukrainian hryvnias

<table>
<thead>
<tr>
<th>Description</th>
<th>Note</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CASH FLOWS FROM OPERATING ACTIVITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit/(loss) before income tax</td>
<td></td>
<td>21,037</td>
<td>(36,781)</td>
</tr>
<tr>
<td>Adjustments for:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation of property, plant and equipment and amortisation of intangible assets</td>
<td></td>
<td>23,462</td>
<td>20,274</td>
</tr>
<tr>
<td>Loss on disposal of property, plant and equipment</td>
<td></td>
<td>406</td>
<td>394</td>
</tr>
<tr>
<td>Impairment/(reversal of impairment) of property, plant and equipment</td>
<td>6</td>
<td>1,231</td>
<td>(1,144)</td>
</tr>
<tr>
<td>Write down of inventories</td>
<td>9</td>
<td>1,683</td>
<td>7,031</td>
</tr>
<tr>
<td>Net movement in provision for trade accounts receivable and prepayments made, other current assets, financial investments and VAT balances</td>
<td>18</td>
<td>20,863</td>
<td>1,938</td>
</tr>
<tr>
<td>Change in provisions</td>
<td>15</td>
<td>12,387</td>
<td>8,587</td>
</tr>
<tr>
<td>Write off of accounts payable and other current liabilities</td>
<td></td>
<td>(111)</td>
<td>(76)</td>
</tr>
<tr>
<td>Share of after-tax results of associates and joint-ventures</td>
<td>7,25</td>
<td>99</td>
<td>627</td>
</tr>
<tr>
<td>Remeasurement of previously held interest on transfer to subsidiary</td>
<td>7,25</td>
<td>-</td>
<td>1,430</td>
</tr>
<tr>
<td>Foreign exchange loss</td>
<td></td>
<td>5,790</td>
<td>20,489</td>
</tr>
<tr>
<td>Finance costs, net</td>
<td></td>
<td>4,909</td>
<td>9,717</td>
</tr>
<tr>
<td>Operating cash flows before working capital changes</td>
<td></td>
<td>91,946</td>
<td>32,641</td>
</tr>
<tr>
<td>Decrease in other non-current assets</td>
<td></td>
<td>554</td>
<td>416</td>
</tr>
<tr>
<td>Increase in inventories</td>
<td></td>
<td>(17,781)</td>
<td>(27,238)</td>
</tr>
<tr>
<td>Increase in trade accounts receivable</td>
<td></td>
<td>(8,623)</td>
<td>(5,955)</td>
</tr>
<tr>
<td>Decrease in prepayments made and other current assets</td>
<td></td>
<td>8,623</td>
<td>5,955</td>
</tr>
<tr>
<td>Decrease in other long-term liabilities</td>
<td></td>
<td>(186)</td>
<td>(519)</td>
</tr>
<tr>
<td>Provisions paid or used</td>
<td>15</td>
<td>(4,872)</td>
<td>(5,554)</td>
</tr>
<tr>
<td>Decrease in trade accounts payable</td>
<td></td>
<td>(4,492)</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Increase/(decrease) in advances received and other current liabilities</td>
<td></td>
<td>7,880</td>
<td>(2,739)</td>
</tr>
<tr>
<td>Cash generated from operations</td>
<td></td>
<td>53,846</td>
<td>1,855</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td></td>
<td>(7,522)</td>
<td>(859)</td>
</tr>
<tr>
<td>Interest received</td>
<td></td>
<td>1,382</td>
<td>669</td>
</tr>
<tr>
<td>Net cash generated by operating activities</td>
<td></td>
<td>47,305</td>
<td>1,695</td>
</tr>
</tbody>
</table>

####CASH FLOWS FROM INVESTING ACTIVITIES

<table>
<thead>
<tr>
<th>Description</th>
<th>Note</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of property, plant and equipment and intangible assets</td>
<td></td>
<td>(7,680)</td>
<td>(4,546)</td>
</tr>
<tr>
<td>Proceeds from sale of property, plant and equipment</td>
<td></td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>Cash acquired in business combination</td>
<td></td>
<td>23</td>
<td>694</td>
</tr>
<tr>
<td>Withdrawal/(placement) of bank deposits</td>
<td></td>
<td>12</td>
<td>2,375</td>
</tr>
<tr>
<td>Dividends received</td>
<td></td>
<td>123</td>
<td>32</td>
</tr>
<tr>
<td>Net cash used in investing activities</td>
<td></td>
<td>(5,238)</td>
<td>(4,696)</td>
</tr>
</tbody>
</table>

###CONSOLIDATED STATEMENT OF CASH FLOWS CONTINUED FOR THE YEAR ENDED 31 DECEMBER 2016

####In millions of Ukrainian hryvnias

<table>
<thead>
<tr>
<th>Description</th>
<th>Note</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CASH FLOWS FROM FINANCING ACTIVITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from borrowings</td>
<td></td>
<td>19,348</td>
<td>19,958</td>
</tr>
<tr>
<td>Repayment of borrowings</td>
<td></td>
<td>(40,183)</td>
<td>(29,361)</td>
</tr>
<tr>
<td>Interest paid</td>
<td></td>
<td>(8,711)</td>
<td>(9,127)</td>
</tr>
<tr>
<td>Profit share and dividends paid</td>
<td>13</td>
<td>1,023</td>
<td>(2,853)</td>
</tr>
<tr>
<td>Net proceeds from sale of the State treasury bonds contributed to share capital</td>
<td></td>
<td>-</td>
<td>29,700</td>
</tr>
<tr>
<td>Net cash [(used in)/generated from financing activities</td>
<td></td>
<td>(30,567)</td>
<td>8,329</td>
</tr>
<tr>
<td>Net increase in cash and cash equivalents</td>
<td></td>
<td>11,500</td>
<td>5,368</td>
</tr>
</tbody>
</table>

####CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR

<table>
<thead>
<tr>
<th>Description</th>
<th>Note</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR</td>
<td>12</td>
<td>21,853</td>
<td>9,256</td>
</tr>
</tbody>
</table>

####Significant Non-Cash Transactions

<table>
<thead>
<tr>
<th>Description</th>
<th>Note</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution of the State treasury bonds to the share capital</td>
<td>15</td>
<td>-</td>
<td>29,700</td>
</tr>
<tr>
<td>Direct payment by a lending bank for gas purchased by the Group</td>
<td></td>
<td>15,635</td>
<td>1,740</td>
</tr>
<tr>
<td>Dividends paid by associates directly to the State Budget</td>
<td></td>
<td>-</td>
<td>1,780</td>
</tr>
</tbody>
</table>
1. THE ORGANISATION AND ITS OPERATIONS

Public Joint Stock Company “Naftogaz of Ukraine” (“Naftogaz of the Company”) was founded in 1998 in accordance with the Resolution of the Cabinet of Ministers of Ukraine №294 dated 25 May 1998. Naftogaz of Ukraine and its subsidiaries (hereinafter collectively referred to as the “group”) are beneficially owned by the State of Ukraine. The Government of Ukraine, as represented by the Cabinet of Ministers of Ukraine, controls the company through participation in the shareholders’ meetings and the supervisory board meetings, as well as through the appointment of the chairman of the executive board and the executive board members.

Naftogaz of Ukraine is a vertically integrated oil and gas company engaged in full cycle of operations in gas and oil transportation, and storage of natural gas, condensate and oil. The company holds stakes in various entities that form the national system of production, refinery, distribution, transportation, and storage of natural 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:

<table>
<thead>
<tr>
<th>Name/Segment</th>
<th>% Interest held as at 31 December</th>
<th>Country of registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale and retail distribution of oil, gas and refinery products</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Gaz Ukrainy, Subsidiary Enterprise</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Naftogaz Trading Europe S.A. (former Naftogaz Overseas S.A.)</td>
<td>100.00</td>
<td>Switzer-land</td>
</tr>
<tr>
<td>Kirovogradgaz, Open JSC</td>
<td>51.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrtransgaz, Subsidiary Enterprise</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrtransnafta, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrtransgaz, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrtransgaz, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
</tbody>
</table>

2. OPERATING ENVIRONMENT

During recent years Ukraine has been in a political and economic turmoil. Autonomous Republic of Crimea within Ukraine was unlawfully annexed by the Russian Federation. During 2016 various areas in Luhansk and Donetsk regions continued to experience military actions. These actions led to rapid inflation, national currency devaluation against major foreign currencies, drop in GDP (liquidity and volatility at the financial markets. In January 2016 agreement on Deep and Comprehensive Free Trade Area between Ukraine and the EU came into force. As a result, the Russian Federation imposed trade embargo or import duties on main Ukrainian export goods. In return, Ukraine imposed similar measures as to Russian goods.

In 2018 inflation was 12.4% compared to 43.3% in 2015. Despite cumulative inflation in Ukraine since 2014, average consumer price index increased by 100% during recent three years, management believes that Ukrainian economy is not hyperinflationary because of inflation level slowdown in 2016 and absence of hyperinflationary economic environment.

Economic situation stabilisation started in 2016 with GDP growth of 1% and Ukrainian hryvnia strengthening. These events allowed the National Bank of Ukraine to ease certain restrictions on foreign currency transactions that were imposed in 2014-2015, including decrease of compulsory conversion level down to 85% and permission of dividend distribution abroad. Nevertheless, certain restrictions were further prolonged.

Significant external financing is needed to support the economy. During 2015 and 2016 Ukraine received first tranches within the Extended Fund Facility programme, agreed with the International Monetary Fund (“IMF”). Further economic and political progress depends essentially from the Ukrainian Government actions. At the same time, development in the economic and political areas remains uncertain.

Before 1 October 2015, the Company was a guaranteed supplier of natural gas in Ukraine to certain groups of customers, while its ability to adjust prices to end customers, reflecting increased prices for the imported gas, was limited, since such prices were regulated at each stage from exploration to end customers by the National Commission for Regulation of Energy and Utilities (the “NCREU”), before 21 August 2014 – the National Commission for Regulation of Energy, the “NCRE”). During 2016 and 2015, there were significant fluctuations in natural gas purchase prices in UAH equivalent, due to the Ukrainian hryvnia devaluation against foreign currencies.

Starting from 1 October 2015, the Law of Ukraine “On Natural Gas Markets” № 329-VIII dated 8 April 2015 came into force that launched the gas sector reform. The Law, on the one hand, stipulates for the state regulation of the monopoly market (transportation, distribution, storage, and LNG installation services) and, on the other hand, fosters the development of free fair competition in the natural gas commodity market. Thus, starting from 1 October 2015, the wholesale and the 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 and the group are undertaking significant measures in the open European natural gas market, which development that is required by the Memorandum on Economic and Financial Policy agreed with the IMF. During 2015 – 2016, turnover of natural gas for industrial and domestic heating companies was approximately 5.0%.

Production of gas, oil and refinery products

<table>
<thead>
<tr>
<th>Name/Segment</th>
<th>% Interest held as at 31 December</th>
<th>Country of registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukrgasvydobyvannia, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukraziatfa, PJSC</td>
<td>50.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Petroleum Company, Joint operations with the Arab Republic of Egypt and Egyptian General Petroleum Corporation</td>
<td>50.00</td>
<td>Egypt</td>
</tr>
<tr>
<td>Zakomtanoftogaz, Subsidiary Enterprise</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Carpaytagz LLC, Joint operations with Misen Enterprises AB</td>
<td>49.98</td>
<td>Ukraine</td>
</tr>
</tbody>
</table>

Oil and gas transportation

<table>
<thead>
<tr>
<th>Name/Segment</th>
<th>% Interest held as at 31 December</th>
<th>Country of registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukrtransgaz, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrtransnafta, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Ukrpetrostransgaz, PJSC</td>
<td>100.00</td>
<td>Ukraine</td>
</tr>
</tbody>
</table>

FINANCIAL STATEMENTS

ANNUAL REPORT 2016

STATEMENT OF REASONS

The Government has also approved the Corporate Governance Plan for “Mahistrala gasoprovody Ukrainy” PJSC, taking into account requirements of the European Bank for Reconstruction and Development and Energy community.

Further the Government approved amendments to the company’s Corporate Governance Restructuring Plan with its Resolution №80. Amendments include rules in respect of gas transportation and storage activities unbundling process.

State regulation of gas market in Ukraine

Before 1 October 2015, state regulation of gas market in Ukraine was performed by the Cabinet of Ministers of Ukraine and the NCREU.

State regulation covered both technical and financial aspects of the market functioning. Technical measures related to the effective use of gas resources, ensuring secure exploitation of the gas transportation system, maintaining correct and safe supply distribution, and consumption of natural gas. Financial measures mainly related to tariff and price setting and maintaining correct financial means for natural gas allocation among market participants.

Gas trading and supply

NCREU was responsible for regulating activities of the natural gas market participants and providing tariff and price setting policy on natural gas market as stipulated by the Law of Ukraine “On Natural Gas Market” № 2467-VI dated 08 July 2010 and NCREU Charter approved by the Presidential Decree № 757/2004 dated 10 September 2004 and the Resolution of the Cabinet of Ministers of Ukraine “On competence of executive authorities and local government bodies in respect of price and tariff regulation”. Natural gas prices were calculated according to the NCREU guidelines and principles of the Law of Ukraine “On Prices and Price Setting” № 170/VI dated 21 June 2012.

Accordingly, NCREU approved the maximum sales price of natural gas for entities financed from the State and local budgets, the maximum sales price of natural gas for industrial customers and other entities (including district heating companies producing heat for households), retail sales prices of natural gas for households, tariffs for transportation services via transmission and distribution pipelines within Ukraine, tariffs for distribution and supply of natural gas under the regulated tariffs, tariffs for storage and pumping services. Additionally, NCREU was responsible for customer rights protection in the area of tariff setting, security of supplies and quality of services.

Starting from 1 October 2015, the Law changed the model of the gas market to the principles of free, fair competition and ensuring a high level of protection of customer rights and interests.

At the same time, the Cabinet of Ministers of Ukraine has issued Resolution №194 dated 01 October 2015, imposing public service obligations on the Company during the transitional period from 1 October 2015 to 31 March 2017 in respect of gas purchase of domestic production from “Ukrvydobvyvannia” PJSC and gas supply for the needs of households, district heating companies and religious organisations, and starting from 23 December 2016 – for the needs of budget financed entities. Additionally, gas supply to the “Obessa Port Plant” PJSC up to 31 December 2016 was included in the public service obligations of the Company.
Additionally, this Resolution defines natural gas selling prices for the needs of households, religious organisations (except gas volumes used for commercial purposes) and district heating companies for heat produced for households and religious organisations needs during the period from 1 October 2015 up to 31 March 2017.

Other customers outside the Resolution buy imported natural gas under the prices set discretionary by the gas market participants, including the Company. At the same time, gas supply tariffs were not applied starting from 1 October 2015. Maximum trade mark-up of gas supplier with public service obligations is set instead as stipulated in the Resolution. Additionally, starting from 1 January 2016, natural gas tariff surcharge is not applied.

According to the Law of Ukraine “On principles of natural gas market functioning” that was effective from 1 October 2015, total volume of natural gas produced in Ukraine, net of natural gas used for technological purposes and other needs as stipulated by this law, by the entities owned 50% and more by the State, had to be sold for the needs of households via the company at regulated prices. If the demand of the households exceeded the domestic production volumes, it was satisfied by imports.

As described above in this Note, according to the Resolution of the Cabinet of Ministers of Ukraine, starting from 1 October 2015 public service obligations were imposed on the Company during the transitional period from 1 October 2015 to 31 March 2017 regarding purchase of gas of domestic production from “Ukrnaftovydobyvannya” PJSC and the sale of natural gas for the needs of households, district heating companies and religious organisations. This Resolution also assumes the company to purchase natural gas from wholesale gas suppliers, including overseas suppliers, in the volume sold by “Ukrnaftovydobyvannya” PJSC. However, it does not cover the needs of households, religious organisations and district heating companies for heat produced for households. Gas volumes consumed by households are reported via the gas meters. If no meters are available, the sales volume is reported at the average normal consumption rates set by the respective regulations.

Households settle their debts on natural gas consumed via special purpose bank accounts. The list of banks creating such accounts is approved by the Cabinet of Ministers of Ukraine. According to the current procedure, gas suppliers with public service obligations open special purpose bank accounts to receive payments for natural gas consumed. Amounts accumulated on the special purpose bank accounts were allocated to current accounts of the transmission system operator, distribution system operators and gas supplier with public service obligations according to ratios calculated by the gas suppliers with specific obligations and approved by NCREU. Balances on the special purpose accounts cannot be arrested or blocked.

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

In 2016 the Law of Ukraine “On measures to settle the arrears for the natural gas consumed by district heat generating and distribution and water supply companies” №1730 was adopted. The principles of district heat generating and distribution and water supply companies payables for gas settling are set in this Law. Among other, the Law assumes writing off penalties and fines implied for overdue debts for gas supplied, and restructuring of payables to the company on gas consumed.

The list of companies entitled for debt settling procedures should be approved by the central body of the government executive authority responsible for pursuing the State policy in housing and utilities. This list should be approved as a separate register of companies. Additionally, gas debts restructuring should be performed according to a standard pro forma contract approved by the separate resolution of the Cabinet of Ministers of Ukraine. As at 31 December 2016, neither separate register of companies nor standard pro forma contract were approved. At the date of these consolidated financial statements register of companies was still under development.

Gas transmission and distribution

Before 1 January 2016 tariffs for gas transit were set by negotiations between two parties, and gas transmission and distribution tariffs were set by NCREU. Starting from 1 January 2016, Ukraine has changed its gas transmission pricing policy to harmonise Ukrainian legislation with the European energy regulations, introducing a new system regulating tariffs for gas transmission. According to the Law of Ukraine “On Natural Gas Market”, gas transmission tariffs are set by NCREU for entry/exit points. New tariffs are set using regulatory asset base (RAB) methodology that assumes setting the initial return on assets to stimulate gas operators to invest in infrastructure development. The new tariffs allow compensating for acceptable return on RAB, depreciation and operating expenses. Depreciation included in the tariff was calculated based on the assumption that there would be no any transit flows starting from 1 January 2020 [accelerated depreciation].

Currently JSC “Gazprom” (“Gazprom”) still pays gas transmission tariffs as set in the current agreement on gas transit. Following disagreement of Gazprom to book entry capacities starting from 1 January 2016, NCREU temporarily suspended the application of new tariffs for gas transit pending the award of the Arbitral Tribunal under the auspices of the Arbitration Institute of the Stockholm Chamber of Commerce [Note 22]. Nafthazag expects that NCREU following the award will apply the new tariffs for gas transit with retroactive effect from 1 January 2016.

Had new tariffs been enforced starting from 1 January 2016, and assuming that Gazprom would not book any transit capacities beyond 2015, the group would have applied the revenue from gas transmission based on the new tariffs and accelerated depreciation.

The following tariffs and prices were set:

<table>
<thead>
<tr>
<th>Element</th>
<th>Tariff 31 December 2016</th>
<th>Tariff 31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariff for entry and exit points of Ukrainian gas transmission network, net of VAT, USD per thousand cubic meters</td>
<td>112.0</td>
<td>112.0</td>
</tr>
<tr>
<td>General gas transportation tariff via transmission and distribution pipelines within Ukraine, net of VAT, UAH per thousand cubic meters</td>
<td>732.0</td>
<td>695.10</td>
</tr>
</tbody>
</table>

Compensation of price difference between sales tariffs and price of imported gas and other types of financial support by the State

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 margin. The level of margin should be calculated following the relevant resolution by the Cabinet of Ministers of Ukraine. As at the date of these consolidated financial statements such resolution has not been adopted.

Accordingly, the company did not receive any compensation as a gas market player with public service obligations during 2016.

In 2015 the company received UAH 29,780 million in the State treasury bonds as a contribution to its share capital [Note 18]. Means received were used to cover liquidity gap of the Company.

Assets located at temporarily occupied areas

In early 2014, Ukraine suffered from the military aggression of the Armed Forces of the Russian Federation which resulted in the occupation of the Autonomous Republic of Crimea (“Crimea”) and unlawful military taking-over of certain areas in Luhansk and Donetsk regions by armed terrorist groups that are controlled, directed and financed by the Russian Federation, as a result of the uncontrolled intrusion of regular armed forces of the Russian Federation.

Additionally, Ukraine suffered from the separatist movements and the collapse of law enforcement in Luhansk and Donetsk.
The effect of the retrospective corrections to the consolidated statement of financial position as at 31 December 2015 was as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Note</th>
<th>31 December 2015, as previously reported</th>
<th>Effect of the restatement</th>
<th>31 December 2015, as restated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>3.1</td>
<td>456 948</td>
<td>[11 472]</td>
<td>445 076</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>3.6</td>
<td>4 428</td>
<td>58</td>
<td>4 486</td>
</tr>
<tr>
<td>Inventories</td>
<td>3.1</td>
<td>10 123</td>
<td>1 991</td>
<td>12 114</td>
</tr>
<tr>
<td>Revaluation reserve</td>
<td>3.1, 3.3</td>
<td>563 958</td>
<td>[27 430]</td>
<td>536 527</td>
</tr>
<tr>
<td>Accumulated deficit</td>
<td>3.1, 3.3</td>
<td>[173 012]</td>
<td>19 777</td>
<td>[153 241]</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>3.1</td>
<td>68 726</td>
<td>[1 762]</td>
<td>66 964</td>
</tr>
<tr>
<td>Provisions</td>
<td>3.4</td>
<td>2 671</td>
<td>706</td>
<td>3 377</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>3.2</td>
<td>14 242</td>
<td>[510]</td>
<td>15 752</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>3.4</td>
<td>11 047</td>
<td>[137]</td>
<td>11 184</td>
</tr>
</tbody>
</table>

The effect of the retrospective corrections to the consolidated statement of financial position as at 31 December 2014 was as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Note</th>
<th>31 December 2014, as previously reported</th>
<th>Effect of the restatement</th>
<th>31 December 2014, as restated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>3.1</td>
<td>571 054</td>
<td>[11 258]</td>
<td>559 796</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td>3.2</td>
<td>1 550</td>
<td>(2)</td>
<td>1 548</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>3.2</td>
<td>7 917</td>
<td>895</td>
<td>8 822</td>
</tr>
<tr>
<td>Inventories</td>
<td>3.1, 3.2</td>
<td>32 066</td>
<td>2 083</td>
<td>34 149</td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>3.2</td>
<td>33 601</td>
<td>[313]</td>
<td>33 288</td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>3.2</td>
<td>9 219</td>
<td>[43]</td>
<td>9 176</td>
</tr>
<tr>
<td>Prepaid corporate income tax</td>
<td>3.2</td>
<td>591</td>
<td>(2)</td>
<td>589</td>
</tr>
<tr>
<td>Cash and bank balances</td>
<td>3.2</td>
<td>11 796</td>
<td>[5]</td>
<td>11 791</td>
</tr>
<tr>
<td>Revaluation reserve</td>
<td>3.1, 3.3</td>
<td>456 987</td>
<td>[26 446]</td>
<td>430 543</td>
</tr>
<tr>
<td>Cumulative exchange difference</td>
<td>3.5</td>
<td>2 960</td>
<td>[874]</td>
<td>2 086</td>
</tr>
<tr>
<td>Accumulated deficit</td>
<td>3.1, 3.3</td>
<td>[219 083]</td>
<td>20 862</td>
<td>[198 221]</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>3.1</td>
<td>85 154</td>
<td>[1 470]</td>
<td>83 674</td>
</tr>
<tr>
<td>Other long-term liabilities</td>
<td>3.2</td>
<td>227</td>
<td>[216]</td>
<td>8</td>
</tr>
<tr>
<td>Borrowings</td>
<td>3.4</td>
<td>71 819</td>
<td>[59]</td>
<td>71 760</td>
</tr>
<tr>
<td>Provisions</td>
<td>3.4</td>
<td>17 268</td>
<td>1 032</td>
<td>18 290</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>3.2</td>
<td>19 895</td>
<td>[710]</td>
<td>19 185</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>3.4</td>
<td>21 611</td>
<td>[850]</td>
<td>20 761</td>
</tr>
<tr>
<td>Corporate income tax payable</td>
<td>3.2</td>
<td>3 268</td>
<td>83</td>
<td>3 351</td>
</tr>
</tbody>
</table>

3.2. Joint arrangements

One of the group’s subsidiaries is involved in joint arrangements that were previously accounted for as joint operations in consolidated financial statements as at and for the year ended 31 December 2015, where other parties in the joint arrangements are responsible for maintaining accounting records. Due to unavailability...
of reliable financial information in accordance with IFRS, the group decided to account for such operations using equity method. The group has recalculated the retrospective effect on its consolidated financial position and consolidated statement of profit and loss and consolidated statement of cash flows as at and for the year ended 31 December 2015.

3.3. Revaluation reserve

Following revaluation of property, plant and equipment performed as at 31 December 2015, the group has performed verification of revaluation reserve on an item-by-item basis. As a result, revaluation reserve as at 31 December 2014 was adjusted by UAH 18,875 million with a corresponding transfer to accumulated deficit.

Additionally, the group identified certain inaccuracies in revaluation of property, plant and equipment and made respective adjustment to carrying amount of property, plant and equipment as at 31 December 2015 by UAH 161 million with respective adjustments to consolidated statement of cash flow.

3.4. Changes in presentation

The group has changed presentation of certain employee related accruals from other current liabilities to current provisions. As a result, the group’s other current liabilities and current provisions were changed by UAH 650 million and UAH 337 million as at 31 December 2015 and 2014, respectively with respective adjustments to consolidated statement of cash flow.

The group has also changed presentation of certain provisions for one of its litigations from trade accounts payable and current provisions to non-current provisions. Reclassification relates to a single litigation involving the company as a defendant. As a result, the group’s trade accounts payable and current provisions were decreased by UAH 270 million and UAH 236 million, respectively, and non-current provisions were increased by UAH 225 million as at 31 December 2015.

Additionally, the group changed presentation of interest on late payment of subsoil royalty amounting to UAH 588 million for the year ended 31 December 2015 from other operating expense to provisions to non-current provisions. Reclassification relates to a single litigation involving the company as a defendant. As a result, the group’s provisions were increased by UAH 441 million as at 31 December 2015.

The group’s management believes that the amended presentation provides more relevant information to users of financial statements.

3.5. Foreign exchange differences on joint operations

The group has identified discrepancies in accounting for foreign exchange differences related to a concession agreement with the Arab Republic of Egypt. Accordingly, the company has decreased other operating expense and cumulative exchange differences in the other comprehensive income by UAH 674 million, respectively.

3.6. Other changes

There were other individually insignificant adjustments included to the effects of restatements and reclassifications described above.

4. SEGMENT INFORMATION

The executive board is the group’s chief operating decision maker. Management has determined the operating segments used for disclosure by the group based on reports reviewed by the executive board for assessing the group’s financial performance.

Management assesses the performance of the operating segments based on the amount of net profit (loss) before income tax.

Reportable segments are defined by management in accordance with the type of activity as follows:

- Gas upstream. Natural gas production is mainly performed in Poltava, Kharkiv, Sumy, Dnipropetrovsk and Zaporizhzhia regions. Exploration works are mainly performed in Carpathian and Dnipropetrovsk regions. The group controls about 70% of all natural gas produced in Ukraine.
- Oil and gas condensate upstream. Oil exploration is performed by "Ukrnafta" PJSC and "Ukrnaftovydbuvannya" PJSC. Production of gas condensate is performed in the area of natural gas exploration.
- Gas transmission and distribution. This segment is presented by the gas transmission and distribution pipelines operated by the group. Ukrainian gas transportation system is one of the largest in the world in terms of its transportation capacities.
- Gas storage. Ukrainian gas transportation system includes 11 underground gas storage facilities located in mainland Ukraine. The total capacity of the underground gas storage system located in Ukraine is 31 billion cubic meters of gas.
- Crude oil transportation. This segment is presented by the transmission oil pipelines operated by the Group. Total length of oil transmission pipelines in Ukraine is 4.7 thousand km. Segment also includes oil storage, presented as oil reserves with total capacity of 11 million tonnes of oil.
- Crude oil and gas condensate refinery and petroleum products trading. This segment is presented by 8 oil and gas refineries. The refinery products mainly include gasoline and diesel fuel, and LPG. Revenue of this segment also include revenues from sales of chemical products.
- Gas trading and supply. As described in the Note 2 above, the natural gas producers in Ukraine, owned 50% and more by the State, should sell total volume of natural gas produced, net of natural gas used for technological purposes and other needs as stipulated by the law, to the households via the company.
- Other. Revenues of this segment include revenues from sales of materials and services.

The accounting policies of the reportable segments are the same as the group’s accounting policies described in Note 27.

Segment information for the reportable business segments of the group for the year ended 31 December 2016 is as follows:

<table>
<thead>
<tr>
<th>Segment Name</th>
<th>Sales – external</th>
<th>Sales to other segments</th>
<th>Capital expenditure</th>
<th>Remeasurement of previously held interest on transfer to subsidiary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas upstream</td>
<td>2,987</td>
<td>11,478</td>
<td>11,478</td>
<td>-</td>
<td>192,764</td>
</tr>
<tr>
<td>Oil and gas condensate upstream</td>
<td>75,159</td>
<td>61</td>
<td>3,428</td>
<td>15,770</td>
<td>85,060</td>
</tr>
<tr>
<td>Gas transmission and distribution</td>
<td>75,159</td>
<td>61</td>
<td>3,428</td>
<td>15,770</td>
<td>85,060</td>
</tr>
<tr>
<td>Gas storage</td>
<td>75,159</td>
<td>61</td>
<td>3,428</td>
<td>15,770</td>
<td>85,060</td>
</tr>
<tr>
<td>Crude oil transportation</td>
<td>15,810</td>
<td>99,772</td>
<td>99,772</td>
<td>-</td>
<td>99,772</td>
</tr>
<tr>
<td>Crude oil and gas condensate refinery and petroleum products trading</td>
<td>9,764</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Sales – external: 2,987 million Ukrainian hryvni
Sales to other segments: 11,478 million Ukrainian hryvni
Capital expenditure: 5,623 million Ukrainian hryvni
Remeasurement of previously held interest on transfer to subsidiary: 10,991 million Ukrainian hryvni
Segment information for the reportable business segments of the group for the year ended 31 December 2015 is as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Gas upstream</th>
<th>Oil and gas condensate</th>
<th>Oil and gas condensate downstream</th>
<th>Gas transmission and distribution</th>
<th>Crude oil and gas</th>
<th>Crude oil and gas downstream</th>
<th>Crude oil and gas trading and supply</th>
<th>Other</th>
<th>Elimination</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales – external</td>
<td>4 836</td>
<td>4 262</td>
<td>49 883</td>
<td>401</td>
<td>3 252</td>
<td>6 519</td>
<td>57 265</td>
<td>1 769</td>
<td></td>
<td>267</td>
</tr>
<tr>
<td>Sales to other segments</td>
<td>16 362</td>
<td></td>
<td>1 152</td>
<td>17</td>
<td>44</td>
<td>9 616</td>
<td>45 [27 348]</td>
<td>-</td>
<td></td>
<td>130</td>
</tr>
<tr>
<td>Total revenue</td>
<td>21 198</td>
<td>4 262</td>
<td>51 035</td>
<td>1 553</td>
<td>3 289</td>
<td>6 643</td>
<td>66 881</td>
<td>1 814</td>
<td>[27 348]</td>
<td>130</td>
</tr>
<tr>
<td>Segment result</td>
<td>2 218</td>
<td>(1 340)</td>
<td>21 200</td>
<td>1 636</td>
<td>2 067</td>
<td>(12 257)</td>
<td>(2 194) [607]</td>
<td>(31 453)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of after-tax results of associates and joint ventures</td>
<td>(627)</td>
<td></td>
<td>(1 430)</td>
<td>(3 271)</td>
<td>(3 781)</td>
<td>(19 856)</td>
<td>(19 856)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remeasurement of previously held interest on transfer to subsidiary</td>
<td>(1 430)</td>
<td></td>
<td>(3 271)</td>
<td>(3 781)</td>
<td>(19 856)</td>
<td>(19 856)</td>
<td>(19 856)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unallocated income/(expense), net</td>
<td>(3 781)</td>
<td></td>
<td>(19 856)</td>
<td>(19 856)</td>
<td>(19 856)</td>
<td>(19 856)</td>
<td>(19 856)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss before income tax</td>
<td>21 200</td>
<td>(1 340)</td>
<td>21 200</td>
<td>1 636</td>
<td>2 067</td>
<td>(12 257)</td>
<td>(2 194) [607]</td>
<td>(31 453)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Segment assets</td>
<td>77 112</td>
<td>17 355</td>
<td>289 244</td>
<td>180 935</td>
<td>17 918</td>
<td>8 200</td>
<td>38 747</td>
<td>13 670</td>
<td>1 548</td>
<td>643</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td>4 355</td>
<td></td>
<td>4 355</td>
<td>4 355</td>
<td>4 355</td>
<td>4 355</td>
<td>4 355</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>80 057</td>
<td>17 705</td>
<td>294 599</td>
<td>198 680</td>
<td>19 426</td>
<td>18 455</td>
<td>57 265</td>
<td>17 705</td>
<td>1 548</td>
<td>643</td>
</tr>
</tbody>
</table>

Geographical information

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukraine</td>
<td>128 909</td>
<td>86 507</td>
</tr>
<tr>
<td>The Russian Federation</td>
<td>63 522</td>
<td>43 533</td>
</tr>
<tr>
<td>Egypt</td>
<td>518</td>
<td>425</td>
</tr>
<tr>
<td>Europe</td>
<td>155</td>
<td>2</td>
</tr>
<tr>
<td>Total revenue and Compensation of price difference</td>
<td>192 764</td>
<td>130 267</td>
</tr>
</tbody>
</table>

Allocation of sales in the table above is made based on the country of residence of the group’s customers.

External customers concentration, exceeding 10% of total revenues

During the years ended 31 December 2016 and 2015, the only external customer with concentration of revenue exceeding 10% of total revenues was Gazprom. Amount of revenue from Gazprom related to gas transmission in 2016 amounted to UAH 59,986 million (2015: UAH 40,341 million).

Revenues, gross profit and receivables of the segment “Gas transmission and distribution” by main types of transportation services are as follows:

<table>
<thead>
<tr>
<th>31 December 2016</th>
<th>In millions of Ukrainian hryvnias</th>
<th>Revenue</th>
<th>Gross (loss)/profit</th>
<th>(Loss)/profit before income tax</th>
<th>Trade accounts receivable</th>
</tr>
</thead>
<tbody>
<tr>
<td>International transit</td>
<td>192 764</td>
<td>130 267</td>
<td>192 764</td>
<td>130 267</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>192 764</td>
<td>130 267</td>
<td>192 764</td>
<td>130 267</td>
<td></td>
</tr>
</tbody>
</table>

Revenues, gross (loss)/profit, profit/(loss) before tax and accounts receivable of gas trading and supply segment by main groups of customers are as follows:

<table>
<thead>
<tr>
<th>31 December 2016</th>
<th>In millions of Ukrainian hryvnias</th>
<th>Revenue</th>
<th>Gross profit</th>
<th>(Loss)/profit before income tax</th>
<th>Provision for impairment</th>
<th>Trade accounts receivable</th>
</tr>
</thead>
<tbody>
<tr>
<td>District heating companies for the needs of households</td>
<td>18 871</td>
<td>11 710</td>
<td>7 244</td>
<td>[1 310]</td>
<td>-</td>
<td>1 310</td>
</tr>
<tr>
<td>Regional gas distribution companies for resale to households</td>
<td>50 140</td>
<td>38 813</td>
<td>4 636</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>District heating companies for the needs of budget entities</td>
<td>2 255</td>
<td>1 375</td>
<td>1 497</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Odessa Port Plant</td>
<td>1 146</td>
<td>1 375</td>
<td>1 497</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total public service obligations performance [Note 2]</td>
<td>72 412</td>
<td>38 813</td>
<td>4 636</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>District heating companies for the needs of other customers</td>
<td>4 763</td>
<td>657</td>
<td>2 346</td>
<td>[1 310]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Regional gas distribution companies for resale to other customers</td>
<td>548</td>
<td>255</td>
<td>1 375</td>
<td>[1 310]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Industrial and other customers</td>
<td>5 137</td>
<td>2 375</td>
<td>1 375</td>
<td>[1 310]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total performance of gas trading at non-regulated prices for the needs of other customers</td>
<td>10 648</td>
<td>3 818</td>
<td>2 346</td>
<td>[1 310]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>83 060</td>
<td>42 631</td>
<td>2 346</td>
<td>[1 310]</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Main selling prices and tariffs for the group’s sales of natural gas are set out in Note 2.

5. 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 discussed in the Note 1, the group is ultimately controlled by the Government of Ukraine, and therefore, all state-controlled entities are considered as related parties under common control. Transactions with related parties are performed on terms that would not necessarily be available to unrelated parties.

Transactions with state-controlled entities. The group performs significant transactions with the entities controlled, jointly controlled or influenced by the Government of Ukraine. These entities include State Savings Bank of Ukraine, as at 31 December 2016 and 2015 equalled to UAH 20 million, including UAH 15 million of fixed service fees.

6. PROPERTY, PLANT AND EQUIPMENT

Movements in the carrying amount of property, plant and equipment were as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost of valuation</th>
<th>Accumulated depreciation and impairment</th>
<th>Net book value at 31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cost or valuation  165 426 30 668 68 827 46 147 120 754 317 5 958 6 999 445 076</td>
</tr>
<tr>
<td>Acquired through business combination</td>
<td>[833] - [293] [4 098] [5 522]</td>
<td>- [293] [4 098] [5 522]</td>
<td>- [293] [4 098] [5 522]</td>
</tr>
<tr>
<td>Revaluation</td>
<td>53 585</td>
<td>77 151</td>
<td>12 566</td>
</tr>
<tr>
<td>Disposals</td>
<td>[89] [13] [31] [95]</td>
<td>- [21] [119] [286]</td>
<td>- [21] [119] [286]</td>
</tr>
<tr>
<td>Depreciation charge</td>
<td>[5 498] [2 861] [8 776] [2 521] [304] [91] [532]</td>
<td>- [20 571]</td>
<td>- [20 571]</td>
</tr>
<tr>
<td>Impairment/reversal of impairment</td>
<td>179 568 462 1 815 6 999 445 076</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Net book value at 31 December 2015 (as restated, Note 3)

<table>
<thead>
<tr>
<th></th>
<th>Cost or valuation</th>
<th>Accumulated depreciation and impairment</th>
<th>Net book value at 31 December 2014 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of valuation</td>
<td>210 782 53 405 75 920 62 392 142 140 582 3 900 10 075 559 796</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquired through business combination</td>
<td>[833] - [293] [4 098] [5 522]</td>
<td>- [293] [4 098] [5 522]</td>
<td>- [293] [4 098] [5 522]</td>
</tr>
<tr>
<td>Revaluation</td>
<td>53 585</td>
<td>77 151</td>
<td>12 566</td>
</tr>
<tr>
<td>Disposals</td>
<td>[89] [13] [31] [95]</td>
<td>- [21] [119] [286]</td>
<td>- [21] [119] [286]</td>
</tr>
<tr>
<td>Depreciation charge</td>
<td>[5 498] [2 861] [8 776] [2 521] [304] [91] [532]</td>
<td>- [20 571]</td>
<td>- [20 571]</td>
</tr>
<tr>
<td>Impairment/reversal of impairment</td>
<td>179 568 462 1 815 6 999 445 076</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cost of valuation | 212 066 53 826 76 598 63 439 142 140 861 5 122 11 677 565 664 |
| Accumulated depreciation and impairment | [1 283] [420] [672] [1 047] | - [279] [1 224] [642] [5 868] |
| Disposals | [3] [13] [16] [68] | - [34] [1 247] [402] | - [34] [1 247] [402] |
| Depreciation charge | [7 137] [5 719] [7 104] [3 521] | - [295] [307] | - [295] [307] |
| Impairment/reversal of impairment | [20] [199] [1] [2 16] [1 856] [91] | - [783] [5 706] | - [783] [5 706] |
| Net book value at 31 December 2016 | 191 074 52 342 106 818 34 411 153 566 952 1 002 11 496 551 681 |

Cost of valuation | 199 270 59 300 116 533 59 194 155 422 1 447 2 724 13 117 587 007 |
| Accumulated depreciation and impairment | [8 196] [6 958] [9 775] [4 783] [1 856] [495] [1 722] [1 621] [35 546] | - [20 571] | - [20 571] |
The group engaged independent appraisers to determine the fair value of its property, plant and equipment as at 31 December 2015. Fair value was determined with reference to depreciated replacement cost or market‑based evidence, 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. Consequently, 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 industry experts and suppliers.

In 2016, the depreciation and depletion expenses of UAH 22,387 million (2015: UAH 19,739 million) was included in cost of sales, UAH 1,443 million (2015: UAH 975 million) in other operating expense, and UAH 631 million (2015: UAH 357 million) were capitalised in the cost of property, plant and equipment.

Reversal of impairment of property, plant and equipment is included in other operating income in consolidated statement of profit or loss.

As at 31 December 2016 and 2015, the group has pledged its property, plant and equipment with carrying amount of UAH 10,536 million and UAH 24,003 million, respectively, to secure its operating expense, and UAH 631 million (2015: UAH 357 million) in other financial expense, UAH 1,065 million (2015: UAH 475 million) in other operating expense and UAH 473 million (2015: UAH 473 million) in financial expenses.

More information about a associates and joint ventures of the group as at 31 December 2016 is as follows:

7. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

The group's investments in associates and joint ventures were as follows:

<table>
<thead>
<tr>
<th>Name of associate</th>
<th>Principal activity</th>
<th>Place of incorporation and principal place of business</th>
<th>Proportion of share of voting interest</th>
<th>Share of profit or (loss)/profit</th>
<th>Dividends received from the associate</th>
<th>Carrying amount of investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Ukrnafta&quot; PJSC</td>
<td>Oil refinery</td>
<td>Ukraine</td>
<td>45.0%</td>
<td>[240]</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>&quot;Gaztransit&quot; PJSC</td>
<td>Construction works</td>
<td>Ukraine</td>
<td>40.2%</td>
<td>93</td>
<td>-</td>
<td>1,022</td>
</tr>
<tr>
<td>Other</td>
<td>miscellaneous</td>
<td>miscellaneous</td>
<td>48%</td>
<td>-</td>
<td>2</td>
<td>306</td>
</tr>
</tbody>
</table>

Details of each of the Group's associates and joint ventures as at 31 December 2016 are as follows:

8. OTHER NON-CURRENT ASSETS

In millions of Ukrainian hryvnias:

<table>
<thead>
<tr>
<th>Name of associate</th>
<th>Principal activity</th>
<th>Place of incorporation and principal place of business</th>
<th>Proportion of share of voting interest</th>
<th>Share of profit or (loss)/profit</th>
<th>Dividends received from the associate</th>
<th>Carrying amount of investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Ukrnafta&quot; PJSC</td>
<td>Oil refinery</td>
<td>Ukraine</td>
<td>45.0%</td>
<td>[240]</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>&quot;Gaztransit&quot; PJSC</td>
<td>Construction works</td>
<td>Ukraine</td>
<td>40.2%</td>
<td>93</td>
<td>-</td>
<td>1,022</td>
</tr>
<tr>
<td></td>
<td>miscellaneous</td>
<td>miscellaneous</td>
<td>48%</td>
<td>-</td>
<td>2</td>
<td>306</td>
</tr>
</tbody>
</table>

Account receivable on product sharing agreement

Restructured accounts receivable of gas consumers...

Intangible assets

Other

Total

Accounts receivable on product sharing agreement

The Company entered into a concession agreement for oil 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 27]. 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.

Restructured accounts receivable of gas consumers. In May 2011, the Law of Ukraine "On certain matters on indebtedness for natural gas and electricity consumers" #1276-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 5% to 24% per annum.

Other. As at 31 December 2015, included in other non-current assets are gas volumes that will be pumped out from the underground gas storages during the period of more than one year. As at 31 December 2016 the group plans to pump this volume of gas out within next 12 months and classifies this gas as inventory.

As at 31 December 2016 and 2015, included in other non-current assets are research and development expenditures amounting to UAH 443 million and UAH 965 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 27].
9. INVENTORIES
The group’s inventories were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas</td>
<td>58,702</td>
<td>26,659</td>
</tr>
<tr>
<td>Crude oil and petroleum products</td>
<td>3,378</td>
<td>1,482</td>
</tr>
<tr>
<td>Spare parts</td>
<td>2,843</td>
<td>1,019</td>
</tr>
<tr>
<td>Technological oil</td>
<td>1,397</td>
<td>1,397</td>
</tr>
<tr>
<td>Raw materials</td>
<td>1,761</td>
<td>1,234</td>
</tr>
<tr>
<td>Other</td>
<td>1,406</td>
<td>1,519</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50,244</strong></td>
<td><strong>34,149</strong></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 2016, write-down adjustment amounted to UAH 1,655 million was included in cost of sales and UAH 38,792 million included in other operating expense (2015: UAH 4,922 million included in cost of sales and UAH 2,535 million included in other operating expense). Amount included in cost of sales represents write down adjustment to imported gas subsequently sold for household use. As at 31 December 2016 and 2015, inventories with carrying amount of UAH 77,698 million and UAH 23,104 million, respectively, were pledged as collateral for borrowings (Note 14).

10. TRADE ACCOUNTS RECEIVABLE

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade accounts receivable</td>
<td>86,438</td>
<td>53,761</td>
</tr>
<tr>
<td>Less: provision for impairment</td>
<td>(37,229)</td>
<td>(20,955)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49,209</strong></td>
<td><strong>32,806</strong></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>31 December 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1 January</td>
<td>20,553</td>
<td>19,003</td>
</tr>
<tr>
<td>Provision for impairment recognised during the year</td>
<td>18,487</td>
<td>5,043</td>
</tr>
<tr>
<td>Reversal of provision</td>
<td>(1,757)</td>
<td>(5,654)</td>
</tr>
<tr>
<td>Amounts written off during the year as uncollectible</td>
<td>(64)</td>
<td>(118)</td>
</tr>
<tr>
<td>Acquired in business combination (Note 23)</td>
<td>–</td>
<td>345</td>
</tr>
<tr>
<td><strong>Balance at 31 December</strong></td>
<td><strong>37,229</strong></td>
<td><strong>20,553</strong></td>
</tr>
</tbody>
</table>

11. 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 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepayments to suppliers for materials, works and services</td>
<td>9,984</td>
<td>8,618</td>
</tr>
<tr>
<td>Prepayments to suppliers for natural gas</td>
<td>5,731</td>
<td>3,131</td>
</tr>
<tr>
<td>VAT recoverable</td>
<td>2,424</td>
<td>2,743</td>
</tr>
<tr>
<td>Receivables under assignment agreements in respect of natural gas sales</td>
<td>1,690</td>
<td>1,787</td>
</tr>
<tr>
<td>Promissory notes receivable</td>
<td>1,471</td>
<td>1,690</td>
</tr>
<tr>
<td>Prepayments for pipelines construction</td>
<td>1,142</td>
<td>1,312</td>
</tr>
<tr>
<td>Amounts receivable under legal claims</td>
<td>609</td>
<td>624</td>
</tr>
<tr>
<td>Taxes prepaid, other than income tax</td>
<td>84</td>
<td>955</td>
</tr>
<tr>
<td>Other</td>
<td>3,937</td>
<td>1,733</td>
</tr>
<tr>
<td>Less: Provision for impairment (Note 23)</td>
<td>(15,169)</td>
<td>(11,514)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,051</strong></td>
<td><strong>9,176</strong></td>
</tr>
</tbody>
</table>

Movements in provision for impairment of prepayments made and other current assets were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1 January</td>
<td>11,514</td>
<td>8,116</td>
</tr>
<tr>
<td>Provision for impairment recognised during the year</td>
<td>6,097</td>
<td>1,512</td>
</tr>
<tr>
<td>Reversal of provision</td>
<td>(355)</td>
<td>(424)</td>
</tr>
<tr>
<td>Amounts written off during the year as uncollectible</td>
<td>(16)</td>
<td>(246)</td>
</tr>
<tr>
<td>Acquired in business combination (Note 23)</td>
<td>–</td>
<td>3,513</td>
</tr>
<tr>
<td><strong>Other movements</strong></td>
<td><strong>180</strong></td>
<td><strong>336</strong></td>
</tr>
<tr>
<td><strong>Balance at 31 December</strong></td>
<td><strong>15,169</strong></td>
<td><strong>11,514</strong></td>
</tr>
</tbody>
</table>

Other movements in provision for impairment of prepayments made and other current assets relate to difference in proportion of assets and profits consolidation related to joint ventures of one of the group’s subsidiaries, recognised in equity movement.

12. CASH AND BANK BALANCES

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash in banks</td>
<td>20,024</td>
<td>8,696</td>
</tr>
<tr>
<td>Term deposits</td>
<td>2,163</td>
<td>3,021</td>
</tr>
<tr>
<td>Other</td>
<td>149</td>
<td>74</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22,336</strong></td>
<td><strong>11,791</strong></td>
</tr>
</tbody>
</table>

As at 31 December 2016, included in term deposits are bank deposits amounting to UAH 483 million (31 December 2015: UAH 2,535 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.

13. SHARE CAPITAL
As at 31 December 2016 and 2015, the registered, issued and fully paid share capital of the Company was UAH 1,64,607 million, comprising 180,450,481 ordinary shares with a par value of UAH 1,000 per share.

As at 31 December 2016 and 2015, 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 4,156 million. During 2015 the Company has completed a new share issue, started in 2014, of UAH 190,410 million to the Government of Ukraine in return for the State treasury bonds with maturities in 2018-2019 with nominal coupon rates in a range of 12.5%-14.5% per annum.

Unregistered contributed capital
In 2015, according to the Resolutions of the Cabinet of Ministers of Ukraine, the Government issued UAH 29,700 million of the State treasury bonds in exchange to the new share issue of the Company. The State treasury bonds mature in 2020 and bear 14.5% coupon rate. As at 31 December 2015 the Company has sold these State treasury bonds for cash at price equal to face value or above.

As at 31 December 2016 and 2015, the Company obtained a temporary share issue registration certificate on these shares. As at 31 December 2016 and 2015 a new share issue was not registered and presented as unregistered contributed capital. Subsequent to 31 December 2015 the Company has registered a new share issue (Note 26).

Profit share payable to the State Budget of Ukraine
For the year ended 31 December 2016, the profit share paid to the State Budget of Ukraine amounted to UAH 1,021 million (2015: UAH 2,822 million).
The group’s borrowings were as follows:

<table>
<thead>
<tr>
<th>Pledges</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proceeds from future sales</td>
<td>UAH 143,865</td>
<td>UAH 122,918</td>
</tr>
<tr>
<td>Property, plant and equipment [Note 6]</td>
<td>UAH 10,556</td>
<td>UAH 24,003</td>
</tr>
<tr>
<td>Inventories [Note 9]</td>
<td>UAH 37,698</td>
<td>UAH 23,104</td>
</tr>
<tr>
<td>Total</td>
<td>UAH 192,199</td>
<td>UAH 170,025</td>
</tr>
</tbody>
</table>

Guarantees. As at 31 December 2016, the group’s borrowings were guaranteed by the State in the amount of UAH 28,912 million (31 December 2015: UAH 20,539 million).

The group’s borrowings were secured by the following pledges:

<table>
<thead>
<tr>
<th>Pledges</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank borrowings</td>
<td>UAH 16,544</td>
<td>UAH 12,017</td>
</tr>
<tr>
<td>Unamortised discount</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total current portion</td>
<td>UAH 47,764</td>
<td>UAH 36,939</td>
</tr>
<tr>
<td>Total</td>
<td>UAH 70,844</td>
<td>UAH 71,764</td>
</tr>
</tbody>
</table>

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 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAH</td>
<td>Bal-</td>
<td>% per annum</td>
</tr>
<tr>
<td>27,315</td>
<td>19%</td>
<td>24,407</td>
</tr>
<tr>
<td>US Dollars</td>
<td>45,316</td>
<td>8%</td>
</tr>
<tr>
<td>EUR</td>
<td>213</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>70,844</td>
<td>71,764</td>
</tr>
</tbody>
</table>

Distributions to the State Budget and dividends paid by the Group to UAH amounting to UAH 29 million, taking total amount of profit share to the State Budget of Ukraine “On Management of the State Property” have to make decisions in respect of their 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.

During 2015, one of the Group’s subsidiaries paid dividends amounting to UAH 29 million, taking total amount of profit share paid to the State Budget and dividends paid by the Group to UAH 2,851 million.

14. BORROWINGS

The group’s borrowings were as follows:

<table>
<thead>
<tr>
<th>Borrowings</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank borrowings</td>
<td>23,275</td>
<td>34,825</td>
</tr>
<tr>
<td>Unamortised discount</td>
<td>(115)</td>
<td>-</td>
</tr>
<tr>
<td>Total non-current portion</td>
<td>23,160</td>
<td>34,825</td>
</tr>
<tr>
<td>Current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank borrowings</td>
<td>47,099</td>
<td>56,200</td>
</tr>
<tr>
<td>Financial leasing</td>
<td>-</td>
<td>21</td>
</tr>
<tr>
<td>Interest accrued</td>
<td>645</td>
<td>718</td>
</tr>
<tr>
<td>Total current portion</td>
<td>47,764</td>
<td>36,939</td>
</tr>
<tr>
<td>Total</td>
<td>70,844</td>
<td>71,764</td>
</tr>
</tbody>
</table>

15. PROVISIONS

Movements in provisions for the years were as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Provisions for losses</th>
<th>Employee benefit obligations</th>
<th>Decommissioning obligations</th>
<th>Provisions for losses and gains</th>
<th>Provisions for the portion of net profit attributable to the State Budget of Ukraine (Note 13)</th>
<th>Other provisions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 31 December 2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3,377</td>
</tr>
<tr>
<td>(as restated, Note 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charge for the year</td>
<td>2,895</td>
<td>350</td>
<td>119</td>
<td>4,050</td>
<td></td>
<td></td>
<td>975</td>
</tr>
<tr>
<td>Assumed in business combination</td>
<td>1,270</td>
<td>676</td>
<td>820</td>
<td>3,028</td>
<td></td>
<td></td>
<td>5,794</td>
</tr>
<tr>
<td>Unwinding of discount [Note 19]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used or paid during the year</td>
<td>(158)</td>
<td>(176)</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td>(334)</td>
</tr>
<tr>
<td>Remeasurements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>559</td>
</tr>
<tr>
<td>Balance at 31 December 2015</td>
<td>5,180</td>
<td>3,616</td>
<td>1,423</td>
<td>7,078</td>
<td></td>
<td></td>
<td>18,270</td>
</tr>
<tr>
<td>(as restated, Note 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-current</td>
<td>5,062</td>
<td>3,034</td>
<td>1,371</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>2,158</td>
<td>5,022</td>
<td>112</td>
<td>7,078</td>
<td></td>
<td></td>
<td>7,587</td>
</tr>
<tr>
<td>Provision for dividends payable to the State Budget [Note 13]</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13,254</td>
<td>13,254</td>
<td></td>
</tr>
<tr>
<td>Charge for the year</td>
<td>6,728</td>
<td>1,111</td>
<td>109</td>
<td>4,099</td>
<td></td>
<td></td>
<td>12,068</td>
</tr>
<tr>
<td>Unwinding of discount [Note 19]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>513</td>
</tr>
<tr>
<td>Used or paid during the year</td>
<td>(64)</td>
<td>(770)</td>
<td>(11)</td>
<td>(23)</td>
<td></td>
<td></td>
<td>(873)</td>
</tr>
<tr>
<td>Remeasurements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>290</td>
</tr>
<tr>
<td>Balance at 31 December 2016</td>
<td>11,844</td>
<td>4,510</td>
<td>1,771</td>
<td>11,154</td>
<td>13,254</td>
<td>4983</td>
<td>43,532</td>
</tr>
<tr>
<td>Non-current</td>
<td>7,070</td>
<td>3,447</td>
<td>1,219</td>
<td>-</td>
<td>13,254</td>
<td>591</td>
<td>21,196</td>
</tr>
<tr>
<td>Current</td>
<td>4,774</td>
<td>1,063</td>
<td>520</td>
<td>11,154</td>
<td>13,254</td>
<td>3980</td>
<td>31,116</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 a negative (adverse) outcome of the court and arbitration procedures.

Employee Benefit Obligations

The group company has 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>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal discount rate, %</td>
<td>14.7‑14.9</td>
</tr>
<tr>
<td>Long-term inflation, %</td>
<td>77</td>
</tr>
<tr>
<td>Nominal salary increase rate, %</td>
<td>10.0‑30.0</td>
</tr>
<tr>
<td>Staff turnover ratio, %</td>
<td>15.7‑17.3</td>
</tr>
</tbody>
</table>

The sensitivity of the non-current employee benefit obligations, as it is unlikely that the change in assumptions would occur in isolation of 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.

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.

Provision for fines and penalties

As a result of non-payment and late payment by "Ukrnafta" PJSC of subsoil royalty, income tax, VAT and dividends, the Group had accrued provision for possible fines, penalties and late payment interest.

16. 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 2016</th>
<th>31 December 2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advances from customers for natural gas</td>
<td>1,130</td>
<td>1,427</td>
</tr>
<tr>
<td>Advances for natural gas transportation</td>
<td>316</td>
<td>166</td>
</tr>
<tr>
<td>Advances for oil transportation</td>
<td>305</td>
<td>265</td>
</tr>
<tr>
<td>Advances for geophysical surveys</td>
<td>240</td>
<td>375</td>
</tr>
<tr>
<td>Advances for petroleum products</td>
<td>215</td>
<td>216</td>
</tr>
<tr>
<td>Other advances received</td>
<td>182</td>
<td>370</td>
</tr>
<tr>
<td>Total advances received</td>
<td>2,326</td>
<td>2,764</td>
</tr>
<tr>
<td>Taxes payable other than income tax</td>
<td>12,768</td>
<td>8,838</td>
</tr>
<tr>
<td>VAT payable</td>
<td>6,195</td>
<td>3,059</td>
</tr>
<tr>
<td>Dividends payable to non-controlling shareholders of &quot;Ukrnafta&quot; PJSC</td>
<td>2,781</td>
<td>2,805</td>
</tr>
<tr>
<td>Liabilities for purchase of property, plant and equipment</td>
<td>1,053</td>
<td>1,025</td>
</tr>
<tr>
<td>Recognised liabilities for litigations</td>
<td>482</td>
<td>469</td>
</tr>
<tr>
<td>Wages, salaries and related social charges payable</td>
<td>343</td>
<td>403</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>1,593</td>
<td>1,598</td>
</tr>
<tr>
<td>Total other current liabilities</td>
<td>26,052</td>
<td>18,197</td>
</tr>
<tr>
<td>Total</td>
<td>28,328</td>
<td>20,961</td>
</tr>
</tbody>
</table>

As at 31 December 2016, taxes payable other than income tax include UAH 13,450 million of subsoil royalty payable (31 December 2015: UAH 8,230 million). Subsoil royalty is calculated with reference to the volume of crude oil, gas condensate or natural gas produced, and volume of crude oil and natural gas transportation.

17. COST OF SALES

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsoil royalty and other taxes other than income</td>
<td>34,873</td>
<td>23,715</td>
</tr>
<tr>
<td>Cost of gas supplied</td>
<td>30,880</td>
<td>65,919</td>
</tr>
<tr>
<td>Depreciation, depletion and amortisation</td>
<td>22,387</td>
<td>19,739</td>
</tr>
<tr>
<td>Non-reimbursable VAT on gas transport</td>
<td>11,998</td>
<td>-</td>
</tr>
<tr>
<td>Cost of purchased oil and petroleum products</td>
<td>6,877</td>
<td>1,864</td>
</tr>
<tr>
<td>Staff costs and related social charges</td>
<td>6,332</td>
<td>4,404</td>
</tr>
<tr>
<td>Repair and maintenance costs</td>
<td>276</td>
<td>1,219</td>
</tr>
<tr>
<td>Other</td>
<td>8,181</td>
<td>4,930</td>
</tr>
<tr>
<td>Total</td>
<td>121,804</td>
<td>121,810</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 and natural gas transportation. Starting from 1 January 2016 VAT is levied on gas transport via Ukraine according to the Tax Code of Ukraine. Thus, gas transport services via transmission pipelines of Ukraine in customs regime provided to JSC "Eaiprom" are subject to VAT at standard rate of 20%. Additionally, there were amendments to the paragraph 256 of the Tax Code of Ukraine stating that starting from 1 January 2016 rent tax for gas transport is not applied. Included in cost of sales for 2016 are expenses of UAH 745 million, for which their nature could be different from their legal form according to primary documents (Note 27). In respect of certain expenses primary documents were withdrawn by the state prosecutor officials. In respect of certain expenses management of the group has initiated a corporate investigation in 2016.

18. OTHER OPERATING EXPENSES

Net movement in provision for trade accounts receivable, prepayments made and other current assets and direct write-offs

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in provisions for litigations and other provisions (Note 15)</td>
<td>10,957</td>
<td>8,037</td>
</tr>
<tr>
<td>Staff costs and related social charges</td>
<td>3,861</td>
<td>1,940</td>
</tr>
<tr>
<td>Impairment of property, plant and equipment</td>
<td>1,231</td>
<td>-</td>
</tr>
<tr>
<td>Depreciation and amortisation</td>
<td>1,085</td>
<td>475</td>
</tr>
<tr>
<td>Professional fees</td>
<td>618</td>
<td>377</td>
</tr>
<tr>
<td>Loss on disposal of property, plant and equipment</td>
<td>416</td>
<td>304</td>
</tr>
<tr>
<td>Fines and penalties</td>
<td>354</td>
<td>818</td>
</tr>
<tr>
<td>VAT liabilities written off</td>
<td>279</td>
<td>193</td>
</tr>
<tr>
<td>Research, development and exploration costs</td>
<td>250</td>
<td>239</td>
</tr>
<tr>
<td>Write down on inventories to net realisable value</td>
<td>58</td>
<td>1,050</td>
</tr>
<tr>
<td>Losses incurred on occupied territories (Note 2)</td>
<td>-</td>
<td>2,142</td>
</tr>
<tr>
<td>Other</td>
<td>2,102</td>
<td>1,591</td>
</tr>
<tr>
<td>Total</td>
<td>41,752</td>
<td>18,341</td>
</tr>
</tbody>
</table>

During 2016, the group recognised losses incurred on occupied territories, including write down on inventories of UAH 1,629 million, VAT written off of UAH 635 million, and reversal of provision for trade accounts receivable, prepayments made and other current assets of UAH 122 million.

Both losses incurred on occupied territories in Crimea, Luhansk and Donetsk regions were recognised by the group as a result of the armed aggression of the Russian Federation including the occupation of Crimea and military invasion and occupation of Luhansk and Donetsk regions in early 2014 (Note 2).

In 2015 there were services on oil storage purchased by "Ukrtransnafta" PJSC in amount of UAH 222 million included in other operating expenses. Management of the Group believes that these costs are overstated as a result of subsidiary’s management override of controls. Subsidiary’s management was replaced in the first half of 2016 (Note 27).

19. FINANCE COSTS

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest expense on bank borrowings</td>
<td>8,834</td>
<td>9,245</td>
</tr>
<tr>
<td>Unwinding of discount on employee benefit obligations</td>
<td>225</td>
<td>1,053</td>
</tr>
<tr>
<td>Interest expense on restricted tax liabilities</td>
<td>370</td>
<td>253</td>
</tr>
<tr>
<td>Unwinding of discount on decommissioning provision</td>
<td>134</td>
<td>54</td>
</tr>
<tr>
<td>Unwinding of discount on long-term accounts payable</td>
<td>102</td>
<td>-</td>
</tr>
<tr>
<td>Loss on origination of accounts receivable, prepayments for financial instruments and non-interest bearing borrowings</td>
<td>78</td>
<td>883</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>9,581</td>
<td>11,521</td>
</tr>
</tbody>
</table>

20. FINANCE INCOME

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unwinding of discount on long-term accounts receivable, prepayments for financial instruments</td>
<td>5,087</td>
<td>1,060</td>
</tr>
<tr>
<td>Interest income on cash in banks and term deposits</td>
<td>1,182</td>
<td>460</td>
</tr>
<tr>
<td>Other</td>
<td>423</td>
<td>284</td>
</tr>
<tr>
<td>Total</td>
<td>4,672</td>
<td>1,804</td>
</tr>
</tbody>
</table>

During the year ended 31 December 2016, one of the group’s subsidiaries has earlier repaid a loan at a discount of UAH 252 million, included in other finance income.

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>2016</th>
<th>2015 (as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current tax expense</td>
<td>8,042</td>
<td>2,964</td>
</tr>
<tr>
<td>Deferred tax benefit</td>
<td>[9,557]</td>
<td>[4,683]</td>
</tr>
<tr>
<td>Income tax benefit</td>
<td>1,495</td>
<td>(1,719)</td>
</tr>
</tbody>
</table>

The group is subject to taxation in Ukraine. In 2016 and 2015 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>Reconciliation between the expected and the actual taxation charge</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>In millions of Ukrainian hryvnias</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>80 285</td>
<td>87 621</td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>120 1 969</td>
<td>- 1 769</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>518</td>
<td>-</td>
</tr>
<tr>
<td>Provisions</td>
<td>2 454 1 755</td>
<td>31 5 640</td>
</tr>
<tr>
<td>Inventories</td>
<td>2 346 (274)</td>
<td>- 2 072</td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>48 1 140</td>
<td>- 1 052</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>25 24</td>
<td>- [1]</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>[1] 2</td>
<td>-</td>
</tr>
<tr>
<td>Unused tax losses</td>
<td>330 2 633</td>
<td>- 2 963</td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td>[83 677] [9 537]</td>
<td>(1 533) [75 673]</td>
</tr>
</tbody>
</table>

In 2015, amendments to the Tax Code of Ukraine (the "Code") came into effect regarding the determination of a corporate income tax payor. In accordance with those amendments, the taxable item shall be determined based on the before tax financial result in accordance with the accounting framework accepted by the entity (for the Company, "IFRS") adjusted by the Code defined list of adjustments. The new version of the Code does not contain a full list of temporary differences available in the Group’s companies before those amendments came into force. Thus, certain temporary differences were reversed.

Parent and its subsidiaries are separate tax payers and, therefore, the 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>Reconciliation between the expected and the actual taxation charge</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deferred tax assets</strong></td>
<td>6 475</td>
<td>-</td>
</tr>
<tr>
<td><strong>Deferred tax liabilities</strong></td>
<td>[82 088] (83 677)</td>
<td>(83 677)</td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td>[75 673] (83 677)</td>
<td></td>
</tr>
</tbody>
</table>

Net deferred tax liabilities as at 31 December 2016 related to the following:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>80 285</td>
<td>87 621</td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>120</td>
<td>1 969</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>518</td>
<td>-</td>
</tr>
<tr>
<td>Provisions</td>
<td>2 454</td>
<td>1 755</td>
</tr>
<tr>
<td>Inventories</td>
<td>2 346 (274)</td>
<td>- 2 072</td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>48 1 140</td>
<td>- 1 052</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>25 24</td>
<td>- [1]</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>[1] 2</td>
<td>-</td>
</tr>
<tr>
<td>Unused tax losses</td>
<td>330</td>
<td>2 633</td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td>[83 677] [9 537]</td>
<td>(1 533) [75 673]</td>
</tr>
</tbody>
</table>

Net deferred tax liability as at 31 December 2015 related to the following:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment</td>
<td>70 575</td>
<td>3 662</td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>2 935</td>
<td>2 815</td>
</tr>
<tr>
<td>Investments in associates and joint ventures</td>
<td>433</td>
<td>467</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>423</td>
<td>(25)</td>
</tr>
<tr>
<td>Provisions</td>
<td>545</td>
<td>2 121</td>
</tr>
<tr>
<td>Inventories</td>
<td>299</td>
<td>2 047</td>
</tr>
<tr>
<td>Prepayments made and other current assets</td>
<td>75</td>
<td>(125)</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>5 (5)</td>
<td>- (25)</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>4 (5)</td>
<td>- (1)</td>
</tr>
<tr>
<td>Unused tax losses</td>
<td>- 330</td>
<td>- 330</td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td>[66 964] [4 683]</td>
<td>[20 857] [539]</td>
</tr>
</tbody>
</table>

As at 31 December 2016 and 2015, unreconciled deductible temporary differences and unused tax losses are as follows:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax losses carried forward</td>
<td>11 723</td>
<td>58 313</td>
</tr>
<tr>
<td>Provisions</td>
<td>8 645</td>
<td>2 753</td>
</tr>
<tr>
<td>Inventories</td>
<td>11 145</td>
<td>181</td>
</tr>
<tr>
<td>Trade accounts receivable</td>
<td>- 1 857</td>
<td></td>
</tr>
<tr>
<td>Trade accounts receivable, prepayments made and other current assets</td>
<td>- 1 542</td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>- 57</td>
<td></td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>- 635</td>
<td></td>
</tr>
<tr>
<td><strong>Net deferred tax liability</strong></td>
<td>31 513</td>
<td>65 408</td>
</tr>
</tbody>
</table>

According to provisions of the Tax Code of Ukraine tax losses accumulated by the group as at 31 December 2016 and 2015 can be carried forward for unlimited periods of time.

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. Facing current economic and political issues, the Government has implemented certain reforms in the tax system of Ukraine by adopting the Law of Ukraine “On Amending the Tax Code of Ukraine and Certain Laws of Ukraine” which is effective from 1 January 2016, except for certain provisions which will take effect at a later date.

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 outcome as possible, the group makes a disclosure of these contingent liabilities. As at 31 December 2016, management estimated possible tax expenses in total amount of UAH 6,550 million, including different taxes exposure of UAH 5,102 million and related penalties of UAH 4,488 million (2015: UAH 6,043 million and UAH 5,086 million, respectively).

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 amount of provision in this respect.

The group conducts transactions with its subsidiaries. It is possible with evolvement of the interpretation of tax law in Ukraine and changes in the approach of tax authorities under the Tax Code that such transactions could be challenged in the future. The impact of any such challenge cannot be estimated, however, management believes that it should not be significant.

The group exports refinery products and transportation services, performs intercompany transactions and is involved in transactions with related parties, which may potentially be in the scope of the new Ukrainian transfer pricing (“TP”) regulations. The group’s companies have submitted the controlled transaction report for the year ended 31 December 2015 within the required deadline. The report on controlled transactions for the year ended 31 December 2016 shall be prepared by the group’s companies by 10 October 2017.

Management believes that the group is in compliance with TP requirements. As the practice of implementation of the new transfer pricing rules has not yet developed and wording of some clauses of the rules may be subject to various interpretations, the impact of challenge of the group's companies transfer pricing positions by the tax authorities cannot be reliably estimated.
Arbitral Tribunal requests, Naftogaz and JSC “Gazprom” have initiated the Gas Sales Arbitration and the Gas Transit Arbitration [“the Arbitrations”] under the auspices of the Arbitration Institute of the Stockholm Chamber of Commerce. The Gas Sales Arbitration was not initiated by both Naftogaz and JSC “Gazprom” in June 2014. Its Request for Arbitration, Gazprom claimed payment of unpaid invoices in an amount of approximately USD 4.5 billion for gas delivered under the Gas Sales Contract from November 2010 to May 2014, while Naftogaz claimed a sum of approximately EUR 3.9 billion associated with the Gas Transit Contract, resulting in a claim for payment by Gazprom to Naftogaz of more than USD 12 billion as compensation for previous overpayments. Gazprom has subsequently updated its payment claims, which at the date of these consolidated financial statements stands at approximately USD 2.8 billion including interest (USD 2.2 billion excluding interest).

In addition, 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 “take or pay” claim), which at the date of these consolidated financial statements stands at approximately USD 42.9 billion including interest (USD 54.5 billion excluding interest). Naftogaz has subsequently updated its claim for overpayments to approximately around USD 17.9 billion including interest (approximately USD 15.7 billion excluding interest).

Naftogaz initiated the Gas Transit Arbitration on 15 October 2010, in its Statement of Claim, Naftogaz claimed a revision of the transit tariff with retroactive effect, compensation for underdeliveries and other adjustments of the Gas Transit Contract. Naftogaz’s monetary claim was approximately USD 5.6 billion at 31 December 2016, which increased to approximately USD 10.6 billion excluding interest. Gazprom has submitted a counterclaim in an amount of approximately USD 5.5 million excluding interest, but has reserved the right to make additional counterclaims after receiving the responses of Naftogaz.

Both the Gas Sales Arbitration and the Gas Transit Arbitration were initiated by Naftogaz following unsuccessful efforts to reach agreement with Gazprom in negotiations. The monetary claims in the Arbitrations are being updated on a continuous basis until the awards, interim or final, are made.

Naftogaz’s main objectives in both Arbitrations are to (i) revise and interpret both contracts in line with European standards and requirements for gas sales and gas transit agreements; (ii) achieve competitive pricing for the gas purchased from Gazprom; and (iii) achieve a cost-reflective tariff for the transit of Russian gas through Ukrainian territory. Naftogaz is seeking approximately USD 5.3 billion excluding interest. Naftogaz has subsequently updated its claim for approximately USD 7.3 billion including interest (approximately USD 11.0 billion excluding interest).

In June 2015, the non-controlling shareholders of Ukrnafta started an action before the London Court of International Arbitration claiming with retroactive effect, compensation for underdeliveries and other damages. The disputing parties have engaged independent appraisers. Fair values of all assets and liabilities at date of acquisition were determined by independent appraisers.

Ukrnafta’s management actions in improving its liquidity, production and sales activities, management of the group believes that application of the going concern assumption in respect of Ukrnafta 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 certain shares of joint-stock companies to the share capital of Ukrnafta and a shareholding company. These joint-stock companies includes JSC “Ukrtransnafta” (long-distance pipeline) and JSC “Pridniprovska”-Long-Distance Pipeline that were reorganised in 2001 into JSC “Ukrtransnafta”, JSC “Ukrnafta”, JSC “Ukrnafta” and fifty-four regional gas distribution entities.

The Government of Ukraine may transfer ownership or control over all or part of the company’s equity interest in those joint-stock companies and/or other state-owned oil and gas transportation and storage facilities to other companies or Government agencies, and those actions could have a material adverse effect to the company’s operations.

State property not subject to privatisation. In 1998, the company entered into an agreement “On the use of the State owned property not subject to privatisation” (“Agreement”) with the State Property Fund of Ukraine, which property included, among other, setting the procedure of electing the chairman of the board, the executive board, the supervisory board members, and quorum for their meetings. Under the shareholders agreement the chairman of the board is to be elected from among the candidates nominated by the non-controlling shareholders, 6 of 11 members of the supervisory boards, members including, among other, setting the procedure of electing the chairman of the board, the executive board, the supervisory board members and quorum for their meetings. The supervisory board meetings are deemed to be quorate if 8 of 11 members are present. This was actually allowed by the Law of Ukraine “On Joint-Stock Companies” effective before March 2015. However, as a result of subsequent amendments to the Law in March 2015, the quorum for the supervisory boards was lowered to the simple majority of votes.

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 UK law. In June 2015, the non-controlling shareholders of Ukrnafta took legal action before the London Court of International Arbitration claiming (1) to acknowledge the shareholders agreement valid and enforceable and (2) to obligate Naftogaz to stick to the provisions of the shareholders agreement even in those instances where the provisions of the shareholders agreement substantially reduce the right of Naftogaz as a majority shareholder in comparison with the scope of rights provided by the Law for the shareholders.

Uniquely as to the ability of "Ukrnafta" PSC to continue as a going concern, following recent decline in oil prices, accumulated debt to the State budget since 20% of UAH 24.09 billion as at 31 December 2016 (UAH 11.47 million), limited ability to collect accounts receivable and settle prepayments made to suppliers with gross amount of UAH 22.0 billion as at 31 December 2016 (UAH 17.04 million), Ukrnafta had insufficient funds to satisfy its working capital needs and settle its tax payments as they fall due. Consequently, as at 31 December 2016 and 2015, Ukrnafta had a negative working capital and incurred net loss for the year then ended.

In 2016 the State Fiscal Authority of Ukraine initiated the suspension of certain oil and gas producing licenses and arrested Ukraïnak’s assests as a lien against overdue obligations of Ukraïnak in respect of subsidial royalties and other taxes. These events limit Ukraïnak in its actions regarding sales of assets, however, do not affect its ability to continue its operating activities. In March 2016 Ukraïnak announced its intention to commence a pre-court financial rehabilitation to legally restrict ability of past due creditors in payment enforcement. Financial rehabilitation plan, among other, assumes a six-month period for Ukraïnak and its creditors, including the State Fiscal Authority of Ukraine as a primary creditor, to agree the restructuring of its obligations. The commencement of the financial rehabilitation plan is dependent on pre-approval by the Ukraïnak’s General Shareholders’ Meeting, Creditors Committee and respective court decision. None of the abovementioned approvals were obtained as of the date of these consolidated financial statements.

Despite the material uncertainties described above, and taking into account Ukraïnak’s management actions in improving its liquidity, production and sales activities, management of the group believes that application of the going concern assumption in respect of Ukraïnak is appropriate for the purpose of these consolidated financial statements.

In March 2015, according to changes in the Law of Ukraine “On Joint-Stock Companies”, quorum of the General meetings of shareholders was lowered from 66.67% share down to 50%+1 share. Following these changes, new Supervisory Board of “Ukrnafta” PSC was appointed on 22 July 2015. Starting from that date the company has a unilateral ability to conduct legitimate General Meetings of Shareholders at “Ukrnafta” PSC.

In 2015, according to changes in the Law of Ukraine “On Joint-Stock Companies”, the supervision of shareholders was lowered from 66.67% share down to 50%+1 share. Following these changes, the Supervisory Board of “Ukrnafta” PSC was appointed on 22 July 2015. Starting from that date the company has a unilateral ability to conduct legitimate General Meetings of Shareholders at “Ukrnafta” PSC.

Following such changes, management of the company believes that control over “Ukrnafta” PSC was regained. Accordingly, the investment in “Ukrnafta” PSC was transferred from investment in associates to investments in subsidiaries starting from that date (Note 28). As a result of the changes, the company reclassified its interest to fair value settlement of acquisition, UAH 1490 million loss was recognised in the consolidated statement of profit or loss (Note 7), and previously recognised share in other comprehensive income amounting to UAH 115 million was transferred to accumulated deficit in the statement of changes in equity.

The following table summarises the fair values of the net assets acquired at the date of acquiring control. Fair values of property, plant and equipment at 30 June 2015 were determined by independent appraisers. Fair values of all assets and liabilities at date of acquisition were determined by management.

In millions of Ukrainian hryvnias

<table>
<thead>
<tr>
<th>Description</th>
<th>As at 22 July 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant and equipment (Note 6)</td>
<td>15,115</td>
</tr>
<tr>
<td>Investments in joint ventures (Note 7)</td>
<td>127</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>5,756</td>
</tr>
<tr>
<td>Inventories</td>
<td>2,158</td>
</tr>
<tr>
<td>Trade accounts receivable (net of provision for impairment of UAH 366 million and unamortised discount of UAH 246 million)</td>
<td>6,423</td>
</tr>
<tr>
<td>Prepayments made and other current assets (net of provision for impairment of UAH 535 million)</td>
<td>5,749</td>
</tr>
<tr>
<td>Cash and bank balances</td>
<td>154</td>
</tr>
<tr>
<td>Provisions (Note 15)</td>
<td>(5,794)</td>
</tr>
<tr>
<td>Deferred taxes (Note 21)</td>
<td>(1,660)</td>
</tr>
<tr>
<td>Trade accounts payable</td>
<td>(1,022)</td>
</tr>
<tr>
<td>Advances received and other current liabilities</td>
<td>(12,781)</td>
</tr>
<tr>
<td>Corporate income tax payable</td>
<td>(918)</td>
</tr>
<tr>
<td>Fair value of 10% of net assets acquired</td>
<td>12,053</td>
</tr>
<tr>
<td>50%-1 share non-controlling interest</td>
<td>(1,727)</td>
</tr>
</tbody>
</table>
Market risk. The group takes on exposure to market risks. Market risks arise from open positions in (a) foreign currencies, (b) interest bearing assets and liabilities and (c) equity investments, all of which are exposed to general and specific market movements.

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:

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restricted cash</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>(88)</td>
<td>(88)</td>
<td>(88)</td>
</tr>
<tr>
<td><strong>Cash and bank balances</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>14,938</td>
<td>2,442</td>
<td>520</td>
</tr>
<tr>
<td><strong>Trade accounts receivable</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>6,942</td>
<td>(6,942)</td>
<td>(6,942)</td>
</tr>
<tr>
<td><strong>Prepayments made and other current assets</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>98</td>
<td>(98)</td>
<td>(98)</td>
</tr>
<tr>
<td><strong>Borrowings</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>(42,591)</td>
<td>(42,591)</td>
<td>(42,591)</td>
</tr>
<tr>
<td><strong>Trade accounts payable</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>(12,602)</td>
<td>(12,602)</td>
<td>(12,602)</td>
</tr>
<tr>
<td><strong>Advances received and other current liabilities</strong></td>
<td>USD</td>
<td>EUR</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>(46)</td>
</tr>
</tbody>
</table>

The following table presents sensitivities of profit or loss and equity to reasonably possible changes in exchange rates applied at the reporting date, with all other variables held constant.

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>At 31 December 2016</th>
<th>At 31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USD strengthening by 10%</strong></td>
<td>3,400</td>
<td>3,400</td>
</tr>
<tr>
<td><strong>USD weakening by 10%</strong></td>
<td>4,957</td>
<td>4,957</td>
</tr>
</tbody>
</table>

Interest rate risk. The Group normally has no significant interest bearing assets, and its income and operating cash flows are substantially independent of changes in market interest rate. The group's interest rate risk exposure arises from borrowings at variable interest rates. Borrowings at fixed rate expose the Group to fair value interest rate risk.

The group predominantly attracts borrowings at fixed rates. The borrowing activities are reviewed on an annual basis. Long-term investing activities and associated funding are considered separately, and are subject to the Government of Ukraine approval.

Concentration risk. The group is exposed to concentration risk on revenues from natural gas transportation, and trade accounts payable as 75% of trade accounts payable as at 31 December 2016 (31 December 2015: 54%) comprise trade payables to a single supplier. Concentration on revenues from natural gas transportation is disclosed in Note 4.

Credit risk. The group takes on exposure 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 irrespective whether they are deficient or not.

The group establishes a provision for impairment that represents its estimate of incurred losses in respect of trade accounts receivable. The main component of this provision is a specific loss component that relates to individually significant exposures. The maximum exposure to credit risk as at 31 December 2016 is UAH 82,077 million (31 December 2015: UAH 52,422 million).

The group does not hold any collateral as security.

### Financial Statements

#### Note 31 December 2015

**Net current liabilities**

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2015</th>
<th>(as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other non-current assets</strong></td>
<td>5,832</td>
<td>5,832</td>
</tr>
<tr>
<td><strong>Trade accounts receivable</strong></td>
<td>49,209</td>
<td>53,208</td>
</tr>
<tr>
<td><strong>Prepayments made and other current assets</strong></td>
<td>11,450</td>
<td>12,226</td>
</tr>
<tr>
<td><strong>Cash and bank balances</strong></td>
<td>11,731</td>
<td>11,731</td>
</tr>
<tr>
<td><strong>Restricted cash</strong></td>
<td>680</td>
<td>680</td>
</tr>
<tr>
<td><strong>Total financial assets</strong></td>
<td>82,207</td>
<td>52,034</td>
</tr>
</tbody>
</table>

**Total financial liabilities**

<table>
<thead>
<tr>
<th>In millions of Ukrainian hryvnias</th>
<th>Note 3</th>
<th>31 December 2015</th>
<th>(as restated, Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Borrowings</strong></td>
<td>14</td>
<td>(70,844)</td>
<td>(70,794)</td>
</tr>
<tr>
<td><strong>Trade accounts payable</strong></td>
<td>(16,234)</td>
<td>(19,112)</td>
<td></td>
</tr>
<tr>
<td><strong>Advances received and other current liabilities</strong></td>
<td>15</td>
<td>[2,777]</td>
<td>[2,913]</td>
</tr>
<tr>
<td><strong>Other long-term liabilities</strong></td>
<td>4</td>
<td>[4]</td>
<td>[4]</td>
</tr>
<tr>
<td><strong>Total financial liabilities</strong></td>
<td>(69,859)</td>
<td>[93,777]</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis of financial assets and liabilities

- **Receivables**
  - Trade receivables
  - Advances and other receivables
  - Total receivables

- **Payables**
  - Trade payables
  - Advances and other payables
  - Total payables

- **Net current assets**
  - Trade receivables
  - Trade payables
  - Net current assets

- **Net current liabilities**
  - Other non-current assets
  - Trade accounts receivable
  - Prepayments made and other current assets
  - Cash and bank balances
  - Restricted cash
  - Net current liabilities

- **Equity**
  - Contributed capital
  - Reserve capital
  - Retained earnings
  - Other reserves
  - Total equity

- **Fixed assets**
  - Property, plant and equipment
  - Intangible assets
  - Long-term investments
  - Fixed assets

- **Intangible assets**
  - Goodwill
  - Other intangible assets
  - Intangible assets

- **Investments**
  - Debt instruments
  - Equity instruments
  - Investments

- **Financial guarantees**
  - Financial guarantees

- **Financial liabilities**
  - Borrowings
  - Trade accounts payable
  - Advances and other payables
  - Total financial liabilities

---

**Note:**

- The financial statements are presented in Ukrainian hryvnias (UAH).
- All amounts are rounded to the nearest million Ukrainian hryvnias (UAH).
- The statements include the results of the current year and the comparative figures for the previous year.
- The statements are prepared in accordance with International Financial Reporting Standards (IFRS).
- The statements include the effect of adopting new standards and interpretations issued by the International Accounting Standards Board (IASB) and the International Amirance Standards Board (IASB).
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 borrowing (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.

The gearing ratio at the end of the reporting period was as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>In millions of Ukrainian hryvnias</th>
<th>31 December 2016 (as restated, Note 3)</th>
<th>31 December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total borrowings (Note 14)</td>
<td>70,844 (21,815)</td>
<td>71,784 (9,256)</td>
<td></td>
</tr>
<tr>
<td>Less: cash and cash equivalents (Note 12)</td>
<td>48,991</td>
<td>62,508</td>
<td></td>
</tr>
<tr>
<td>Total Net Debt</td>
<td>460,272</td>
<td>443,762</td>
<td></td>
</tr>
</tbody>
</table>

Details of the group's property, plant and equipment and information about the fair value hierarchy as at 31 December 2015 are as follows:

<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>Gas transmission system and gas storages</td>
<td>Pipelines and related equipment</td>
<td>Depreciated replacement cost method using the income approach for economic obsolescence determination</td>
<td>Date of implementation of incentive tariff regulation system</td>
<td>Regulatory Asset Base (RAB) start in 2015 for transportation and 2018 for storage</td>
<td>The later the implementation of new tariff system, the lower the fair value</td>
</tr>
<tr>
<td></td>
<td>Buildings</td>
<td></td>
<td>Rates of return on Regulatory Asset Base</td>
<td></td>
<td>The higher the rate, the higher the fair value</td>
</tr>
<tr>
<td></td>
<td>Machinery and equipment</td>
<td></td>
<td>Nominal WACC for USD-denominated cash flow</td>
<td>10.59%</td>
<td>The higher the WACC, the lower the fair value</td>
</tr>
<tr>
<td></td>
<td>Other fixed assets</td>
<td></td>
<td></td>
<td>0-50</td>
<td>The lower the period, the lower the fair value because of lower remaining useful life of infrastructure assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas extraction assets</td>
<td>Pipelines and related equipment</td>
<td>Depreciated replacement cost method using the income approach for economic obsolescence determination</td>
<td>The remaining period of the deposit extraction, years (based on proven and probable reserves determined by independent expert)</td>
<td>Gas sale price</td>
<td>The higher the gas sale price, the higher the fair value</td>
</tr>
<tr>
<td></td>
<td>Oil and gas producing properties</td>
<td></td>
<td></td>
<td>Market price for the period from 2016 till the first quarter of 2017 is formed based on forecast gas price on German hub NCG less transportation costs to Ukrainian western border. Market price for further periods is formed based on forecast gas price on German hub NCG less transportation costs to Ukrainian border</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buildings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machinery and equipment</td>
<td></td>
<td></td>
<td>Subsoil royalty rate long-term projection</td>
<td>The higher the tax rate, the lower the fair value</td>
</tr>
<tr>
<td></td>
<td>Other fixed assets</td>
<td></td>
<td></td>
<td>Nominal WACC for UAH-denominated cash flow</td>
<td>The higher the WACC, the lower the fair value</td>
</tr>
<tr>
<td>Oil transmission system and storages</td>
<td>Pipelines and related equipment</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>Nominal WACC for UAH-denominated cash flow</td>
<td>The higher the factor, the lower the fair value</td>
</tr>
<tr>
<td></td>
<td>Building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machinery and equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other fixed assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fair value of the group's financial assets and financial liabilities measured at fair value on a recurring basis and fair value of property, plant and equipment

The group's available-for-sale investments and property, plant and equipment are measured at fair value at the end of each reporting period. The following table provides information about how the fair 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 parameters used in this valuation technique are market prices 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>

Gearing ratio 0.11 0.14
In addition to gas purchase from “Ukrgasvydobuvannya” PJSC, “Chornomornerugazy” PJSC is also obliged to sell gas to the company for the needs of households, heat generating entities and religious organisations:

- the company is obliged to sell gas to district heating companies for all groups of customers, as well as for producing electricity by these companies.
- Starting from 1 April 2017 the company will sell gas for the needs of households, religious organisations and district heating companies at the price of UAH 4,942 (100 cubic meters, excluding VAT, transportation and distribution tariffs and trade mark-up).
- In setting wholesale price for religious organisations and district heating companies for the needs of religious organisations a ratio of 0.5 is applied to the price defined above to setting wholesale price for gas for district heating companies for all customers, except for the needs of religious organisations and households, and for electricity production by district heating companies a ratio of 1.6 is applied.
- In case gas wholesale price calculated at 100% import parity before 1 July 2017 is more than 10% higher than currently effective price, selling price should be calculated at 100% import parity for the period from 1 October 2017 to 1 April 2018 for gas sales to households, religious organisations and district heating companies. Concurrently with resolution on Company’s gas sales price change for specified categories, gas price from PJSC “Ukrgasvydobuvannya” and PJSC “Chornomornerugazy” should be revised.

Change of the Supervisory Board chairman. In April 2017, Paul Warwick was elected as chairman of the supervisory board and Volodymyr Bemchyyshyn as deputy chairman. The new supervisory board chairman was elected following the resignation of Yulia Kovaliv.

Registration of share capital increase. In April 2017 the company has registered a new share capital issue amounting to UAH 29,700 million out of unregistered share capital existed as at 31 December 2016 (Note 13).

Loans repayment and prolongation. During January–April 2017 the group repaid UAH 12,159 million of bank loans. Additionally, in April 2017 the company has prolonged maturity of loan with one of the state-owned banks in amount of about UAH 590 million. Under amended repayment schedule loan should be repaid in several instalments by the end of April 2018.

27. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Statement of compliance. These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”).

Basis of preparation. The consolidated financial statements have been prepared on the historical cost basis except for property, plant and equipment that are measured at revalued amounts at the end of each reporting period, as explained in the accounting policies below.

28. SUBSEQUENT EVENTS

Financing facility under the International Bank for Reconstruction and Development guarantee. On 20 December 2016 financing facility was signed by the Company and the Ministry of Finance of Ukraine on one side, and the International Bank for Reconstruction and Development (“IBRD”) and two banks non-residents on the other side. Financing should be provided according to the loan agreement in the form of revolving credit line amounting to EUR 476 million, and under the guarantees of the IBRD. Drawdown of the facility should be made within 2 years from the date of the loan agreement, repayment – during three years. Financing can be used as mean to settle obligations under the letters of credit as well as direct payments to suppliers. During February 2017 the company has fulfilled preliminary requirements before the loan agreement came into force, including obtaining the resolution of the Ministry of Justice of Ukraine in respect of effectiveness and binding power of the agreement on providing the guarantee between the Ministry of Finance of Ukraine and the IBRD. As a result, on 17 February 2017 notices of effectiveness of the loan agreement from the IBRD and bank agent under the loan agreement were received. During February-April 2017 letters of credit to gas suppliers amounting to over EUR 447 million were issued within this facility. Settlement of such letters of credits is planned for 1 March-2017.

Extension of the Regulations on public service obligations. The Cabinet of Ministers of Ukraine Resolution #187 has approved the Regulations for public service obligations for certain gas market participants (“Regulations”) on 22 March 2017. The Regulation is valid from 1 April 2017 and lasts until 1 April 2018 and contains, amongst others, a series of differences, in particular:

- In case gas wholesale price calculated at 100% import parity before 1 July 2017 is more than 10% higher than currently effective price, selling price should be calculated at 100% import parity for the period from 1 October 2017 to 1 April 2018 for gas sales to households, religious organisations and district heating companies. Concurrently with resolution on Company’s gas sales price change for specified categories, gas price from PJSC “Ukrgasvydobuvannya” and PJSC “Chornomornerugazy” should be revised.

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control of the acquiree. Acquisition-related costs are generally recognised in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their fair value, except that:

- Deferred tax assets or liabilities, and assets or liabilities related to employee benefit arrangements are recognised and measured in accordance with IAS 12 Income Taxes and IAS 19 Employee Benefits respectively;
- Liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with IFRS 2 Share-based Payments; and
- Assets [or disposal groups] that are classified as held for sale in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations are measured in accordance with that Standard.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquiree’s previously held equity interest in the acquiree [if any] over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. After reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquiree’s previously held equity interest in the acquiree [if any], the excess is recognised immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's net assets at acquisition date. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value or, when applicable, on the basis specified in another IFRS.

When the consideration transferred by the group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against income. Measurement period adjustments are adjustments that arise from additional information obtained during the ‘measurement period’ (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or liability is remeasured at subsequent reporting dates in accordance with IAS 39 Financial Instruments: Recognition and Measurement, or IAS 37 Provisions, Contingent Liabilities and Contingent Assets, as appropriate, with the corresponding gain or loss being recognised in profit or loss.

When a business combination is achieved in stages, the group's previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss is recognised in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognised in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed at the acquisition date, so that, if known, would have affected the amounts recognised at that date.

Goodwill. Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

For the purposes of impairment testing, goodwill is allocated to each of the group’s cash-generating units [or groups of cash-generating units] that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognised directly in profit or loss. An impairment loss reversed for goodwill is not reversed in subsequent periods.

On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

Transactions with non-controlling interests. The group treats transactions with non-controlling interests at transactions with equity owners of the group. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying amount of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the group ceases to have control or significant influence, the retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the disposal of the previously accounted for retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income with respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other 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 includes goodwill identified 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. The group's 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 the associate, including any other unsecured receivables, the group does not recognise further losses, unless it has incurred obligations or made 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 in associates 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 net assets of the joint 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 Investment in associates.

Interest 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;
- 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 IFRSs 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 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 company entered into a concession agreement for all exploration and development (“Concession Agreement”) with the Arab Petroleum Exploration and Production Company in connection with the operations carried out by the company in the concession areas.

The Concession Agreement includes the following conditions:

- Subject to the auditing provisions under the Concession Agreement, the company shall recover on a quarterly basis all exploration and development costs to the extent and out of 25% of all petroleum produced and saved from all production areas and not used in petroleum operations [“Cost Recovery”]. Petroleum products under the Concession Agreement include crude oil and gas and LPG.
- Remaining 75% of the petroleum produced is shared by the company and EGPC depending on the volume of production and the product type (crude oil or gas and LPG). The company’s share varies from 15% to 19%.
- EGPC shall become the owner of all the company’s assets acquired and owned within the Concession Agreement, which assets were charged to Cost Recovery by the company in connection with the operations carried out by
the company shall become the property of EGPC as soon as it is purchased, title to fixed and movable assets shall be transferred automatically and gradually from the company to EGPC as they become subject to the Cost Recovery. The development period under the Concession Agreement is limited to a maximum of 25 years from the date of commercial oil discovery or from the date of first gas deliveries, started in 2011.

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 all the segments are reported separately. Segments falling below this threshold can be reported separately at management discretion.

Property, plant and equipment. The group uses the revaluation model to measure property, plant and equipment, except construction in process which is carried at cost. Fair value was based on valuations made by external independent valuers. The fair value reflects the value of the property, plant and equipment, and the costs associated with flooding is considered to be fully recoverable based on an engineering analysis, and at any time thereafter. Cushion gas is used for maintaining pressure in underground storage facilities of the group and protecting them from flooding. Cushion gas is considered to be fully recoverable. It is classified as a separate asset, as appropriate, only when it is probable that the storage facility is closed will be available for sale or other use. Cushion gas is revalued 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 prepayments for property, plant and equipment.

Exploration expenses. Exploration expenses comprise the costs associated with undeveloped 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 materials, personnel and external services costs incurred in connection with both the search for new development techniques and significant improvements in products, services and processes and in connection with research activities. Expenditures related to research activities are shown as R&D expenses in the period in which they are incurred. Development costs are capitalised if the recognition criteria according to IAS 38 Intangible Assets are fulfilled.

Exploration and evaluation assets. Oil and gas exploration and evaluation expenditures are accounted for using the successful cost method of accounting. Costs are accumulated on a field-by-field basis. Costs directly associated with an exploration well, and exploration and property leasehold acquisition costs, are capitalised as long as the following conditions are satisfied:

- sufficient oil and gas reserves have been discovered that would justify completion as a well; and
- sufficient progress is being made in assessing the economic and technical feasibility to justify beginning field development in the near future.

If it is determined that commercial exploitation could not be achieved, these costs are charged to expense.

Expenditures related to the following activities are initially measured at cost and capitalised within property, plant and equipment in the consolidated statement of financial position:

- Acquisition of rights to explore;
- Topographical, geological, geophysical and geotechnical studies;
- Exploratory drilling;
- Trenching, sampling, and
- Activities in relation to evaluating technical feasibility and commercial viability of extracting a mineral resource.

Exploration and evaluation assets are carried forward during the exploration and evaluation stage and are not amortised but assessed for impairment in accordance with the indicators of impairment as set out in IFRS 6 Exploration and Evaluation of Mineral Resources. In circumstances where a property is abandoned, the cumulative capitalised costs relating to the property are written off in the period.

Amortisation is charged prior to the commencement of production.

In circumstances where a property is identified as containing economically recoverable resources then the accumulated exploration and evaluation costs associated with that property are transferred to oil and gas producing properties and are presented within the property, plant and equipment in the consolidated statement of financial position.

Depreciation and depletion. Depreciation is charged to the consolidated statement of profit or loss on a straight-line basis to allocate costs of individual assets to their residual value over their estimated useful lives. Depreciation also includes the cost of acquisition or, in respect of self-constructed assets, from the time an asset is completed and ready for use.

Oil and gas assets, including oil and gas producing properties are depleted using a unit-of-production method. The cost of producing wells is amortised over proved developed reserves. Licence acquisition, common facilities and future decommissioning costs are amortised over total proved and probable reserves.

Other property, plant and equipment are depreciated on a straight-line basis over their expected useful lives. The typical useful lives of the Group’s other property, plant and equipment are as follows:

- Useful lives in years
- Pipelines and related equipment 9-60
- Machinery and equipment 3-60
- Buildings 5-60
- Drilling and exploration equipment 3-30
- Other fixed assets 5-30

Construction in progress and cushion gas are not depreciated.

Intangible assets. Intangible assets have definite useful lives and primarily include capitalised computer software. Acquired software is written off at cost and capitalised within property, plant and equipment in the consolidated statement of financial position:

- Acquisition of rights to explore;
- Topographical, geological, geophysical and geophysical studies;
- Research and development expenses.

Exploration. They also include all impairments on exploration activity and all costs relating to the property are written off in the period.

A reversal of an impairment loss is recognised in the consolidated statement of profit or loss or to the extent of any revaluation balance existence in respect of the related asset, other reserves. Provisions in respect of decommissioning activities are evaluated and re-estimated annually, and are included in the consolidated financial statements at each reporting date at their expected present value, using discount rates which reflect the economic environment in which the Group operates.

Interest expense related to the provision is included in finance costs in profit or loss.

Leases. Leases in which a significant portion of the risks and rewards of ownership are retained by the lessee are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the consolidated statement of profit or loss on a straight-line basis over the period of the lease. Finance leases are capitalised at the lease commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments.

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 added to the cost of an item of property, plant and equipment when the item is acquired, and corresponding obligation is recognised. Changes in the measurement of an existing decommissioning liability, that result from changes in the estimated timing or amount of the outflows, or from changes in the discount rate used for measurement, are recognised in the consolidated statement of profit or loss or to the extent of any revaluation balance existence in respect of the related asset, other reserves. Provisions in respect of decommissioning activities are evaluated and re-estimated annually, and are included in the consolidated financial statements at each reporting date at their expected present value, using discount rates which reflect the economic environment in which the Group operates.

Interest expense related to the provision is included in finance costs in profit or loss.

Impairment of non-financial assets. Assets are reviewed for impairment whenever 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 assets carrying amount exceeds its 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 suffered 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 of 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 losses been recognised in prior periods. 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.

Classification of financial assets. The group classifies its financial assets into the following categories: (a) loans and receivables, (b) available-for-sale financial assets.

Loans and receivables include financial receivables created by the group by providing money, goods or services directly to a debtor, other than receivables which are created with the intention to be sold immediately or in the short term, or which are quoted in an active market. Loans and receivables comprise primarily loans, trade accounts receivable including purchased loans and promissory notes. All other financial assets are included in the available-for-sale category.

Classification as debt or equity. Debt and equity instruments issued by the group are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement. Debt is defined as a financial liability and an equity instrument.

Equity instruments. An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by a group entity are recognised at the proceeds received, net of direct issue costs. Repurchase of the company's own equity instruments is recognised in profit or loss on the purchase, sale, issue or cancellation of the company's own equity instruments.

Financial liabilities. Financial liabilities are classified as either financial liabilities “at amortised cost” or at “fair value through profit or loss (FVTPL)” or “other financial liabilities.”

Initial recognition of financial instruments. Financial assets and financial liabilities are initially measured at fair value. The group's principal financial instruments comprise available-for-sale investments, borrowings, cash and bank balances. The group has various other financial instruments, such as trade receivables and trade payables, which arise directly from its operations.

Inventories are recorded at the lower of cost and net realisable value. The cost of inventories includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. Cost of manufactured inventories includes an appropriate share of production 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 and pipeline fill. Weighted average cost formula is used for natural gas and pipeline fill. Net realisable value is the estimated selling price in the ordinary course of business, less the cost of completion and selling expenses.

Trade receivables. 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 less provision for impairment. A prepayment is classified as non-current when the goods or services relating to the prepayment are expected to be obtained after one year, or when the prepayment relates to an asset which will itself be classified as non-current upon initial recognition.

If there is an indication that the assets, goods or services relating to a prepayment will not be received, the carrying amount of the prepayment is released 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. Promissory notes are recognised based on management's estimate of the fair value to be given up in such settlements. The fair value is determined with reference to observable market information.

Cash and bank balances. Cash and bank balances include cash on hand, at call or due immediately, and deposits with term highly liquid investments with original maturities of three months or less. Cash and bank balances are carried at amortised cost using the effective interest method. Restricted balances that do not qualify for cash and cash equivalents are excluded from cash and cash equivalents for the purposes of the consolidated cash flow statement. Balances restricted from being exchanged or used to settle a liability for at least twelve months after the reporting date are included in restricted cash.

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. The 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 or proposed 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 receiving 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 losses, impairment loss is recorded for the gross amount of the debt, including VAT.

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 necessarily take a substantial period of time to get ready for their intended use or sale, are added to the 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 initially measured under the policy for financial instruments mentioned above. Subsequently, instruments with a fixed maturity are re-measured at amortised cost using the effective interest method. Bank overdrafts are included into borrowings line item in the consolidated statement of financial position.

Advances received. Advances received are carried at amounts originally received. Amounts of advances received are expected to be realised through the revenue received from usual activities of the business.

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 or loss and the subsequent 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. Where discounting is used, 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 incurred, and are subsequently stated at amortised cost using the effective interest method. Other non-financial liabilities are measured at cost.

Contingent assets and liabilities. A contingent asset is an asset that is not recognised in the consolidated financial statements but disclosed when the existence of economic benefits is probable. Contingent liabilities are 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. Revenue is measured at the fair value of the consideration received or receivable, and are shown net of value added tax and discounts. Revenue from the sale of goods is recognised when the goods are delivered and title has passed, at which time all the following conditions are satisfied:

- The group has transferred to the buyer the significant risks and rewards of ownership of the goods;
- The group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- The amount of revenue can be measured reliably;
- It is probable that the economic benefits associated with the transaction will flow to the group; and
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

If the goods are transported to a specified location, revenue is recognised when the goods are passed to the customer at the destination point.

Revenue from sales of services is recognised when:

- The amount of revenue can be measured reliably;
- It is probable that the economic benefits associated with the transaction will flow to the group;
- The stage of completion of the transaction at the reporting date can be measured reliably;
- The costs incurred on the transaction and the costs to complete the transaction can be measured reliably.

Revenue gross versus net presentation. When the group acts as a principal, revenue and cost of sales are recognised on a gross basis. If the group sells goods or services as an agent, revenue is recorded on a net basis, representing the margin/commission earned. Whether the group is considered to be principal or agent in a transaction depends on analysis of both legal form and substance of the agreement the group enters in.

Key indicators that group acts as an agent in a transaction are:

- Another party and not the group is a primary obligor for delivering goods or services;
- Absence or limited general inventory risk;
- No exposure to significant risks and rewards associated with the sale of goods or services;
- Earnings from a transaction are represented by fixed amount; and
- Lack of discretion to select suppliers and ability to establish a selling price.

Recognition of expenses. Expenses are recorded on an accrued basis. Cost of sales comprises the purchase price, transportation costs, commissions relating to supply agreements and other related expenses.

Finance income and costs. Finance income and costs comprise interest expense on borrowings, losses on early repayment of loans, interest income on funds invested, income or loss on origination of financial instruments, write-off of the interest on the provision obligation and provisions.

Interest income is recognised as it accrues, taking into account the effective yield on the asset.

Sale and repurchase agreements and lending of securities. Sale and repurchase agreements (“repo agreements”) which effectively provide a lender’s right to the counterparty are treated as secured financing transactions. Securities sold under such sale and repurchase agreements are not derecognised. The securities are not reclassified in the consolidated statement of financial position unless the transferee has the right by contract or custom to sell or repudiate the securities, in which case they are reclassified as repurchased receivables. The corresponding liability is presented within amounts due to other banks or other borrowed funds.

Employee benefits: Defined Contributions Plan. The group makes statutory unified social contributions to the Pension Fund of Ukraine in respect of its employees. The contributions are calculated as a percentage of current gross salary and are expensed when incurred. Discretionary pensions and other post-employment benefits are included in labour costs in the consolidated statement of profit or loss.

Employee benefits: Defined Benefit Plan. The group provides lump sum benefits, payments on reaching certain age, and other benefits as prescribed by the collective agreement. The liability recognised in the consolidated statement of financial position in respect of the defined benefit pension plan is the present value of the defined benefit obligation at the reporting date. The defined benefit obligation is calculated annually using the projected unit credit method.

Present value of the defined benefit obligation is determined by discounting the estimated or actuarial cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension liability.

Actual gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to other comprehensive income in the period in which they arise. Past service costs are recognised immediately in the consolidated statement of profit or loss.

28. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

In the application of the group’s accounting policies, management is required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not otherwise observable. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Critical judgements in applying accounting policies. The following are the critical judgements, apart from those involving estimations, that the group management has made in the process of applying the group’s accounting policies and that have the most significant effect on the amounts recognised in the consolidated financial statements.

Investment in “Ukrnafta” PSC. The group holds 50% +1 share of voting rights in “Ukrnafta” PSC. The rest is owned by limited number of investors. In March 2015, according to changes in the Law of Ukraine “On Joint-Stock Companies”, quorum of the General meetings of shareholders was lowered from 60%+1 share down to 50%+1 share. Following those changes and changes in the supervisory board of “Ukrnafta” PSC in July 2015, the company has regained control over “Ukrnafta” PSC starting from 22 July 2015. Accordingly, the investment in “Ukrnafta” PSC is accounted for as investment in subsidiary starting from that date (Note 23). The company considers this change as a business combination and applied acquisition method of accounting, respectively.

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. Management assesses post-employment and other employee benefit obligations using the projected unit credit method based on actuarial assumptions which represent management’s best estimates of the 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 on an actuarial basis using a number of assumptions. The major assumptions used in determining the net cost (income) for pensions include their discount rate and expected salary increases. Any changes in these assumptions will impact the carrying amount of pension obligations. Since there are no long-term, high quality corporate or government bonds in Ukraine, a significant judgement is needed in assessing an appropriate discount rate. Key assumptions are presented in Note 15.

Deferred tax asset recognition. The deferred tax asset, recognised in the consolidated statement of financial position, represents future deductible temporary differences arising from future tax deductions from taxable profits. Deferred tax assets are recorded to the extent that realisation of the related tax benefit is probable. In determining future taxable profits and the amount of tax attributable to one tax year, management makes judgements and applies estimation based on historic taxable profits and expectations of future taxable income that are believed to be reasonable under the circumstances.

Tax legislation. Ukrainian tax, currency and customs legislation continues to evolve. Conflicting regulations are subject to varying interpretations. Management believes its interpretations are appropriate and sustainable, but no guarantee can be provided against a challenge from tax authorities (Note 22).

Deamortisation costs. The decommissioning provision represents the present value of the decommissioning costs relating to oil and gas properties, which are expected to be incurred in the future (Note 15). These provisions were recognised, based on historic estimates relating to the volumes of production, proved reserves, and assumptions made by independent appraisers taken place as at 31 December 2016.

Revaluation 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 price, price indices, changes in technology, foreign exchange rates and other relevant factors. In case such assessment identifies that carrying amounts of items of property, plant and equipment differ materially from their fair values, management engages independent appraisers to perform property, plant and equipment revaluation.

Per results of relevant assessment made as at 31 December 2016 management decided that carrying amounts of property, plant and equipment accounted under the revaluation model, do not differ materially from their fair values, and no revaluation was made at this date. Latest revaluation made by the independent appraisers took place as at 31 December 2015.

Management also reviews carrying amounts of property, plant and equipment to determine whether any indicators thereof exist. In performing the assessment for general impairment, assets that do not generate independent cash flows are allocated to an appropriate cash-generating unit. Indicators of a potential impairment include analysis of market conditions, asset utilisation and the ability to utilise the asset for alternative purposes. If 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 the carrying value is greater than the recoverable amount.

Management did not identify any general indicators of impairment as at 31 December 2016.

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 property, plant 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 estimated useful life or residual value is recorded on a prospective basis from the date of the change.

Impairment of trade accounts receivable and prepayment made. 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 comparison with the payment history, credit terms allowed to customers and available market information regarding the counterparty’s ability to pay. Should actual collections be less than management’s estimates, the group would be required to 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 to reduce inventories 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

Adopted and revised International Financial Reporting Standards

The following standards have been adopted by the group for the first time for the financial year beginning on or after 1 January 2016:

- Amendments to IFRS 12 "Disclosure of Interests in Other Entities";
- Amendments to IAS 11 "Joint Arrangements" – Accounting for acquisition of interest in joint arrangements;
- Amendments to IAS 1 "Presentation of Financial Statements" – Initiative as to the disclosure of information;
- Amendments to IAS 16 "Property, Plant and Equipment" and IAS 38 "Intangible Assets" – Clarification in respect of applying depreciation and amortisation formulas;
- IFRS 14 "Regulatory Deferred Accounts";
- Amendments to IAS 27 "Separate Financial Statements" – applying equity method in separate financial statements;
- Annual Improvements to IFRSs 2012-2014 Cycle.

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 and prior years.

Standards and Interpretations in issue, but not yet effective.

At the date of authorisation of these consolidated financial statements, the following Standards and Interpretations, as well as amendments to Standards were in issue but not yet effective.

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<td>Amendments to IAS 40: Transfers of Investment Property</td>
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<tr>
<td>Annual Improvements to IFRS 2014-2016 Cycle</td>
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Management is currently evaluating the impact of the adoption of Amendments to IAS 12 "Disclosure of Interests in Other Entities", Amendments to IFRS 15 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture”, Amendments to IAS 11 Amendments resulting from Annual Improvements Cycles, IFRS 15 "Revenue from Contracts with Customers”, IFRS 9 "Financial Instruments” and IFRS 16 "Leases”, as well as 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.
Baker & McKenzie — international legal consultancy

BCM — billion of cubic meters

BP — British Petroleum, a transnational oil and gas, petrochemical and coal corporation

CDB — China Development Bank

CABINET OF MINISTERS — The Cabinet of Ministers of Ukraine

CHP PLANT – combined heat and power plant

COMPANY – Naftogaz

CRIMEA — The Autonomous Republic of Crimea, a region of Ukraine currently occupied by the Russian Federation

DNC – district heating company (same as “teplokommunenergo”)

DSNS, SESU – State Emergency Service of Ukraine

EBRD – European Bank for Reconstruction and Development

EC – the European Commission

EFET – European Federation of Energy Traders

EGPC – Egyptian General Petroleum Corporation

EIB – European Investment Bank

ENERGY MINISTRY — the Ministry of Energy and the Coal Industry of Ukraine

EU – the European Union

EUSTREAM – Slovak gas transmission system operator

FGSZ – Hungarian gas transmission system operator

FRONTIERA RESOURCES — US oil and gas company

GAS — natural gas, unless stated otherwise

GAZPROM – Public Joint Stock Company Gazprom, a Russian energy company

GAZ-SYSTEM S.A. – Polish gas transmission system operator

GDS – gas distribution station

GENERAL MEETING, GM – General Meeting of Shareholders

GMS – gas measuring station

GROUP – a group of companies that consists of NUGC Naftogaz of Ukraine, PJSC Ukrgazyvydobuvannya, PJSC Ukrtransnafta, JSC Uktranstvo, SC Gas of Ukraine, SE Ukravtoga, PJSC Chornomornaftogaz, OJSC Kirovohradgaz, SE Zakor-donnafagaz, PJSC Ukrpetrotransgaz, Naftogaz Overseas SA, SE Volnyvetsy

Ukraine, SE Ukraftogazokompnji, SE Naukarftogaz, SE Naftogazobshuvannya, SE UKV, SE Naftogazbuka, SE Budvelnyk

GSE – Gas Storage Europe, the association of European operators of underground gas storage facilities

GTS – gas transportation system

IEA – International Energy Agency

IFRS – International Financial Reporting Standards

IAS – International Accounting Standards

IMF – International Monetary Fund, a special UNO agency

INTERCONNECTOR – a joint cross-border gas pipeline

JV – JOINT VENTURE

LNG-TERMINAL – a liquefaction terminal, reservoir and regasification of liquefied natural gas

MCM – million of cubic meters

MEDT – Ministry of Economic Development and Trade

MEMORANDUM – the Memorandum of Understanding on creation of the integrated gas market

NAFTOGAZ (NJSC NAFTOGAZ OF UKRAINE) – National Joint Stock Company Naftogaz of Ukraine

NAFTOGAZ OVERSEAS S.A. – Joint Stock Company Naftogaz Overseas S.A. (Switzerland)

NEURC (PREVIOUSLY NERC) – National Energy and Utilities Regulatory Commission

NIS – National Institute for Strategic Studies under the President of Ukraine

OECD – Organization for Economic Co-operation and Development

PJSC KIROVHHRADGAZ, KIROVHHRADGAZ – Open Joint Stock Company Kirovohradgaz, a regional gas distribution and supply company

OBLAGAZ – a regional gas distribution and supply company

PJSC CHROMOMRNATDOGAZ – Public Joint Stock Company Chromominmnafogaz

PJSC UKRGAZSYDOMOBUVANNYA – Public Joint Stock Company Ukrgazyvydobuvannya

PJSC UKRAVTOGAZ – Public Joint Stock Company Ukravtoga

PJSC UKRNATFA – Public Joint Stock Company Ukranatfa

PJSC UKRSPETSTRANSGAZ, UKRSPETSTRANSGAZ – Public Joint Stock Company Ukrspetstransgaz

PJSC UKRTRANSNAFTA, UKRTRANSNAFTA – Public Joint Stock Company Ukrrtransnafta

PWC, PRICEWATERHOUSECOOPERS – international audit consultancy

RUSSIA – the Russian Federation

RESOLUTION 510 – the Resolution of the Cabinet of Ministers of Ukraine Resolution #510 of 05 September 2014 “On Improvement of State Policy in the Field of Regulation of the Natural Gas Transportation Pipelines Through Ukraine”

RESOLUTION 583 – the Resolution of the Cabinet of Ministers #583 of 03 March 2015 “On Establishment of Retail Prices for Natural Gas Used for the Needs of Households”

STATE COMPANY GAS OF UKRAINE, GAS OF UKRAINE – a subsidiary of the National Joint Stock Company Naftogaz of Ukraine

STATE ENTERPRISE ZAKORDONNAFTOGAZ, ZAKORDONNAFTOGAZ – a subsidiary of NUGC Naftogaz of Ukraine

SPF – State Property Fund of Ukraine

SUBSIDIARIES – subsidiary companies of the National Joint Stock Company Naftogaz of Ukraine

T – ton

TCM – thousand cubic meters

TEPLOKOMUNNENERO – enterprises, producing heat and energy, district heating companies

TSO – transmission system operator

UGS – underground gas storage

UGV – Public Joint Stock Company Ukrgazyvydobuvannya

UNBUNDLING – separation of gas transmission from gas supply and production

URENGOY-POMARY-UZHGOROD GAS PIPELINE (UPU) – 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

VTP – virtual trading point

WORLD BANK – the organization that provides assistance for development
### GRI CONTENT INDEX

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**General standard disclosures**

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**Strategy and analysis**

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<td>Description of any significant variations in employment numbers (such as seasonal variation in employment in the tourism or agricultural industries)</td>
<td></td>
<td>There were no significant variations in employment numbers</td>
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<td>Description of any significant changes during the reporting period regarding the organization’s size, structure, ownership, or its supply chain</td>
<td></td>
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**Organizational profile**

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<td></td>
<td>In the reporting period the company did not subscribe to any economic, environmental and social charters, principles, or other initiatives</td>
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<td>G4-16</td>
<td>Memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization: - Holds a position on the governance board; - Participates in projects or committees; - Provides a substantive funding beyond routine membership dues; - Views membership as strategic.</td>
<td></td>
<td>The company is a member of such organization: - International gas union - European energy forum - Eurogas - EFETnet</td>
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**Identified material aspects and boundaries**

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<td>There were no restatements of information provided in previous reports</td>
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**Stakeholder engagement**

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<td>Naftogaz Annual report 2015, Stakeholder relations</td>
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<td>This report was prepared in accordance with the Global Reporting Initiative (GRI) G4, &quot;Core&quot; level</td>
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</table>

**Report profile**

| **G4-35** | Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting | Naftogaz Annual report 2016, Stakeholder relations Code of corporate ethics [http://www.naftogaz.com/files/HR/Naftogaz-Kode-Ethics.pdf] Procedure for Interacting with Stakeholders [http://www.naftogaz.com/files/official_documents/Procedure_for_interaction_with_Stakeholders-UA.pdf] |  |  |

**Economic performance**


**Indirect economic impacts**


**Energy efficiency**


**Water**


**Emissions**


**GHG emission in CO2-equavalent was calculated based on Global warming potential coefficients, IPCC Second Assessment Report (100-years period)**

**Kатегорія "екологічні"**


**Energy consumption and efficiency**


**Energy efficiency**


**Energy efficiency**


**Energy efficiency**


**Energy efficiency**


**Ethics and integrity**


**Specific standard disclosures**


## Additional Information

### Effluents and waste
- **DA-DMA** Disclosures on management approach 48 Ecology and environmental protection
- **DA-EN22** Total water discharge by quality and destination 48 Ecology and environmental protection
- **DA-EN23** Total weight of waste by type and disposal method 48 Ecology and environmental protection

### Environmental investments
- **DA-DMA** Disclosures on management approach 48 Ecology and environmental protection
- **DA-EN31** Total environmental protection expenditures and investments by type 48 Ecology and environmental protection

### Employment
- **DA-DMA** Disclosures on management approach 26 Personnel
- **DA-LA1** Total number and rates of new employee hires and employee turnover by age group, gender and region 26 Personnel
- **DA-LA2** Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation 26 Personnel

### Labor/Management relations
- **DA-DMA** Disclosures on management approach 26 Personnel
- **DA-LA4** Minimum notice periods regarding operational changes, including whether these are specified in collective agreements 26 Personnel
- **DA-DMMA** Disclosures on management approach 32 Health and Safety
- **DA-DE6** Type of injury and rates of injury occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and gender 32 Health and Safety
- **DA-LA7** Workers with high incidence or high risk of diseases related to their occupation 32 Health and Safety
- **DA-LA8** Health and safety topics covered in formal agreements with trade unions 32 Health and Safety

### Occupational health and safety
- **DA-DMA** Disclosures on management approach 32 Health and Safety
- **DA-LA10** Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings 26 Personnel

### Training and education
- **DA-DMA** Disclosures on management approach 26 Personnel
- **DA-LA12** Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity 26 Personnel

### Diversity and equal opportunity
- **DA-DMA** Disclosures on management approach 26 Personnel
- **DA-DMMA** Disclosures on management approach 26 Personnel

### Non-discrimination
- **G4-DMA** Disclosures on management approach 26 Personnel
- **G4-HR3** Total number of incidents of discrimination and corrective actions taken During reporting period, the company recorded no cases of discrimination

### Child labor
- **G4-DMA** Disclosures on management approach 26 Personnel
- **G4-HR5** Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor Not relevant. Child and forced labour are prohibited by any applicable laws or regulations of Ukraine. The company does not operate in countries where there is a high risk of human rights violations, including use of child labour

### Forced or compulsory labor
- **G4-DMA** Disclosures on management approach 26 Personnel
- **G4-HR6** Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor Not relevant. Child and forced labour are prohibited by any applicable laws or regulations of Ukraine. The company does not operate in countries where there is a high risk of human rights violations, including use of child labour

### Local communities
- **G4-DMA** Disclosures on management approach 40 Local community development
- **G4-SO1** Percentage of operations with implemented local community engagement, impact assessments, and development programs 40 Local community development

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**Aspect** | **Indicator** | **Definition** | **Page** | **Report section and comments**
---|---|---|---|---
Effluents and waste | **DA-DMA** | Disclosures on management approach | 48 | Ecology and environmental protection
 | **DA-EN22** | Total water discharge by quality and destination | 48 | Ecology and environmental protection
 | **DA-EN23** | Total weight of waste by type and disposal method | 48 | Ecology and environmental protection
Environmental investments | **DA-DMA** | Disclosures on management approach | 48 | Ecology and environmental protection
 | **DA-EN31** | Total environmental protection expenditures and investments by type | 48 | Ecology and environmental protection

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| **G4-DMA** | Disclosures on management approach | 26 | Personnel
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| **G4-SO1** | Percentage of operations with implemented local community engagement, impact assessments, and development programs | 40 | Local community development

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| **G4-SO1** | Percentage of operations with implemented local community engagement, impact assessments, and development programs | 40 | Local community development
Report content and the aspect boundaries

The content of the report was determined based on the findings of the evaluation of the material aspects of the company operations. The evaluation methodology is in line with the requirements and principles specified in the GRI G4 Guidelines. The most important topics and issues to be presented in the report were identified by the company using various instruments which take into account the views of the internal and external stakeholders:

- Informational environment analysis;
- Analysis of annual reports and sustainability reports issued by the similar companies in Ukraine and abroad;
- Interviews of Naftogaz internal departments and subsidiaries;
- Consultation with the company top management;
- Analysis of suggestions and requests of other internal and external stakeholders.

The company has the procedure for interaction with stakeholders in place which applies to all activities of the company and is used to identify the interests and getting feedback from various stakeholder groups. The general list of important aspects is created based on the analysis of the stakeholders’ suggestions and interests. Every aspect is used to identify the interests and getting feedback from various stakeholder groups.

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Material aspects and boundaries

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<th>Boundaries</th>
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