

# INTEGRATED REPORT 2015

Integrated Report Financial  
and non-financial  
results



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# Introduction



**Oleg Popov**  
 Chairman of the Supervisory Board,  
 CEO of JSC "SCM"

## Dear colleagues and partners, I am pleased to present the 2015 Annual Report of DTEK Group.

Today, all domestic companies continue to operate in difficult economic and political conditions, which affect their financial and production performance. In such a situation, the key challenge faced by DTEK was to preserve production potential of our companies to ensure stable supply of heat and electricity to Ukrainian households and timely payment of salaries to our employees without any reductions.

DTEK staff did everything possible to ensure that the heating season in the country was not affected by the shortage of both fuel and financial resources. Engineers and miners worked hard to maintain the stability of operations of the Unified Energy System. I would like to thank DTEK miners, who kept the power plants operating high volatile (steam) coal with sufficient supply of fuel, which allowed the power plants to run under increased load. TPPs operating on anthracite coal managed to accumulate sufficient reserves of the scarce resource to get through the heating season. Thanks to the joint efforts made by railway personnel and DTEK to restore the infrastructure destroyed during the military operations, a steady supply of coal from Ukrainian mines located in the ATO zone was maintained.

Despite the difficult situation, DTEK succeeded in implementing a number of important projects that stimulated development of the entire Ukrainian energy sector, and hence, the domestic economy in general. The most important projects in the coal production segment include the completion of first phase of the construction of a ventilation shaft at the Yuvileina mine, which opens access

to the development of 19 million tonnes of commercial coal reserves, and the completion of commercial testing of the world's first frontal cutting complex for installing assembly chambers in thin layers of coal. Projects in the thermal power generation segment include a retrofit of power unit no. 9 at DTEK Kurakhivs'ka TPP that was completed in 2015 despite the ongoing military actions. In the gas segment, a 6,750 meter deep well was commissioned. Until then, gas reserves at this depth were considered unlikely, and the extraction of such gas appeared to be impossible. In aggregate, DTEK Group invested about USD 230 million in the development of its production facilities in 2015.

The company invests not only in upgrading and new areas of business development but also in sustainability. In 2015, DTEK continued implementing projects in the areas of environmental protection, industrial health and safety, professional development of its employees, and social partnership.

In addition, DTEK joined forces with other businesses of SCM Group to provide all possible assistance to civilians in Donbas Region who suffered from military operations. Rinat Akhmetov's Humanitarian Center was the primary partner in these activities. DTEK engineers and volunteers have also been restoring the destroyed grid and carried out humanitarian initiatives aimed at providing support to internally displaced persons.

I would like to express my sincere gratitude to each member of the DTEK team for their dedicated service, personal courage, and real heroism!



**Maksym Timchenko**  
CEO of DTEK

## Dear colleagues and partners,

In presenting the results we achieved in 2015 – the year when the implementation of the first stage of DTEK Group's long-term development strategy was completed – I would like to thank our personnel for their professional qualities and dedication, and our partners and investors for their understanding and trust in us.

In 2013, we moved from five-year to more long-term planning, as projects in the energy sector take several years to complete and require substantial investments. These projects create capacities whose operations will have an impact on the economy and social life of the country for decades. Our strategy envisages three stages and covers six areas such as energy, society, customers, people, efficiency and Ukraine "plus". I would like to describe in detail what was done at the first stage in 2013-2015 in each area.

### Energy

Our company has deservedly become the face of the Ukrainian energy industry. In the thermal power generation sector, we have been undertaking a large-scale upgrade. These efforts are of critical importance for the preservation of flexible capacities in Ukraine's energy system, since the equipment operated by power units has already passed 70-80% of its service life. As of 2016, we have upgraded 17 power units. As a result, their service life was extended by at least 15 years, capacity was increased and dust emission was reduced in line with European standards.

In coal production, large-scale efforts are being made to upgrade equipment and transport chain aimed at improving production efficiency and safety of miners. This resulted in the best performance in the industry – since 2013, average performance in high volatile (steam) coal production has increased by 9.8% to 82.2 tonnes per month per person. Due to timely investments, our TPPs' demand for high volatile (steam) coal was satisfied completely, which is extremely important for increasing the load of power units when anthracite is a scarce resource as a result of military actions.

We have fulfilled our plan for diversification of the assets portfolio. In 2014, we completed construction of the Botievo Wind Farm with capacity of 200 MW. This is a significant achievement for DTEK, as well as for the development of renewable energy sources as a new segment of the Ukrainian energy industry. During this period we achieved first place among private companies in gas production. Until then, not a single private company managed to reach an annual production indicator of 1 billion cubic meters of gas. Moreover, in 2015, Naftogazvydobuvannya commissioned a 6,750 meter gas extraction well, which is the deepest well in Europe.

### Society

It is very important for us to promote comprehensive development of Ukraine in general with the primary focus on the regions where the Company's businesses operate. We have succeeded in establishing a steady dialog and cooperation with local communities. The partnership relationships allow us to find solutions to problems and to improve quality of life and create conditions for further development. In 2013-2015, DTEK focused its efforts on the implementation of three-year strategies aimed at social partnership with the regions, where the company operates, in order to make cities comfortable for life. There were five key areas of cooperation: energy efficiency in the utilities sector, healthcare, support of socially important infrastructure, development of the business environment, and encouraging the initiatives of local communities. As we can see, these focus areas not only demonstrated their effectiveness, but also became more relevant in the crisis conditions. In 2015, the company initiated and financed mapping out of strategies for the development of business areas for the next 3-5 years. The strategies define the key points of growth capable of producing the maximum effect on the economy and social life of cities, making them more sustainable and wealthier.

## Customers

We would like to be closer to our consumers and we strive to ensure the highest level of satisfaction with the quality of our services. To this end, we do a lot of work in this area. In 2013, the company opened the first modern customer service centers (CSC) and widened the geography of web service coverage. Today, all regional power supply divisions operated by our distribution companies have been transformed into CSCs operating as a one-stop-shop service, and web service is available to all consumers in all locations. In addition, modern contact centers covering Kyiv and Dnipropetrovsk region were set up. Thus, by 2016, the company's distribution companies were brought to a unified standard of operation – the organizational structure was reformed and a retail sales function was created.

Moreover, in 2015 we offered our customers a new service – energy service. Kyivenergo introduced an energy audit service for residential buildings to promote energy-saving opportunities. In general, this offer from an energy supplier is unique among Ukrainian distribution companies. This service is aimed at customers who need professional help with determining the sources of energy losses and finding effective solutions. DTEK ESCO was also established on the basis of our energy efficiency project team. This company will perform energy service functions for both SCM Group and consumers located throughout Ukraine.

Another component of customer services is increased reliability and quality of energy supply. During the first stage of implementation of the long-term development strategy, the companies focused on construction and reconstruction of power grids to remove sections affected by energy shortages and to reduce losses. As a result, new capacities allowing connection of new subscribers were created and the quality of energy supply was enhanced. For example, in 2015, the System Average Interruption Duration Index was reduced by almost 8% as compared to 2013, i.e., to 130.5 minutes, and real losses in the grids were 35% lower than the average indicator for Ukraine.

## People

Occupational health and safety are the Company's top priorities. We treat the safety of our employees as a philosophy rather than a burden. Our aim is to make safe behavior in the workplace an ingrained habit of every employee. This is exactly why our main focus area in 2013-2015 was in creating a culture of workplace safety, and today the working conditions at almost all production facilities of DTEK Group comply with the OHSAS:18001 international standard. To assess the progress of occupational health and safety efforts, occupational safety committees function at all levels of the companies' management: on each facility, at each production office, and at supervisory boards. During this period, the lost time injury frequency rate decreased by 35% to 0.44.

Our companies operate in complex industries, and we are constantly installing modern equipment to upgrade our production processes. It is very important for our employees to be experts in their fields capable of dealing with any projects regardless of complexity. To this end, the Company introduced a system of continuous personal development – from professional mentorship to MBA programs for managers. For instance, in 2012-2014 we implemented a unique project aimed at complete upgrade of the production training system. The DTEK Academy has opened 14 training centers providing education to about 50,000 workers and engineers and technical staff annually. We developed corporate professional standards that take into account the requirements of modern production. This experience allowed us to formulate eight educational standards for working professions that were approved as state standards by the Ministry of Education and Science of Ukraine.

I can state with confidence that business is provided with skilled workers and junior and mid-level managers due to the corporate system of production training. So far, in-house candidates have been trained for more than 70% of key positions.

## Efficiency

The efficiency of production, investments and management constitutes the foundation for the successful development of DTEK Group. The expansion of the company's profile called for a thorough overhaul of the governance model, so we carried out the reorganization in two stages. In 2013, production facilities were brought to unified operational standards and business processes, which created conditions for the successful integration of new assets and accelerated the decision-making process. Then, in 2014, a new model of corporate governance was introduced: a strategic holding company and three operating companies responsible for coal production, thermal power generation and distribution, renewable energy and gas production were established. These changes made it possible to separate the functions of strategic planning and business operations and thereby ensure efficient distribution of efforts.

The Novator continuous improvement and lean production system aimed at improving the efficiency of operations has also been introduced. The Company's successful future directly depends on our competitive abilities, skilful application of the world's best practices in the area of business management and resources, and timely elimination of inefficient practices. At the same time, it is crucial to develop not only production facilities, but also the potential of our personnel by involving them in improvements. Who else but employees know the best ways for improvement in their areas of responsibility? In 2013, teams of professionals of DTEK Lugans'ka TPP and Ternivska Mine Office developed proposals aimed at improving production processes at their companies. This is how the first pilot projects of the Novator system were launched. Today, Novator covers 43 companies and is present in each segment, where DTEK Energy operates, including coal production and preparation, generation and distribution of electricity. Principles of continuous improvement and lean production are set out in regulations, and all employees learn these principles. In 2013-2015, this project delivered over UAH 1 billion worth of economic benefits.

## Ukraine "plus"

Ukraine remains the company's key market, although at the same time we strive to develop trade links with external markets. To ensure direct access to European energy markets, DTEK Trading SA, a Swiss trading company, was incorporated in June 2013. Later, test supply of electricity to the domestic wholesale market of Hungary was launched in the first half of 2014. Since the second half of 2014, due to the scarcity of anthracite coal and capacity in the Unified Energy System of Ukraine caused by military actions, cooperation under cross-border contracts was significantly limited to secure supply to domestic consumers. As we can see, since November 2015, due to the surplus accumulated in the Ukrainian energy system, prerequisites for the restoration of supply to European consumers have been created.

**I would like to focus separately on the company's operations under military actions** – our companies successfully passed this very stern test. I am proud to say that our employees worked under extreme overload, and did not let down either the company or the country. DTEK miners and electricians fulfilled all their obligations, which was a great contribution to the security of the heating seasons in the country. We managed to respond to the major challenge faced by thermal power generation – providing Ukrainians with electricity amid a scarcity of anthracite coal. Our engineers have been restoring power grids and substations destroyed during military operations because electricity supply is crucial to the survival of people in war zones.

DTEK proved by deeds rather than by words that people are the highest value for us. We always direct our energy toward achieving real results to provide the Ukrainian people with electricity and heat. Our strict adherence to the values of professionalism, pursuit of excellence, responsibility, unity, and openness enables us to believe in success!

# About DTEK Group

About DTEK Group

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# About DTEK Group 01

**DTEK is a strategic holding company that manages three operating companies with assets in coal production, thermal power generation and distribution, renewable energy and gas production. DTEK makes a substantial contribution to achieving energy independence and energy efficiency of the Ukrainian economy.**

DTEK has 118,000 employees working at its companies in ten regions of Ukraine. DTEK is one of the best employers in Ukraine according to business publications and international audit firm EY.

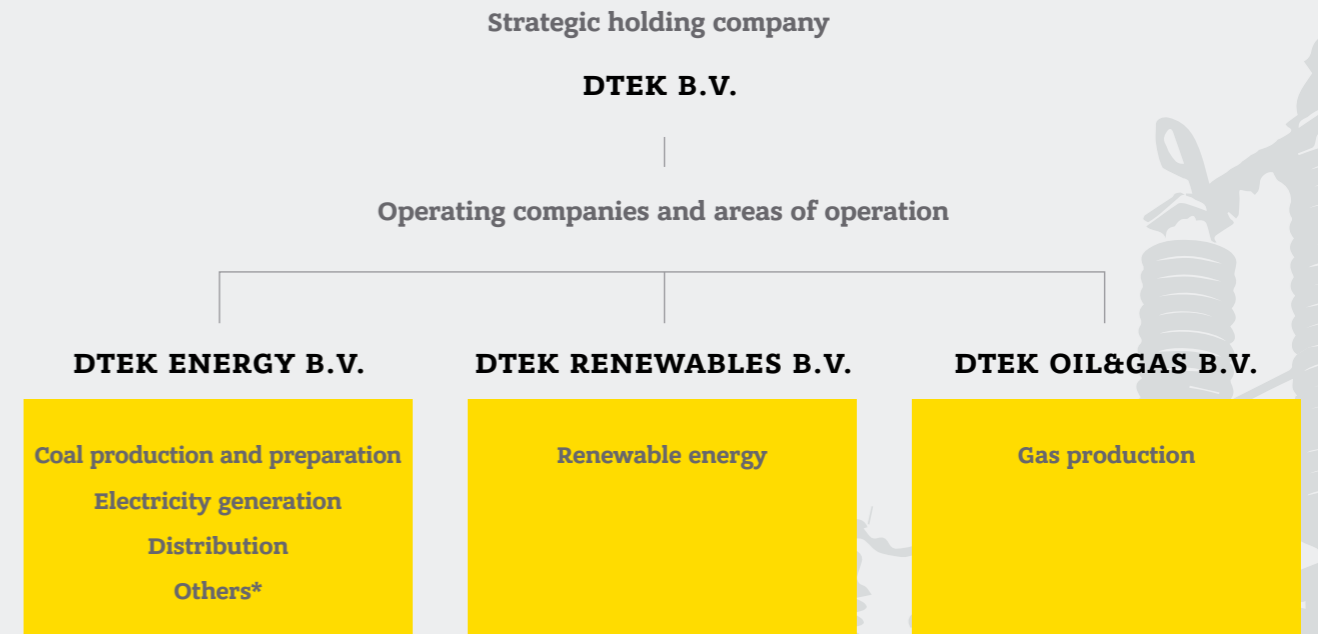
The company implements the world's best standards of management and efficiency and works openly and transparently. DTEK is actively engaged in the activities of European business associations including EURELECTRIC and EURACOAL. The company is a member of the European Business Association, the American Chamber of Commerce, the European-Ukrainian Energy Agency, and the U.S.-Ukraine Business Council.

DTEK upholds the principles of sustainable social development and is a party to the United Nations Global Compact. Building a relationship of trust with society lies at the foundation of the company's

activities. This objective is achieved by forming consistent social partnership with local government bodies and residents. The company's social investments are distributed among five key areas: energy efficiency in the utilities sector, healthcare, support of socially important infrastructure, development of the business environment, and encouraging the initiatives of local communities.

DTEK is part of the financial and industrial group SCM. Rinat Akhmetov is a shareholder of this group.

## Structure of DTEK Group



### Key tasks of the strategic holding company:

- long-term planning;
- development of new businesses;
- management of the investment portfolio and raising long-term financing;
- development of the management talent pool;
- reputation management;
- interaction with central government bodies.

### Key tasks of operating companies:

- improving operating efficiency;
- development of industry-related expertise;
- implementation of investment projects;
- professional growth of employees;
- independent resolution of operational and management issues.

The strategic holding company is the 100% owner of the three operating companies. This structure enables the strategic holding company to fully manage all businesses and conduct long-term planning, while each of the three operating companies serves as a center of industry expertise and focuses on operations.


**31**  
mines



**13**  
coal preparation plants



**10**  
TPPs\*




**2**  
CHPPs\*\*\*



**1**  
WPP\*\*



**6**  
electricity distribution companies



**3**  
gas fields



**118**  
thousand jobs



\* TPP – thermal power plant;  
\*\* WPP – wind power plant;  
\*\*\* CHPP – combined heat and power plant.



By developing our businesses, DTEK invests in the Ukrainian economy, Ukrainian energy industry, and in towns and cities, where our companies operate. This creates a potential that will be in demand for many years to come.



Maksym Timchenko,  
CEO of DTEK



# Areas of business of DTEK Group Companies

## DTEK Energy Coal production, thermal power generation and distribution

The main product of DTEK Energy is kilowatt hour. The company has set up a full production cycle: from coal production and preparation to electricity generation and distribution. Coal production, thermal power generation and electricity distribution companies are managed by DTEK Energy.

### Coal production and preparation

DTEK Energy produces steam and coking coal of G, DG, T, and A grades, which is then prepared at its own plants. The total commercial reserves of the company's deposits amount to 1,691 mln tonnes, of which high volatile (steam) coal accounts for 1,050 mln tonnes, and anthracite and lean coal for 641 mln tonnes. DTEK is one of the largest European producers on the anthracite market.

Six companies in Ukraine and two in the Russian Federation produce coal. High volatile (steam) coal is produced by DTEK Pavlogradugol (Dnepropetrovsk Region), DTEK Dobropolyeugol, and Bilozers'ka Mine ALC (Donetsk Region). Anthracite is produced by DTEK Rovenkyanthracite, DTEK Sverdlovanthracite (Luhansk Region), and the Obukhovskaya mine office (RF). Lean coal is produced by DTEK Komsomolets Donbassa Mine (Donetsk Region).

Thirteen coal preparation plants represent the company's preparation segment.

Total commercial coal reserves of DTEK's deposits

**1.69 billion tonnes**

Coal produced by DTEK Energy is consumed by the Company's TPP, and other companies operating in the energy, metallurgy, chemical, construction and agricultural sectors in Ukraine, the CIS countries, Europe, Asia, North and South America, and North Africa.

## Electricity generation

The Company's thermal power generation facilities include DTEK Skhidenergo, DTEK Dniproenergo, DTEK Zakhidenergo, Kyivenergo, and Myronivska TPP, which belongs to DTEK Donetskoblenenergo. Total installed capacity of the generating facilities exceeds 18 GW.

The electricity generated by DTEK is supplied to the Unified Energy System of Ukraine, which is under control of the dispatcher, National Power Company Ukrenergo. All electricity is sold on the wholesale electricity market operated by State Enterprise Energoynok.

The electricity generated by Burshtynska TPP and Dobrotvirsk TPP (DTEK Zakhidenergo) is supplied to consumers in Lviv, Ivano-Frankivsk and Zakarpattia regions and can also be exported.

DTEK Burshtynska TPP successfully operates on a separate energy island that is synchronized with ENTSO-E, the European energy system.

Total installed capacity of DTEK's generating facilities exceeds

**18 GW**

The main fuel for DTEK Energy's TPPs is coal. In 2015, the share of coal in the fuel mix of the generation companies was 98.1%. High volatile (steam) coal is used for electricity generation by six TPPs: Zuivska\*, Kurakhovska (DTEK Skhidenergo), Zaporizka (DTEK Dniproenergo), Burshtynska, Dobrotvirsk, and Ladyzhynska (DTEK Zakhidenergo). Kryvorizka TPP (DTEK Dniproenergo) consumes Grade T coal; Luganska TPP (DTEK Skhidenergo) and Prydniprovsk TPP (DTEK Dniproenergo) run on anthracite and lean coal; Myronivska TPP (DTEK Donetskoblenenergo) uses high volatile (steam) and lean coal.

Gas and fuel oil account for 1.9% of electricity generation. The company's TPPs use them to ignite coal. Kyivenergo's TPPs operate on gas.

## Electricity distribution

DTEK includes six distribution companies: DTEK Donetskoblenenergo\*, DTEK Power Grid\*, DTEK Energougol ENE\*, DTEK Dniproenergo, Kyivenergo, DTEK Krymenergo\*\*. The distribution companies purchase electricity on the wholesale market of Ukraine and supply it to end consumers.

Length of DTEK's power grids

**129.5 thousand km**

DTEK's distribution companies provide services to 4.4 mln customers: iron and steel plants, coal plants and machine-building plants, as well as companies and households in Donetsk and Dnipropetrovsk regions. Kyivenergo provides a full cycle of energy services and heating supply to the capital of Ukraine.

The total length of DTEK Energy distribution companies' networks is 129.5 thousand km, and the total transformer capacity is more than 34.4 thousand MVA.

The company ensures uninterrupted electricity supply to consumers and creates additional capacity to connect new subscribers by developing power grids.

## Heating

DTEK Energy's TPPs sell heat to public utilities, companies and households in the cities, where they are located. The heat is distributed and transmitted to consumers via heating networks that are mainly communally owned.

**DTEK Group companies became the face of the industry. DTEK provided miners with modern equipment, implemented a wide-scale program for retrofitting of TPPs, constructed the most powerful wind farm, and drilled ultradeep gas wells. The implementation of these projects would have been impossible without the hard work and total dedication of our employees.**

\* Energy companies located in territories that are temporarily not controlled by the Ukrainian government operate under Resolution No. 263 of the Cabinet of Ministers of Ukraine on Specifics of the regulation of relations in the area of electricity in territories where government bodies temporarily do not exercise their authority or partially exercise their authority dated 7 May 2015.

\*\* On 21 January 2015, the Crimean government passed a resolution to expropriate movable and real property of DTEK Krymenergo.

## DTEK RENEWABLES

### Renewable energy

In the area of alternative energy generation, DTEK focuses its efforts on the development of wind energy projects. DTEK's subsidiary, Wind Power LLC, is responsible for the implementation of wind energy projects. The company constructed the Botievo Wind Farm (Zaporizhyya region) with installed capacity of 200 MW.

Installed capacity  
of the Botievo Wind Farm

# 200 MW

Botievo Wind Farm is now the largest wind farm in Ukraine and is one of the 5 largest wind farms in Eastern and Central Europe. The company is planning to expand the Botievo energy hub up to 300 MW.

The Botievo Wind Farm construction project was the company's pilot project in the wind energy segment. The Botievo Wind Farm is part of the DTEK Pryazovskyi Wind Park, which also includes Primorsk Wind Farm (200 MW) and Berdiansk Wind Farm (150 MW). Construction projects for these stations are currently under development.

**A total of 634 million kWh of "green" electricity was generated by the Botievo Wind Farm in 2015. This electricity sufficed to satisfy five months' demand of an industrial center such as Zaporizhyya in 2015.**

## DTEK OIL&GAS

### Gas production

The key priority of DTEK's gas production business is to satisfy the demand of the SCM Group companies for gas. DTEK OIL&GAS is the managing company in this business segment, which studies and implements promising projects. It also manages development of the investment environment in the segment. JSC Naftogazvydobuvannya, which develops licensed sites at the Machukhske and Semerenkivske fields in Poltava Region is the core production asset of DTEK. Proven reserves of gas (C1 and C2 categories) total 26 billion cubic meters.

Naftogazvydobuvannya is Ukraine's largest private gas production company. As of January 2016, the company was operating 20 wells. The extracted gas is processed and brought to market standards at three gas treatment plants: Machukhi, Semerenki, and Olefrivka.

Proven reserves of gas  
(C1 and C2 categories)

# 26 billion cubic meters

Naftogazvydobuvannya LLC was established to explore and develop new oil and gas fields. Following an auction held on 24 July 2015 by the State Service of Geology and Mineral Resources of Ukraine, Naftogazvydobuvannya was awarded a license to conduct a geological survey with subsequent production of hydrocarbons at the Khoroshevska field (Kharkiv Region). The reserves of the Khoroshevska field are estimated at 761 million cubic meters of gas and 495,000 tonnes of oil (C3 category). Naftogazvydobuvannya is planning to start geological and geophysical surveys of this area in 2016.



# Where DTEK Group companies operate

**Kyiv:**

**Electricity and heat generation and distribution**

Kyivenergo

**Dnipropetrovsk Region:**

**Coal production and preparation**

DTEK Pavlogradugol:  
Pershotravenske mine office,  
Pavlogradske mine office,  
Dniprovskia mine office,  
Ternivska mine office,  
Geroiv Kosmosu mine office,  
Pavlogradska coal preparation plant (CPP)

**Electricity generation**

DTEK Dniproenergo:  
Kryvorizka TPP,  
Prydniprovskia TPP

**Electricity distribution**

DTEK Dniprooblenergo:

**Donetsk Region:**

**Coal production and preparation**

DTEK Dobropolyeugol and Bilozers'ka Mine ALC:  
Bilozerska mine office,  
Dobropilske mine office;  
DTEK Dobropilska CPP;  
DTEK Mine Komsomolets Donbassa:  
Komsomolets Donbassa mine office and CPP,  
Mospino coal preparation enterprise;  
Kurakhovska CPP;  
DTEK Oktyabrs'ka CPP

**Electricity generation**

DTEK Skhidenergo:  
Kurakhovska TPP, Zuivs'ka TPP;  
DTEK Donetskoblenergo:  
Myronivska TPP

**Electricity distribution**

DTEK Energougol ENE;  
DTEK Donetskoblenergo;  
DTEK Power Grid

**Luhansk Region:**

**Coal production and preparation**

DTEK Rovenkyanthracite:  
Rovenkivske mine office,  
Yasenivske mine office,  
Komendantska CPP,  
Rovenkivske preparation plant,  
Vakhrusheva preparation plant;  
DTEK Sverdlovanthracite:  
Chervonyi Partyzan mine office,  
Sverdlovske mine office,  
Sverdlovske CPP,  
Tsentropilka preparation plant,  
Chervonyi Partyzan preparation plant

**Electricity generation**

DTEK Skhidenergo:  
Lugans'ka TPP

**Lviv Region:**






**Electricity generation**

DTEK Zakhidenergo:  
Dobrotvirs'ka TPP

**Poltava Region:**

**Gas production**

Naftogazvydobuvannya

-  – gas production
-  – electricity distribution
-  – electricity generation
-  – coal production and preparation
-  – renewable energy

**Vinnitsia Region:**

**Electricity generation**

DTEK Zakhidenergo:  
Ladyzhyns'ka TPP;  
Ladyzhyns'ka HPP

**Zaporizhya Region:**

**Electricity generation**

DTEK Dniproenergo:  
Zaporizka TPP;  
Wind Power: Botievo wind farm

**Ivano-Frankivsk Region:**

**Electricity generation**

DTEK Zakhidenergo:  
Burshtyns'ka TPP

**Kharkiv Region:**

**Gas production**

Naftogazvydobuvannya

**Autonomous Republic of Crimea:**

**Electricity distribution**

DTEK Krymenergo

**Russian Federation:**

**Coal production and preparation**

Mine Office Obukhovskaya JSC,  
Donskoy Anthracite JSC, including  
Sulinanthracite LLC;  
Obukhovskaya mine office and CPP

# Key production and financial indicators 02

Coal production

**28.7**  
million tonnes

Electricity generation (supply)

**38.3**  
billion kWh

Gas production

**1.3**  
billion cubic meters

Electricity distribution

**45.1**  
billion kWh

## Key financial indicators

**Revenue** – USD 4,367 mln

**EBITDA** – USD 344 mln

**Net losses** – UAH 41,890 mln

**Assets** – USD 4,990 mln

**Capital investments** – USD 230 mln

**Tax paid** – USD 662 mln

# Key achievements and events for the reporting period 03

## March

**The DTEK Conference on the "Role of the initiative of local communities in the development of territories" became a platform for a dialog between the government, local self-government, business, and non-governmental organizations.** The most popular topics of the conference included the possibility of voluntary associations of communities, decentralization of power, and cooperation with the State Regional Development Fund. The participants also discussed the results achieved by the projects implemented in cooperation with DTEK within the framework of three-year social partnership strategies for 2013-2015.

## April

**DTEK successfully completed negotiations to restructure Eurobonds with a total value of USD 200 mln,** which matured in April 2015. The exchange was approved by 91.14% of holders who had the right to participate in a tender process to restructure the securities.

**DTEK entered the top 5 in the rating of Ukraine's Most Attractive Employers 2015** following a survey conducted among engineering and natural science professionals. The rating was compiled by Universum, a company specializing in employer branding, in cooperation with the HeadHunter Ukraine, job portal.

**The unique exploratory well No. 17 of the Semerenkivske gas condensate field was commissioned for pilot operation.** This 6,750 meter well became the deepest well in Europe producing commercial gas inflow.

**Power supply to ventilation shaft No. 3 (VS-3) at DTEK Mine Komsomolets Donbassa,** which was shelled numerous times during military operations, was restored. This restored the operation of ventilation shaft No. 2 and allowed degassing of a network of mine openings. Then, to resume the extraction of lean coal, the mine openings were inspected, and operations to pump out water and repair equipment were started. The resumption of lean coal production allowed the accumulation of sufficient reserves of coal at Ukrainian thermal power plants, thus securing the 2015/2016 heating season. The required materials were supplied under a Temporary Procedure for controlling the movement of people, transport vehicles and cargo along the contact line in Donetsk and Luhansk regions.

## May

**The retrofit of power unit No. 9 of Kurakhovska TPP was completed.** The modernization increased the unit's capacity by 15 MW to 225MW, and the fuel combustion rate decreased by 6%. Dust emissions were reduced by 40 times to the level specified by European Directive 2001/80/EC.

**Phase one of the construction of a ventilation shaft at Yuvileina mine was completed:** a shaft was drilled, a lift for moving people up and down, materials and equipment was installed, and an air ventilator was commissioned. The construction of the shaft opens access to the development of 19 million tonnes of commercial coal reserves.

**Kyivenergo completed construction of a 330 kV gas-insulated distribution unit at CHPP-5.**

As a result, the reliability and quality of electricity supply in Kyiv was improved due to the enhanced connection between the capital's electricity supply system and the Unified Energy System of Ukraine.

## June

**Commercial testing of the world's first frontal cutting complex was completed.**

Tests were performed in different mining and geological conditions: at the Stepova mine from September 2013, and then continued at the Yuvileina mine. The development of cutting-edge equipment for installing assembly chambers in thin coal layers was carried out by Corum Group on the initiative of DTEK.

## August

**Naftogazvydobuvannya, a company of DTEK Group, was awarded a license to conduct a geological survey with subsequent production of hydrocarbons at the Khoroshevsk field.** C3 category reserves of the Khoroshevsk field are estimated at 761 million cubic meters of gas and 495 thousand tonnes of oil. Geological and geophysical surveys must be performed to assess the feasibility of production.

**DTEK delivered anthracite via Nikitovka-Mayorskaya railway passage.** Thanks to the joint efforts of railway personnel and DTEK, the movement of trains was resumed on this section of the railway, which was destroyed during military operations in 2014. This made it possible to increase the supply of coal from the ATO zone and accumulate sufficient coal reserves at TPP warehouses for the 2015/2016 heating season.

## September

**DTEK entered into a partnership contract with the Ivano-Frankivsk National Technical University of Oil and Gas.** The parties agreed to cooperate in three areas: education of young specialists; professional development for oil and gas employees; joint research and development projects, and implementation of engineering projects and research.

**Organizational structure and sales functions were transformed at the level of customer service centers (CSC):** regional power supply divisions operated by DTEK Dniproenergo and DTEK Donetskoblenergo were transformed into CSC. Sales and customer service functions are being aligned with the approved Customer Service Quality Standards.

## October

**Naftogazvydobuvannya, a company of DTEK Group,, completed a wide azimuth 3D seismic survey at the Machukhske and Semerenkivske license fields** to develop resource potential of deep deposits (down to 6,500-7,000 meters). These operations were unique for Ukraine in terms of technologies, scale and complexity.

## November

**The Energy Efficient School Project was awarded the grand prize of the all-Ukrainian competition Best Social Projects of Ukraine.** The competition was organized with support from the Ministry of Social Policy of Ukraine. The Company launched this project in 2013. The project is aimed at students in grades 6 to 8, who receive education and practical training in energy efficiency: they are involved in laboratory classes, organize information campaigns in schools and nearby areas, participate in competitions between schools to reduce energy consumption, learn how to perform a heat audit of buildings, and develop projects to improve the energy efficiency of school buildings. DTEK finances the implementation of the best proposals.

**DTEK Energy entered the ten best project management companies of Ukraine among 654 project management companies that participated in the rating.** The survey was conducted by Spider Ukraine and PMI Kyiv Chapter (Kyiv branch of the Project Management Institute) with support from the PMI World Project Management Association.

**Kyivenergo completed a project to install more than 3,000 building heat metering unit,** and also recorded more than 4,000 units for fiscal metering. As a result, 90% of consumers pay for actually consumed heat, and Kyiv is one of Ukraine's leaders in terms of installation of heat meters in residential buildings.

## December

**DTEK's Clean City project and Get a Child Ready for School volunteer project for children displaced from the ATO zone won first prize of the all-Ukrainian competition Corporate Volunteer Programs in Ukraine 2014-2015.** The competition was initiated by the Eastern Europe Fund in partnership with the UN Global Compact network in Ukraine and the Ukrainian Philanthropists Forum. The competition brings together the best business practices or help find solutions to society's most acute social and environmental problems by attracting expertise of leading companies.

**In 2015, the Ministry of Education and Science of Ukraine approved five educational standards developed by DTEK as state standards.** In particular, these standards apply to the following occupations: stope miner, underground installation operator, electric meter electrician, and substation electrician. Engineers and managers of production and engineering department of DTEK Group defined requirements applicable to these occupations and to the scope and quality of work activities.

**DTEK Power Grid completed the retrofit of switchgear 150 kV at the Dniprovskia substation,** which is a backbone substation of the Pavlograd energy hub. This substation connects several other electrical substations and at the same time supplies electricity to a number of mines, companies and residents of Dnipropetrovsk Region. The work was aimed at improving the reliability of electricity supply to consumers.

# Humanitarian contribution of the Company

**DTEK engineers and volunteers have been restoring the destroyed grid and implemented humanitarian initiatives aimed at providing support to internally displaced persons. The Company, together with SCM Group businesses, were also actively involved in the work of Rinat Akhmetov Humanitarian Center, which was established to provide maximum assistance to all civilians in Donetsk and Luhansk suffered from military operations.**



## Engineers

**582 high voltage lines and 554 substations were restored and connected**

Damaged power units were restored by DTEK Donetskoblenenergo, DTEK Power Grid and DTEK Energougol ENE. The companies are continuing emergency response and restoration operations while supplying electricity to consumers.

## Volunteers

The company's volunteers initiated the collection of warm clothing and footwear for internally displaced people as well as school supplies for children from internally-displaced families.

**More than 2,500 pieces of clothing and footwear and more than 600 articles of stationary for schoolchildren were collected and delivered.**

DTEK provided support to the Beauty will Save the World exhibition of art works created by people displaced from the ATO zone. The proceeds from the sale of art works were donated to help internally-displaced people.

**28 artists from Donbas cities participated in the exhibition, and more than 200 art works created in different styles and techniques were exhibited.**



## Mission

We are working in the name of progress and social prosperity.

Our energy brings light and warmth to people.

## Vision

We are a dynamically developing Ukrainian company, that strives for leadership in European energy markets. Our success is based on people, efficiency, and advanced technologies.

## Values

### Professionalism

Our employees have extensive professional knowledge, carry out their duties responsibly and diligently, and accomplish their tasks in a timely and workmanlike manner.

We strive to achieve the best results while making the best possible use of human, natural and financial resources.

### Responsibility

We are building our business on the understanding that all our efforts should serve the interests of society. We bear responsibility for the quality of our work and the observance of corporate standards, for meeting our obligations, for using resources prudently, and for protecting the environment. We are responsible for the people who make the success of our company possible – our employees.

### Pursuit of excellence

We create the right conditions for the development of talents and abilities of our employees, implement the latest technologies, and improve production and management processes. As we expand our business, we strive to instil confidence in our employees and contribute to the successful development of Ukraine.

### Unity

We value team spirit, unity and solidarity. We can only achieve strong results as a team. We enjoy both working and socializing together. Our common potential comes from the diverse experience and knowledge of each employee. Our unity comes from the common pursuit of the same ideas and goals while understanding and supporting each other.

### Openness

We are open and keep employees, partners, shareholders and other external parties informed about important issues relating to our development, creating a foundation for working together in a spirit of trust. We conduct our business on the basis of principles that are clear to our employees and partners.

## Development concept

DTEK will actively develop in Ukraine and enter the markets of neighboring countries as a diversified energy company with secured fuel resources.

DTEK will focus on the sale of electricity to all categories of consumers while maintaining high standards of service and building a strong retail brand.

DTEK will support and develop the key success factors: talents and potential of its employees and efficiency of production, investments, and management.

DTEK will participate in the reform and modernization of Ukraine's economy, social development of regions where it operates, and promotion of best Standards in industrial and environmental safety.





# Stages and priorities of DTEK's 2030 Corporate Strategy

**In 2013, DTEK started implementing its long-term development strategy, which sets key vectors of business development, management projects and technologies. The strategy envisages three stages and covers six areas: energy, society, customers, people, efficiency and Ukraine "plus".**

## 1 Stage

**2013-2015**

The implementation of stage one of DTEK's 2030 Corporate Strategy was completed in 2015. During this period, the Company became a major player in the renewable energy sector, and became the number one private company in the area of gas production.

However, DTEK had no choice but to revise the program for the development of mines, thermal power plants, and distribution companies due to military operations in Donbas and a crisis in the Ukrainian energy industry. The Company's priority was to preserve the stability of its companies' operations to ensure stable tax payments to the state budget, secure full-time jobs for people and prompt payment of salaries. DTEK has accumulated specific experience in dealing with crisis situations, and managed to reform itself without losing control, while retaining its personnel. DTEK ensured the urgent restoration of vital activities (electricity, heat, and water supply, transport infrastructure) in the regions affected by military operations.

Distribution companies operating in the areas that were not affected by military operations established a retail function, which allowed them to offer consumers high-quality services and introduce new services. All regional electricity supply division operated by our distribution companies were transformed into Customer Service Centers (CSC) operating as a one-stop-shop service, and modern contact centers were established.

At this stage, the Company successfully completed implementation of the new corporate governance model, which allowed up to separate the strategic planning function from business operations. Novator continuous improvement and lean production system aimed at improving the efficiency of operations was also implemented. The aim of Novator is to increase the efficiency of the Company's operations by developing the potential of its employees, constant improvement of processes, reduction of losses, and improving product quality.

In the area of occupational health and safety, the main focus for DTEK in 2013-2015 was creating a culture of occupational safety and making safe behavior at the workplace an ingrained habit of every employee. During this period, the lost time accident frequency rate decreased by 35% to 0.44. Today, working conditions at almost all production facilities of DTEK Group comply with the OHSAS:18001 international standard.

DTEK completed the implementation of the three-year social partnership strategies developed in cooperation with local communities in 2012 and aimed at finding consistent solutions to the most acute problems. These strategies outline five main areas for cooperation, which not only proved their effectiveness, but also became more relevant in the crisis conditions. In 2015, the company initiated and financed the mapping out of strategies for the development of business areas for the next three to five years. The strategies define the key points of growth capable of producing a maximum effect on the economy and social life of cities, making them more sustainable and wealthier.

## 2 Stage

**2015-2020**

### Energy

- increasing efficiency of the use of generating capacities, completing retrofit projects at mines and coal preparation plants, switching distribution companies to incentive tariff policies;
- systematic development of the main assets in the gas production segment, development of the existing and future priority sites of the undistributed reserve;
- development and implementation of wind energy projects in Ukraine and neighboring countries.

### Society

- reducing the number of workplace injuries;
- implementing development strategies in the areas where the Company operates;
- building an effective environmental risk management system;
- promoting the best European practices aimed at reforming the energy industry and creating an efficient competitive environment.

### People

- establishing a personnel service center based on a single IT platform;
- creating a system of continuous personal development for all employees;
- changing employees' attitudes to occupational safety.

### Efficiency

- reaching the optimal operation modes of the load at TPP and mine capacities;
- successful rollout of the Novator, continuous improvement and lean production system, at all companies;
- reducing costs by improving the efficiency of energy resource use.

### Customers

- switch to a single billing platform by distribution companies;
- establishing a single customer service center and implementing a customer relationship management system;
- developing and implementing a retail brand;
- extending the range of services by introducing energy services.

### Ukraine "plus"

- implementation of the strategy for direct entry to the European energy market;
- increasing the share of direct sales to end consumers.

## 3 Stage

**2020-2030**

The final stage of the long-term strategy aims at using new technologies in all areas of the Company's activities. Focus will be on the application of new technologies: safety of processes and automation, sales of electricity and ancillary services. DTEK will continue expansion both in development of new businesses and geographical diversification of business.

# Six strategic vectors of development

## Energy

The basis of DTEK's energy business is thermal generation with own fuel supply. DTEK diversifies its assets portfolio by developing projects in renewable energy and gas production.

The Company strives to maintain at least a 25% share of the electricity market, which amounts to about 40 billion kWh of electricity supply with consideration of growing consumption.

It is expected that by the end of 2016, an incentive tariff policy will be introduced in the distribution segment, which will increase the investment attractiveness of the business and will create favorable conditions for further development.

The Company plans to continue developing the portfolio of Ukrainian wind energy assets, first of all, by implementing the Pryazovskiy Wind Park construction project.

In gas production, the Company will focus on active drilling of wells at the Semerenkivske and Machukhske fields under a long-term development program. A exploration survey will be carried out in the Khoroshevske area, and the Company will participate in auctions to purchase new license areas from undistributed deposit reserves.

**DTEK's strategy is based on common goals for all Ukraine and contributes to the solution of key tasks of the country: energy independence, energy efficiency, and energy balance. The Company is actively engaged in promoting the best European practices aimed at reforming the energy industry and creating an effective competitive environment.**

## Society

One of the key tasks is to reduce the workplace injury rate by half, which will be achieved by establishing modern production facilities and processes where complex sections are automated and automatic control of mining safety indicators is implemented. Our primary task is to establish a culture of valuing one's own life.

DTEK will promote comprehensive development of Ukraine in general with the primary focus on the regions where the Company's facilities operate. One of our primary goals is to establish partnership with society, to promote joint initiatives with local residents for urban development and to facilitate an understanding by local communities of the challenges the business faces. DTEK implements large-scale social programs to raise living standards in the cities and towns where the Company operates, including those targeting environmental protection. To achieve this goal, DTEK plans to develop and implement an efficient system of environmental risk management.

The Company outlined five main areas for cooperation with the regions where it operates: energy efficiency in the utilities sector, healthcare, support of socially important infrastructure, development of the business environment, and encouraging the initiatives of local communities.

Today, the Ukrainian energy sector is undergoing large-scale reforms that will result in the liberalization and openness of the market, establishing market coal pricing mechanisms and tariffs in the electricity generation and distribution segments. DTEK is actively engaged in supporting the reforms by participating in working groups on the development of draft laws.

The focus will be on preserving and improving the Company's reputation. DTEK has always demonstrated that it does business transparently, and will continue to do so in the future.



## Customers

Liberalization of the energy market means that consumers have the right to choose their suppliers. In order to effectively operate in a free market, the transition from electricity supply company to a customer-oriented business has become DTEK's key task.

The Company develops common customer management standards for all distribution companies by replacing the obsolete service system with Western standard service. There are plans to expand our network of CSC and unify its operating principles. Online services are replacing consumer billing books. In the next couple of years, we will introduce a single centralized billing system, thus establishing the foundation for the large-scale deployment of Smart Grid and Smart Metering technologies.

The Company is expanding its range of services by adding energy efficiency services, which should result in growth of customer satisfaction to 90% by 2030.

We will be actively developing DTEK's retail brand to make reliability and innovations available to everyone.

## People

People are the backbone of the Company and the source of our greatest competitive advantages. DTEK will proceed with investments in the development of our personnel and promotion of an innovation culture.

People are the Company's intellectual capital, and we are planning to train all managers in the personnel management systems and to create a system of continuous personal development for employees. The focus will be on the formation of corporate culture that creates conditions for efficient achievement of business goals, employee engagement, building loyalty to the Company and adopting the Company's values.

DTEK plans to use state-of-the-art IT technologies in the areas of human resources, benefits and incentives, and organizational management, as this will allow organization of personnel management business processes in the most efficient manner, as well as cultivate and attract talent to the Company.

**DTEK will continue with large-scale investments in the development of its personnel and will promote an innovation culture in production and management. The Company's goal is to use the Human Capital philosophy, according to which employees act as business partners.**

## Efficiency

DTEK strives not only to reduce costs, but also to explore new possibilities to obtain maximum return from used resources.

The Company is implementing the Novator, continuous improvement system, and developing a culture of lean production. Novator will become the basic model for employee conduct: each employee will have the right to make a reasonable suggestion on improving efficiency at his/her workplace. The best proposals will be implemented.

This approach is conducive to business development and has advantages for consumers and the economy in general. From the point of view of consumers, DTEK's efficiency means lower electricity consumption; for partners this means a lower energy component in the cost, while for Ukraine this means increased energy security, the implementation of innovations, a favorable investment climate, and increased effectiveness of the entire economy.

Business efficiency is a prerequisite for sustainable long-term development.

## Ukraine "plus"

Ukraine is the key priority for DTEK's development. The company's largest investments are channelled to the development of Ukraine's energy sector and economy. We build new capacities, introduce new technologies, and set up new businesses. Effective operation on external markets is impossible when there is no strong production base at home.

At the same time, we try to develop commercial relations with external markets. One of our main tasks is to expand technical and business opportunities to export electricity, implement modern and innovative commercial mechanisms, and reach end consumers on European markets. DTEK is ready to take part in the project for synchronization with ENTSO-E, and will do everything necessary to get its power units and networks ready for integration into the European energy system.

In general, DTEK strives to represent the Ukrainian business sector to international partners as a transparent, responsible and effective Company, oriented toward long-term sustainable development.

# DTEK Group top management 06



## **Maksym Timchenko** **CEO of DTEK**

Mr. Timchenko has been the head of DTEK since July 2005.

Under his leadership, DTEK has become the largest Ukrainian company, providing employment for 118,000 employees residing in 10 regions of Ukraine.

Since 2005, DTEK's portfolio has grown to 31 mines, 13 coal preparation plants, 10 TPPs, 2 CHPPs, and 6 distribution companies. In 2013, DTEK became a major shareholder of the largest private gas producing company in Ukraine – Naftogazvydobuvannya. In 2014, DTEK completed the construction of Botievo Wind Farm with a capacity of 200 MW, which is one of the 5 largest wind power farms in Central and Eastern Europe. In 2015, DTEK successfully implemented a new corporate governance structure, which provides for effective unbundling of strategic planning and operational functions.

Along with 20 other leaders of the world's largest energy companies, Maksym Timchenko was a co-founder and signatory of the Energy for Society, a global initiative of the World Economic Forum.

For years, Maksym Timchenko has maintained a leading position among top managers of Ukrainian companies according to ratings by leading Ukrainian business publications. In 2014, he ranked first in the "Top-100 Best Executives of Ukraine". In 2012 and 2013, Forbes and Companion magazines positively assessed Maksym Timchenko's work: he made it into their lists of the top ten business executives of Ukraine.

From 2002 to 2005, Mr. Timchenko worked as a senior manager at SCM, where he was responsible for SCM's energy business until it was spun off into DTEK. Mr. Timchenko began his career as a consultant at PricewaterhouseCoopers (1998–2002), where he advanced to a senior auditor position. He is a member of the Association of Certified Chartered Accountants (ACCA).

He obtained a diploma in Production Management with honours from the Donetsk State Academy of Management in 1997. He continued his education at Manchester University and received a BA degree in Economics and Social Sciences with honours.



## **Vsevolod Starukhin** **CEO of DTEK Energy**

Mr. Starukhin was appointed to his current position in September 2014.

In March 2010, he became CFO at DTEK. He joined DTEK in December 2009 as deputy finance director.

For several years, Mr. Starukhin has maintained a leading position in the list of best CFO of Ukraine. He also was a member of a professional ratings jury. In 2013, Mr. Starukhin was the winner in the Fundraising Category of 50 Best CFOs in Ukraine by Investgazeta. The rating selected the best finance directors of Ukrainian companies, and five of them won in special categories. The nominees were assessed by leading international consulting and investment companies: Concorde Capital, Horizon Capital, Ernst & Young and KPMG. In 2011-2013, Mr. Starukhin topped the list of 10 Best CFOs in Ukraine (held annually by Financier Magazine) three times in a row. In 2014, he joined the rating's jury.

Mr. Starukhin started his career in 1995-1996 at Kraft Jacobs Suchard as a financial operations and credit control manager. He headed the financial departments of Mars in Russia, Hungary, the Netherlands and Brazil from November 1996 to May 2006. He worked at Schlumberger in 2006-2008 as the financial manager in the Company's headquarters in France and later on as CFO in Russia. In April 2008, Mr. Starukhin became CFO of the aluminum division of RUSAL (Moscow, Russian Federation).

In 1995, he graduated from the Warsaw School of Economics and received a degree in International Economics. In 2003, he received a PhD in Economics at the Academy of Labour and Social Relations in Moscow. While working at DTEK, he completed a joint program Leader's Energy by the London Business School (Great Britain) and DTEK Academy.



**Igor Shchurov**  
**CEO**  
**of PJSC Naftogazvydobuvannya**

Mr. Shchurov was appointed to his current position in April 2013.

Prior to this, from 2011, Mr Shchurov was in charge of DTEK OIL&GAS. He joined DTEK Group after Novatek, Russia's largest independent gas producer, where he was the head of its subsidiary Novatek-Tarkosalenftegaz (annual production – 14 billion cubic meters of gas). From 1998 to 2007, he worked at Samaraneftgaz (Yukos Oil Company), where he rose from oil and gas production operator to deputy general director.

In 2002, he received a PhD in Technical Sciences at Ufa State Petroleum Technological University. In 2000, he received a second university degree in Finance and Credit at Samara State University of Economics. In 1998, he graduated from Samara State Technical University where he received a degree in Oil and Gas Field Development.



**German Ainbinder**  
**Director of Wind Power**

Mr. Ainbinder has been the head of Wind Power since December 2011. In April 2016, he joined the Supervisory Board of DTEK RENEWABLES.

He started his work at DTEK in 2005 as a Strategy and Corporate Development Director. In 2008 he became Head of the Business Development Division at DTEK, which was in charge of setting up and developing new business areas, including alternative energy resources.

In June 1999, Mr. Ainbinder joined the Strategy and Organization Design team at KPMG. From 1997 to 1999, he worked in the Russian division of Merck Sharp & Dohme Idea where he was in charge of business development. In 1995, he joined the Management Consulting Team at Deloitte&Touche CIS.

In 1995, Mr. Ainbinder graduated from the School of Business and Economics at the Government of the Russian Federation's Academy of National Economy. In the same year, he received an MBA degree in Applied Economics and Finance from California State University (Hayward). In 1991, he graduated from the Moscow Machine-Instrument Institute.

# Review of macroeconomic indicators and industries

Ukraine's macroeconomic  
indicators in 2015

01

Coal Market

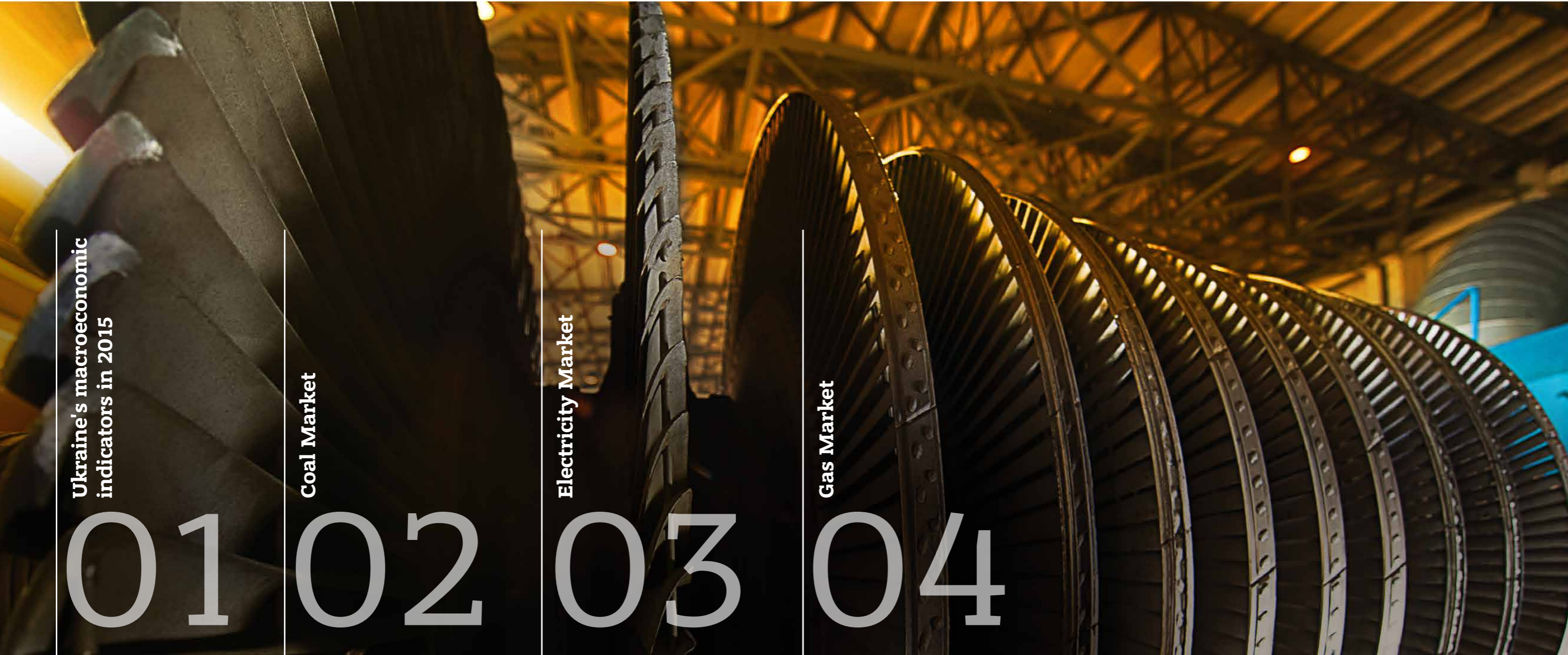
02

Electricity Market

03

Gas Market

04

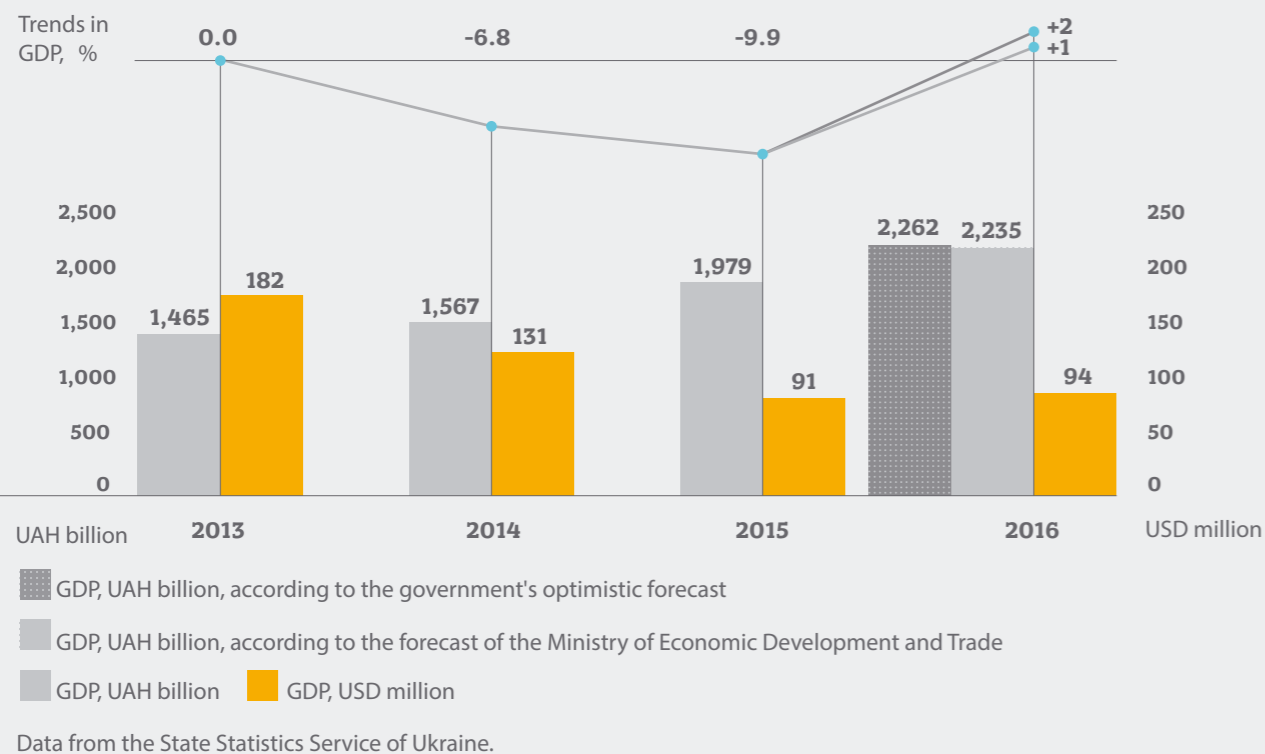


# Ukraine's macroeconomic indicators in 2015 01

In 2015, Ukraine's economy continued to experience a downturn. Gross domestic product dropped by 9.9%. The negative results are attributed, first of all, to the ongoing military conflict in Donetsk and Luhansk regions, annexation of Crimea and severance of economic connections with these regions. Similar to 2014, the economy continued to be adversely affected by a high rate of inflation, devaluation of the national currency, reduction of real household earnings, downward trends in external markets and protectionist measures pursued by – trading partners.

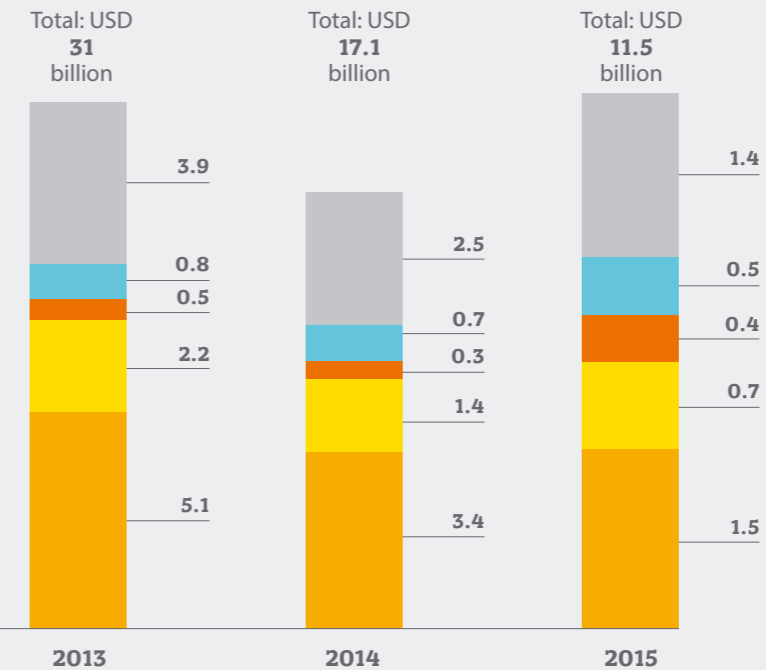
Increasing the availability and effectiveness of the military forces has remained a top priority for Ukraine. In 2015, USD 4.4 billion was allocated in the state budget for defence and security purposes. This is 50% higher in UAH terms than in 2014, and accounts for 16% of all budget expenditures. At the same time, budgetary financing provided to business activities increased by 28.9% in UAH terms to USD 2.6 billion.

## Ukrainian GDP



**The resumption of economic growth was identified by the government as its main task for 2016. According to the optimistic forecast, Ukraine's GDP could rise by 1-2% within a year. Up to 2% growth of industrial production is expected.**

## Structure of capital investments, %



Legend:

- Industry
- Construction
- Information and Telecommunications
- Agriculture
- Other

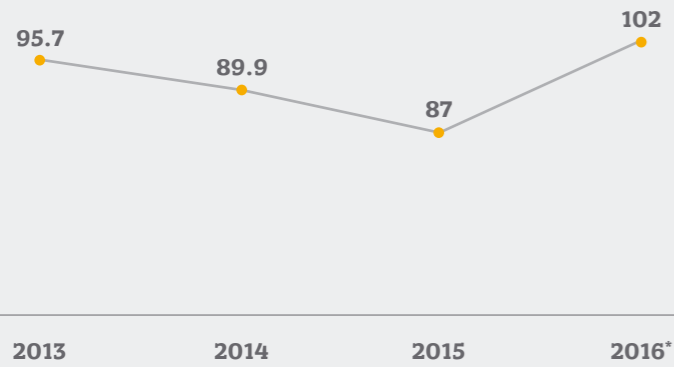
Data from the State Statistics Service of Ukraine.

In 2015, in the structure of capital investments, equity of companies accounted for 67.4%, private investments in housing construction – for 12%, bank loans – for 7.3%, budgets of all levels – for 7.4%, and foreign investments accounted for 3.1%.

The share of foreign investors increased by 0.4 basic points compared to 2014, and the share of local and central budgets increased by 4.1 basic points as a result of the reduction of the share of companies by 4.1 basic points.

Ukraine succeeded in reversing the negative trend in attracting foreign capital observed in 2014 and Q1 of 2015. In 2015, USD 3.8 billion in direct foreign investments were received compared to USD 2.4 billion in 2014. Capital outflow slowed to USD 0.9 billion from the starting point of USD 1.2 billion. In aggregate, the reduction in shareholders' equity, including the reduction caused by exchange differences, amounted to USD 5.2 billion in 2015 while in 2014 this indicator reached USD 13.6 billion.

### Industrial production index, %



Data from the State Statistics Service of Ukraine.

\*The government's forecast

The internal market failed to encourage domestic production as consumer purchasing power dropped. Despite the growth of annual average nominal wages by 30.4% in UAH terms by up to USD 240, the real wage index was 90.1% due to high inflation. At the same time consumer prices increased by 43.3% year-on-year. According to the government's forecast, in 2016, minimum wages and pensions will grow by 12.5% while prices are expected to rise by 12%.

In 2015, the industrial production index was 87%, although in December 2015 this indicator reached as high as 101% as compared to November 2015. In 2015, the volume of sales of industrial products increased by 25.5% year-on-year to in UAH terms to USD 67 billion. This increase is attributed the growth in industrial prices by 25.4% year-on-year. At the same time, the industry's expenditures increased, including expenses in connection with transportation services. Transportation tariffs grew by 27% during the year.

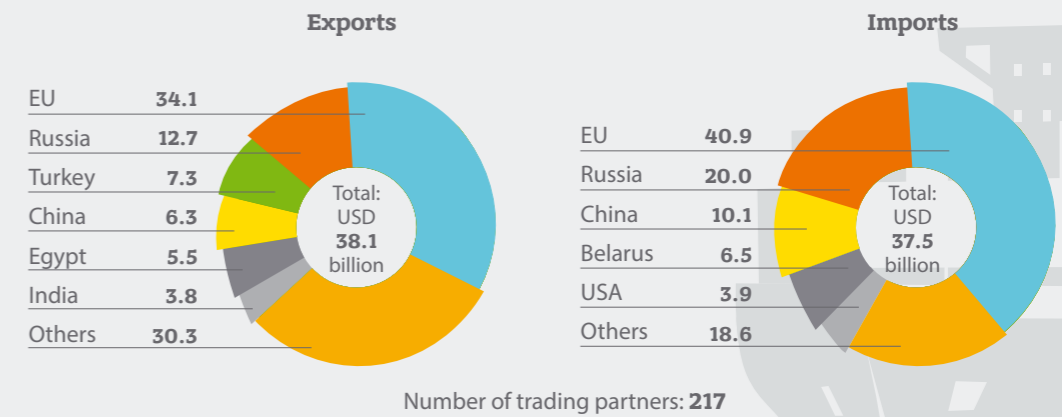
In 2015, retail sales turnover exceeded USD 45 billion, which is 79.3% in UAH terms in comparable prices compared turnover in 2014.

The drop in prices and overproduction on international raw materials markets caused a 29.3% reduction in exports of Ukrainian goods to USD 38.1 billion. Devaluation of the national currency could have had a positive effect on the growth of exports. However, this index was adversely affected by negative factors, such as the closure of the Russian market. Exports to the Russian Federation fell twofold in 2015.

In these conditions, industrial production contracted by 13.4% year-on-year. The deceleration was steeper in energy-intensive industries: 16.4% for the iron and steel industry, and 15.9% for the chemical industry. At the same time, in December, the "investment goods" industrial group showed growth of 9.4% in production on a month-on-month basis and 3.3% year-on-year. Increased demand for these products could be an indicator of the stabilization of the industry. However, in 2015, the output of investment goods fell by 15.4% compared to 20.3% in 2014.

As a result, the industry reduced energy consumption by 17.8%, which amounts to 50.1 billion kWh, while consumption of gas fell by 22% to 11.2 billion cubic meters.

### The structure of cross-border trade in 2015, %



Data from the State Statistics Service of Ukraine.

Exports to EU countries contracted to the level of USD 13 billion (-23.4% year-on-year), while imports of goods from EU amounted to USD 15.3 billion (-27.2% year-on-year).

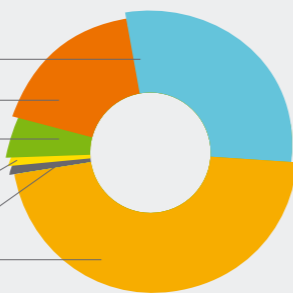
In 2015, the major share of Ukrainian exports belonged to products produced by the iron and steel industry (24.8%), products of vegetable origin accounted for 20.9%, 10.3% was accrued by the machinery industry products, fats and oils of animal or vegetable origin accounted for 8.7%, mineral products accounted for 8.1%, the share of prepared foods was 6.5%, and products of the chemical industry and related industries accounted for 5.6%.

Devaluation of the national currency by 52.2% to 24 UAH/USD resulted in a substantial increase in prices of imported goods causing a drop in demand. Mineral products accounted for 31.2% of total imports, machinery products accounted for 16.7%, products of the chemical industry and related industries accounted for 13.3%, polymers, plastics and goods made from them accrued 7.1%, the share of products produced by the iron and steel industry was 5.3%, means of ground transportation, aircraft, and watercraft accounted for 4.7%, and prepared food products accounted for 4.3%.



### The total amount of government and government-guaranteed debt as of 31.12.2015

	USD billion	UAH billion
UAH	19.5	468.4
SDR*	12.5	299.7
EUR	3.9	93.2
CAD	0.3	6.9
JPY	0.2	5.6
USD	29.1	698.0
<b>Total</b>	<b>65.5</b>	<b>1,571.8</b>



Data from the Ministry of Finance of Ukraine

\* Special Drawing Rights

### Structure and trends in government and government-guaranteed debt, billion USD

	2014	2015
External commercial debt in foreign currency	21.4	18.1
Internal commercial debt in the national currency	26.5	19.4
Internal commercial debt in foreign currency	4.3	2.5
Internal official debt in the national currency	0.2	0.1
External official debt in foreign currency	16.4	23.3
Borrowings guaranteed by the US government	1.0	2.0
<b>Total</b>	<b>69.8</b>	<b>65.5</b>

Data from the Ministry of Finance of Ukraine

In 2015, the USD equivalent of Ukraine's government and government-guaranteed debt decreased by 4.3 billion as a result of debt restructuring and partial write-off. This indicator in the national currency increased by USD 21.6 billion due to the devaluation of the national currency.

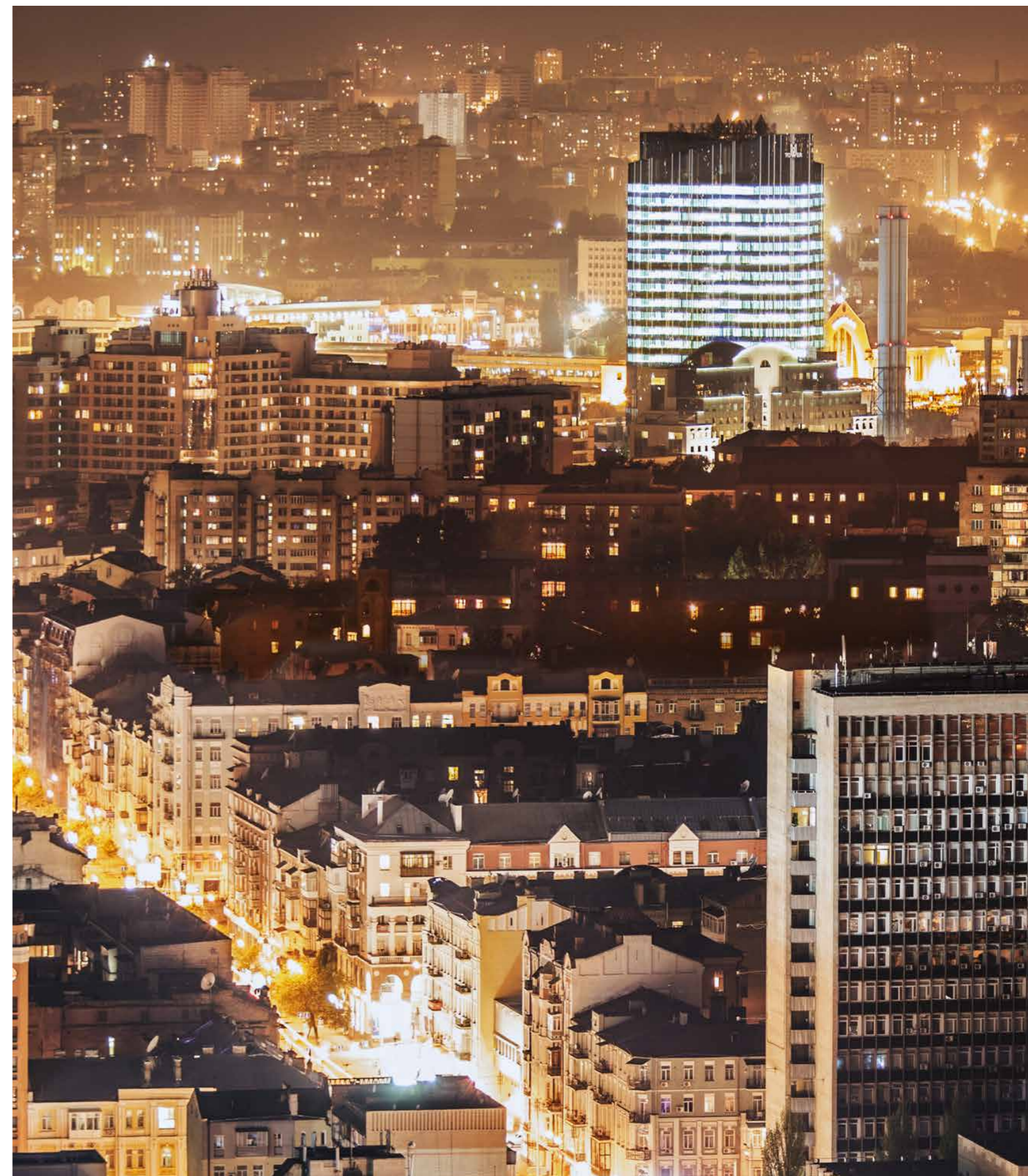
The National Bank of Ukraine's (NBU) international reserves reached USD 13.3 billion, an increase of 77%. Foreign currency reserves covered 3.5 months' worth of imports, while the standard rate is three months. However, the reserves were lower compared to the NBU' forecast due to a delay in financing under the IMF program.

The banking system demonstrated excessive liquidity. At the same time, due to the slowdown of commercial activity, high interest rates, and heightened requirements applicable to borrowers, the demand for credit resources remained low in 2015. At the end of 2015, companies were able to raise loans to finance their working capital from major banks in the national

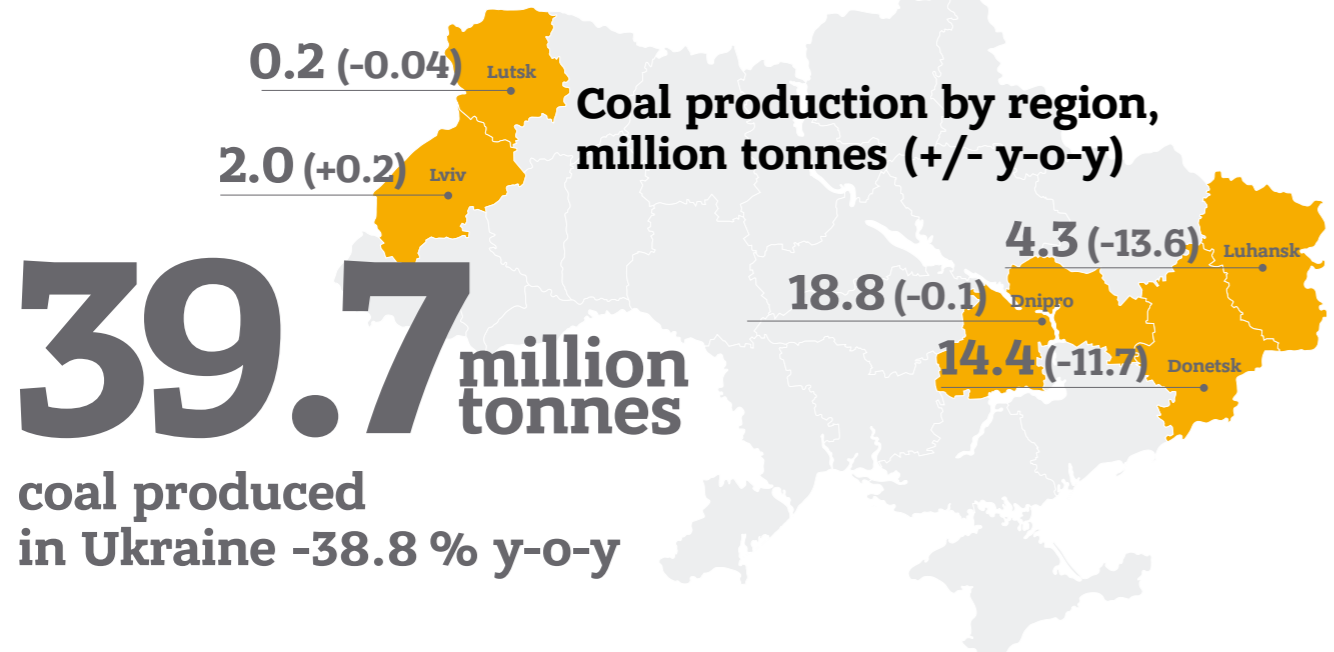
currency at an interest rate of 21% while producers' prices grew by 25.4% during the year.

At the end of 2015, the total amount of borrowings in the economy fell to USD 33 billion compared to USD 50.9 billion at the beginning of the year. The aggregate amount of repaid loans raised by commercial entities was higher than the amount of loans received by them. At the same time, the banking sector increased its loan portfolio by USD 8.7 billion in 2014.

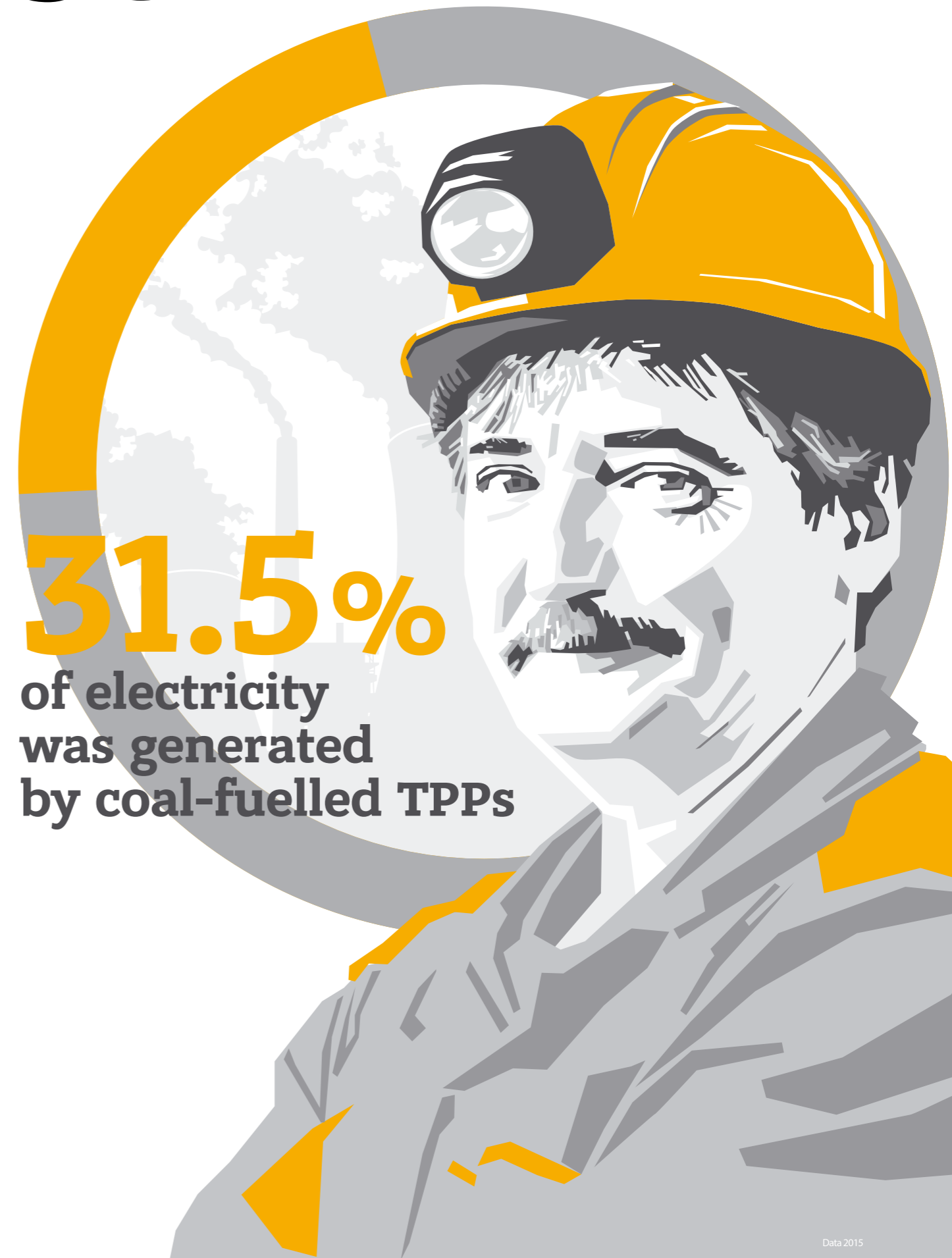
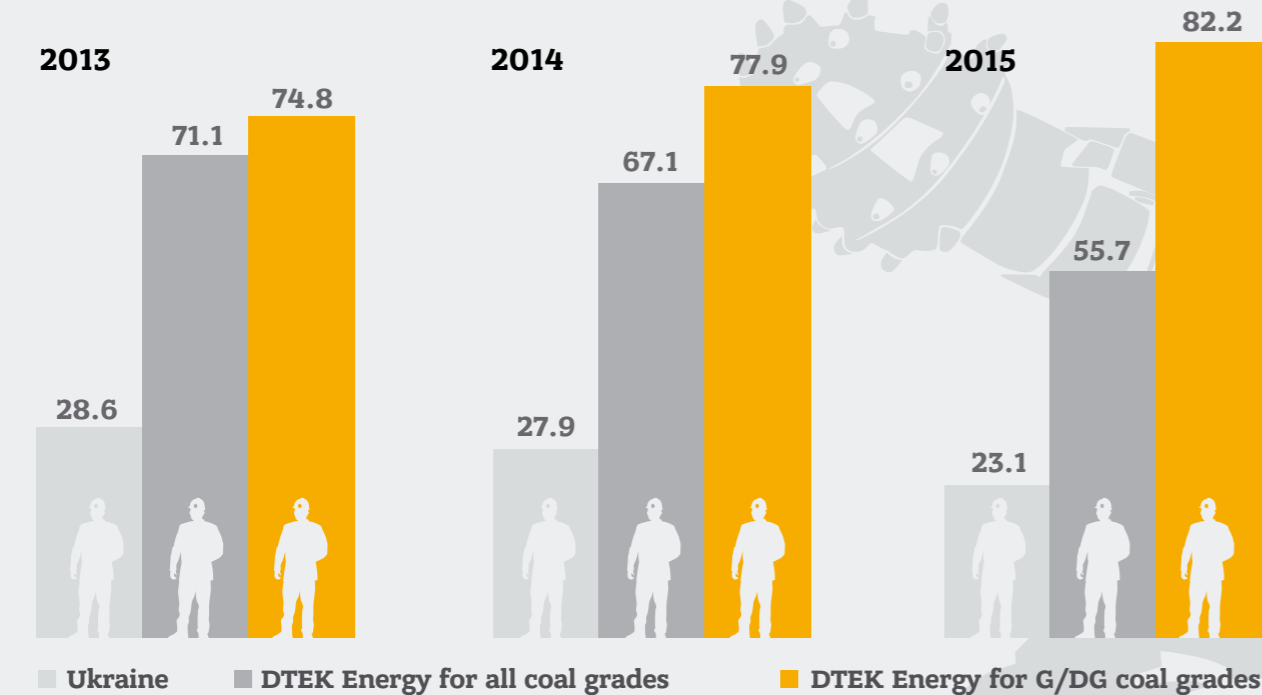
The highest demand for borrowings is demonstrated by electricity and water supplying companies, which is due to arrears on payments incurred by consumers. According to the data provided by Energobusiness publication, in 2015, the indebtedness for electricity alone increased by 7.4% in UAH terms to USD 0.9 billion. The main contributor to the increase in debt was the industrial sector: its debt increased by USD 73 million to 0.5 billion.



# Coal Market



Average production indicator in Ukraine, tonnes per person per month



**31.5%**  
of electricity was generated by coal-fuelled TPPs

for Ukrainian TPPs

**8.5 million tonnes**  
of coal delivered from Donbas mines

**1.6 million tonnes**  
imported in total

**3.2 million tonnes**  
of A and T grade coal was supplied by DTEK Energy

**0.4 million tonnes**  
imported by DTEK Energy

**Coal has a one-third share in the supply of primary energy in Ukraine. The main factor is that Ukraine has significant reserves of coal that will supply the country for least 100 years, as well as the competitive price of coal compared to other energy sources. A substantial amount of coal reserves and their availability have allowed Ukrainian thermal power plants (TPPs) to opt out using more expensive imported gas and heating oil as fuel. The share of coal in TPPs' total fuel sources increased from 30-50 % in 1991 to 98 % in 2015.**

Ukraine's reserves of coal amount to 56 billion tonnes, with thermal coal accounting for 70%, and coking coal for 30 %. Ukraine's main coal deposits are located in the Donetsk, Dnipro, and Lviv-Volyn coal basins, and in the Dnipro-Donetsk and Zakarpattia coal depressions. These deposits are characterized by large occurrence depths and thin seams (0.8–1.0 m). Works may be carried out at depths of 500 meters to over 1,000 meters.

As of 1 January 2016, there were 150 operating mines with various forms of ownership in Ukraine. Eighty-five mines, or 57% of Ukraine's total number of mines, are located in territories temporarily out of control of the Ukrainian government. Sixty of these mines produce thermal coal. Since July 2014, state authorities have not received any reports from the majority of mines located in the uncontrolled territories.

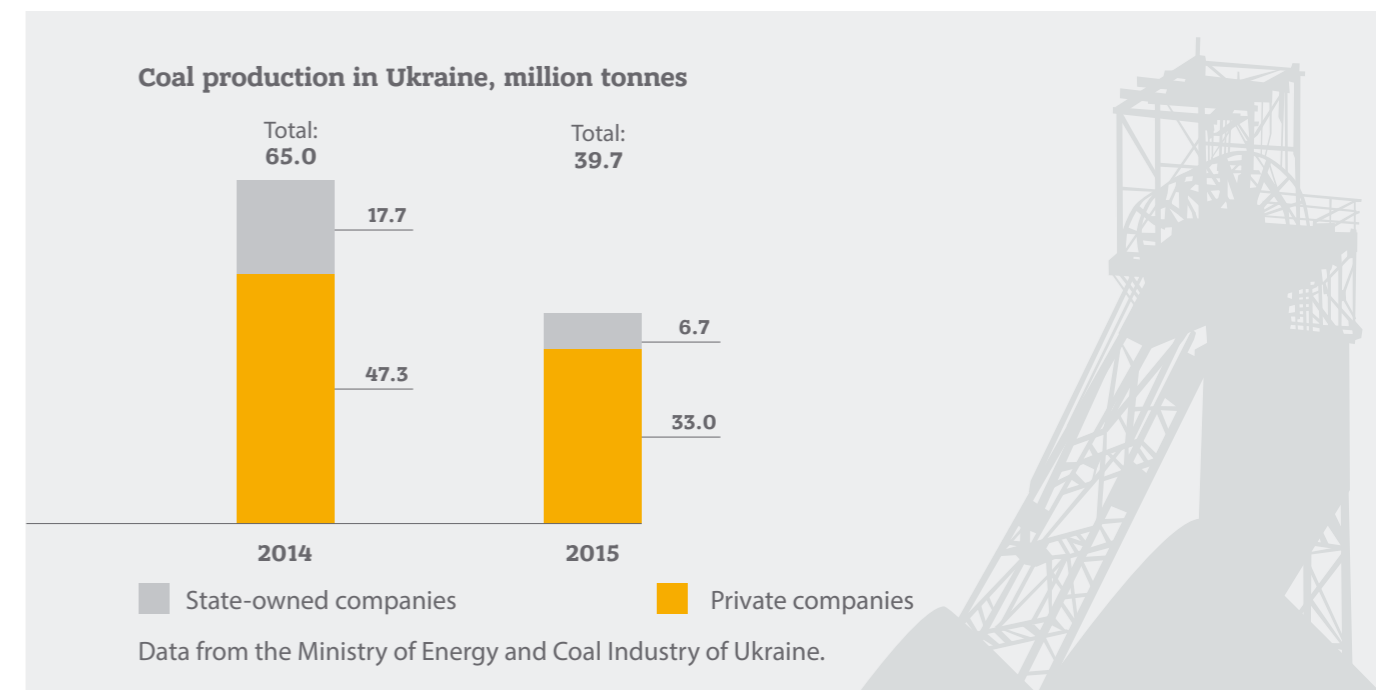
**Ukraine has significant proven reserves of coal and is among the top five countries in the world, after China, the United States, India and the Russian Federation.**

The Ministry of Energy and Coal of Ukraine manages 90 mines, and only 35 of them are located outside the ATO zone. Thirty-three mining companies produce 20,000 tonnes of coal a day. Another two mines operate in the water drainage mode. As of 1 January 2016, state-owned mines employed 51 thousand work people compared to 56 thousand year-on-year. According to the data from the State Statistics Service of Ukraine, in aggregate the Ukrainian coal industry provides 122 thousand jobs.

## Coal balance

According to the data from the Ministry of Energy and Coal Industry of Ukraine, in 2015, coal production in Ukraine decreased by 38.8% year-on-year to 39.7 million tonnes. Production of thermal coal declined by 35.7% to 31.4 million tonnes, and coking coal by 48.4% to 8.3 million tonnes.

State-owned mines operated by the Ministry reduced production by 62% to 6.7 million tonnes, and the production of thermal coal decreased by 63.5% to 4.8 million tonnes.



The reduction in coal production is attributed to the ongoing military conflict in Donbas. The other negative factors affecting the industry are the cutback in state financing and reduced load of TPPs. In 2015, the article "State support for mining companies for partial compensation of expenses in connection with the cost of production of finished marketable coal products" was removed from the state budget. This resulted in increased arrears on salaries owed to miners employed by state-owned mines and on payments for consumed electricity. Following a series of protests organized by miners, Parliament allowed redistribution of a portion of the budget funds and granted USD 41 million to support the coal industry. However, these funds were insufficient, and as a result, the industry began 2016 with three months of arrears on salaries. In general, in 2015, arrears on miners' salaries increased by 21% in UAH terms and reached USD 35.5 million on 31 December.

Due to insufficient financing of state-owned mines, the main responsibility for providing the national economy with coal falls on private companies. For instance, DTEK Energo focused its efforts on supporting production of high volatile (steam) coal, which maintained production of this grade of coal at the level of 22 million tonnes as in 2014. TPPs operating on G grade coal received sufficient quantities of Ukrainian fuel.

Ukraine has been experiencing a shortage of anthracite coal since 2014. To meet the demand for coal required to generate electricity at TPPs, 8.5 million tonnes of coal were delivered from the ATO zone, and another 1.6 million tonnes were imported in 2015. In 2015, there were significant changes in the structure of imports: the amount of coal imported from the Russian Federation was greatly reduced.



**Coal imports for the energy industry, thousand tonnes**

	2014	2015	Change, +/-	Change, %
<b>Total</b>	<b>2,466.8</b>	<b>1,597.6</b>	<b>-869.2</b>	<b>-35.2</b>
<b>including:</b>				
South Africa	375.7	896.9	521.2	138.7
Russia	2,009.8	627.9	-1,381.9	-68.7
Australia	81.3	0.9	-80.4	-98.8
Poland	-	71.9	71.9	-

Data from the Ministry of Energy and Coal Industry of Ukraine.

In 2015, sales of coal in Ukraine decreased by 3.7% year-on-year in UAH terms to USD 1.7 billion. Coal accounts for 2.4% (compared to 3.1% in 2014) in the total structure of the sale of industrial products.

## Pricing

Coal in Ukraine is sold either under direct contracts between coal producers and consumers or through the wholesale market operator – State Enterprise Ugol Ukrainy (Coal of Ukraine). The wholesale market operator distributes coal products at fixed prices. This results in cross-subsidization of loss-making state-owned mines at the expense of profitable ones. According to the data from the Antimonopoly Committee of Ukraine (AMCU) with reference to the six months of 2015, about 31% of coal supplied by state-owned companies was supplied under direct contracts with Ugol Ukrainy.

In 2015, state-owned mines increased the wholesale price of a tonne of marketable coal product by 59.5% in UAH terms to USD 45.9 (in 2014, the wholesale price increased by 27.6%), while the production cost increased by 17.2% in UAH terms to USD 94.7 per tonne (30.8% in 2014). The state allocated USD 21.2 million to partially cover the gap between the selling price and the cost of production (compared to USD 768 million in 2014).

Private companies set prices for their products based on supply and demand in Ukraine, taking into account general trends on international markets.

**API2 index reflects the average annual price of thermal coal with a calorific value of 6,000 kcal/kg delivered CIF ports of Amsterdam, Rotterdam, Antwerp**

	2013	2014	2015
USD/tonne	81.68	75.24	56.77
%, against previous period	-11.70	-7.88	-24.55

With reference to data from McCloskey Sources.

One of the key factors of the market behavior on world coal markets is the steep drop in the price of oil, which caused a decline in quoted prices of other energy resources, and excess supplies of coal on consumer markets. In 2015, the world market for thermal coal maintained an excessive supply of coal as the major exporting countries still were unable to reach a balance between supply and demand.

## Industry regulation

The Ministry of Energy and Coal Industry is the main government body responsible for formulating policy in the coal mining sector. When setting and implementing its targets, the Ministry is governed by the Program of Activities of the Cabinet of Ministers of Ukraine, the European Ukraine Parliamentary Coalition Agreement, and the Ukraine-2020 Sustainable Development Strategy.

**Key areas of development, reform, and restructuring of the industry:**

- liberalization of the coal market by implementing exchange trade, and switching to direct contracts as well as dissolution of Ugol Ukrainy;
- privatization of all coal-mining companies as required by the Law of Ukraine on Specifics of Privatization of Coal Mining Companies (2015-2016); closing down or mothballing mines that have not been privatized (2015-2019);
- optimisation of state support to ensure efficient restructuring and financial sustainability, minimizing of subsidies to ensure water drainage and environmental protection by introducing the appropriate law (by 2020);
- establishing an effective social support system for employees of companies undergoing liquidation or mothballing.

## Key events of 2015 in legislation governing sector reforms and restructuring

- A list of coal-mining companies subject to privatization in 2015 (26 companies) was updated by Resolution No. 271 of the Cabinet of Ministers of Ukraine on Ensuring Transparent and Competitive Privatization in 2015 of 12 May 2015.

In compliance with the Resolution, pre-privatization preparations were completed and document packages were delivered to privatization authorities in connection with the following five companies: Velykomostovska Mine, Chervonogradksa Mine, Vidrodzhennya Mine, Mizhyrichanska Mine owned State Enterprise Lvivvugillya; Buzhanska Mine owned by State Enterprise Volynvugillya. Pre-privatisation preparation of other companies was suspended due to the lack of financing, and also as a result of the ongoing anti-terrorist operations in eastern Ukraine.

- Liquidation of Rodynska Mine owned by State Enterprise Krasnoarmeyskugol; Zarichna Mine owned by SE Lvivvugillya; Novovolynska Mine No. 9 owned by SE Volynvugillya was ordered by Directive No. 696-p of the Cabinet of Ministers of Ukraine on the Liquidation of Some Unprofitable Coal Mining Companies of 8 July 2015.

- As part of the optimization of state support provided to the coal industry, in order to ensure efficient restructuring (liquidation and mothballing of mines), the Ministry of Energy and Coal Industry developed and published on its website a draft law on State Support of the Coal Industry. The draft law is currently undergoing a review by central government executive authorities.



- To create a legal framework for the liberalization of the coal market and to implement exchange trade in coal (electronic trading), the draft law on the Coal Product Market of Coal Product was developed and published on the website of the Ministry of Energy and Coal Industry of Ukraine. The draft law was produced by the working group established by Ministry order No. 451 of 16 July 2015.

- To ensure a systematic approach to finding solutions to the problems arising from coal industry, operations, to implement comprehensive measures aimed at using its full potential, to increase coal production, to improve efficiency and to make the coal industry financially viable and subsidy-free, and also to create a favorable investment environment for the privatization of mines, the Ministry of Energy and Coal Industry formulated the draft concept of the 2015-2020 State Targeted Program for Coal Industry Reform. The document was submitted to the central government executive authorities for additional review due to the change of government.

The key aspect of work planned for 2016 will be the continuing fulfilment of these tasks.

# Electricity Market

**157.3**  
billion kWh

were produced in Ukraine  
-13.6 % y-o-y

**150.6**  
billion kWh

were consumed in Ukraine  
-11.3 % y-o-y

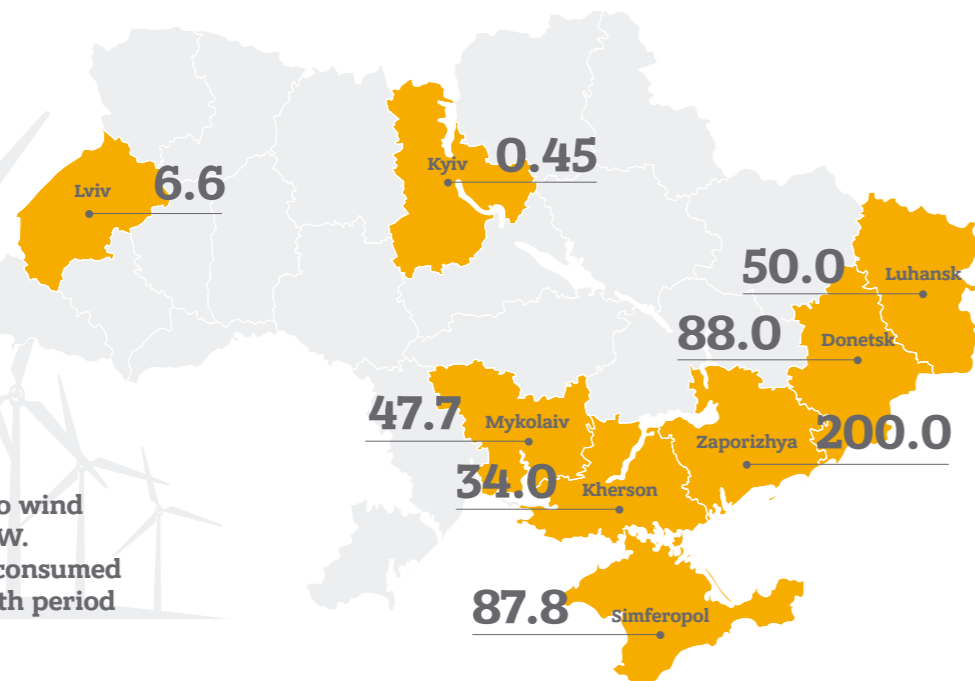
**2,525**

starts of DTEK Energy TPPs' turbines running on high volatile (steam) coal to reduce a shortage of capacity in the UES, +8 % y-o-y

Installed wind farm capacity by region, MW

**634**  
million kWh

were produced by the Botievo wind farm with capacity of 200 MW. This amount of electricity is consumed by Zaporizhyya over five-month period



**14.1%**

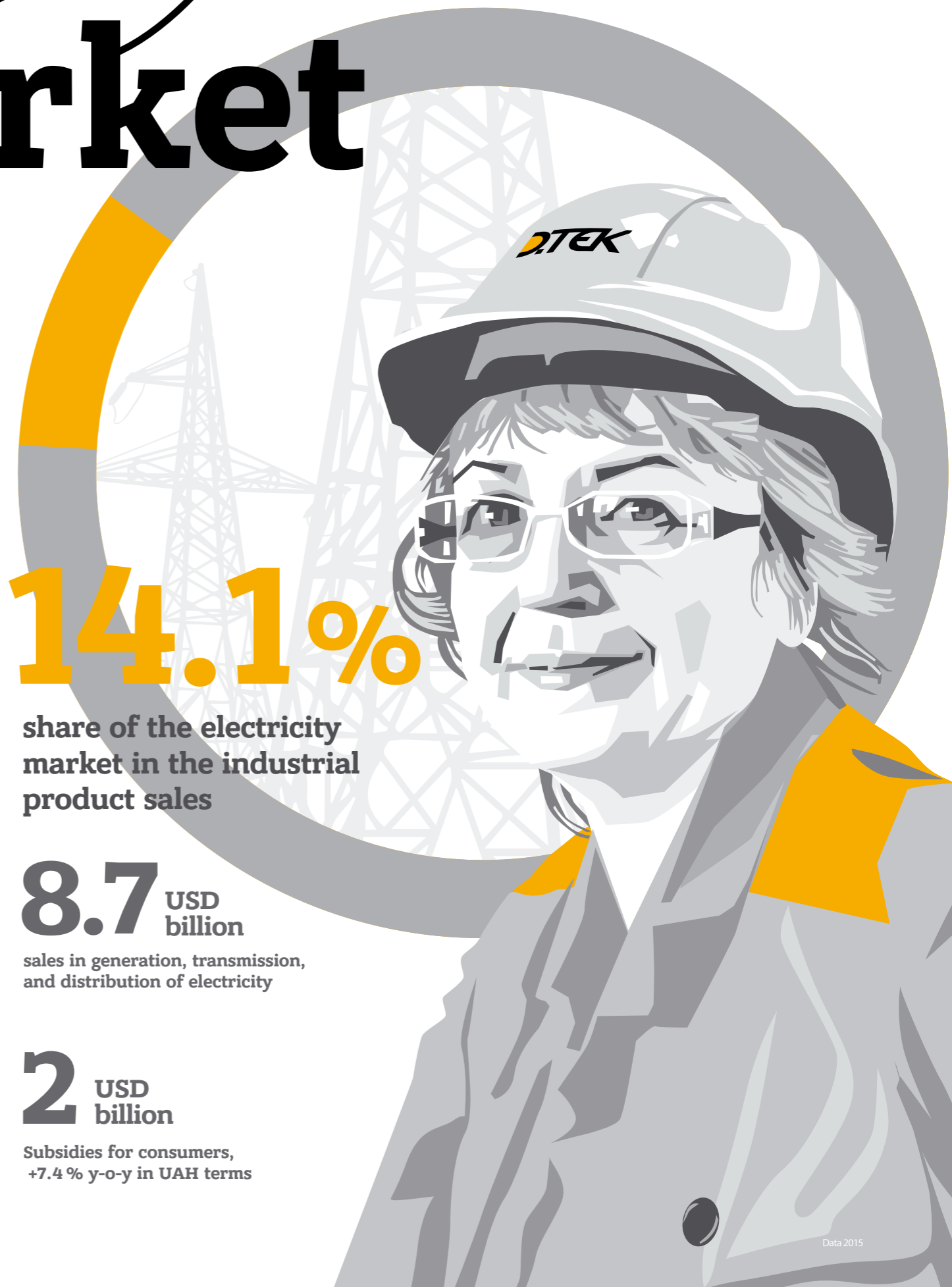
share of the electricity market in the industrial product sales

**8.7** USD billion

sales in generation, transmission, and distribution of electricity

**2** USD billion

Subsidies for consumers, +7.4 % y-o-y in UAH terms



## The energy system of Ukraine is united and was built on a regional basis. It consists of eight power grids operating in parallel: West, South-West, Central, South, North, Dniprovska, Krymska and Donbaska.

The Unified Energy System's (UES) major power suppliers are the national nuclear energy generating company Energoatom, which operates four NPPs; five thermal power generation companies with 14 TPPs, and Ukrhydroenergo, which operates nine HPPs and PSPPs.

Centralized operations and technology management of the UES is carried out by national energy company Ukrenergo. Its main task is to balance generation and consumption of electricity in the country, thus ensuring the reliability of operations of the UES. All generated electricity is sold on the wholesale electricity market (WEM), which is organized on the "single buyer" principle, in this case, State Enterprise Energorynok. Ukraine is planning to convert the existing market model into a liberalized market by implementing the requirements stated by the EU Third Energy Package establishing the rules for an internal electricity market.

Today, the thermal generation market operating on the basis of "day ahead" price bids is the only competitive segment of the electricity market. Price bids are accepted subject to a price ceiling set by the National Energy and Utilities Regulatory Commission (NEURC). Based on the price bids submitted for each power unit of TPP and forecast next-day consumption, Energorynok prepares a merit order based on ascending order of cost of production. The power units with the lowest price bids are loaded on a first-priority basis. The last satisfied price bid determines the reference electricity price for each TPP power unit included in the merit order.

Tariffs for all other electricity generating companies are fixed by the NEURC.

## Electricity balance

The energy sector continued operating under heavy regulatory control. The government issued four directives introducing temporary emergency measures into the electricity market: in January, February, March and December (No. 36-p of 14.01.2015, No. 124-p of 25.02.2015, No. 280-p of 31.03.2015, and No. 1296-p of 09.12.2015). These directives vested the relevant government bodies with the right to adjust tariffs on the generation of electricity by parties operating under price bids (TPPs of generating companies), to revise investment programs, to set additional payments for generating companies, and to change the algorithm for the allocation of funds on the wholesale electricity market.

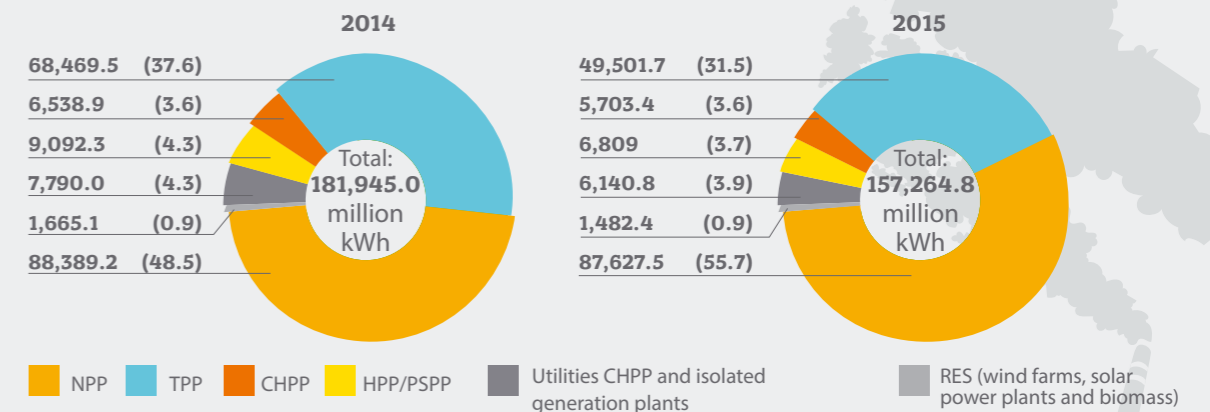
Despite the introduction of emergency measures, efforts aimed at striking a balance between production and consumption of electricity have failed: from January through April, from July through September, and at the beginning of November, Ukraine experienced a shortage of capacity. According to a report issued by Energorynok, when making balanced daily merit orders, restriction of consumption by approximately 742 MWh during the start-end period was planned in 134 instances from January to October. Excess capacity was already recorded in November-December as a result of disconnection of Crimea from the UES. On 20 November, high voltage transmission lines connecting the peninsula with mainland Ukraine were damaged, which reduced daily consumption

in the energy system by 600-650 MW. Engineers managed to restore one 220 kV power transmission line (Kakhovska-Titan), which operated from 8 to 31 December. After that, electricity supply to Crimea ceased altogether.

In addition, the Starobeshivska TPP of Donbasenergo and DTEK Zuivska TPP were disconnected from the UES (Resolution No. 263 of the Cabinet of Ministers of Ukraine on "Specifics of the regulation of relations in the area of electricity in the territories where state government bodies temporarily do not exercise their authority or partially exercise their authority" of 7 May 2015, Orders of the Ministry of Energy and Coal Industry of Ukraine No. 273 of 08.05.2015, and No. 339 of 05.06.2015 approving the List of electricity generating companies). The destruction of overhead lines of the Donbas energy system during the military operations resulted in the formation of an isolated energy hub of the DTEK Luganska TPP, which continues to supply electricity to households in the north of Luhansk Region.

In 2015, electricity generation in Ukraine amounted to 157.3 billion kWh, which was 13.5% lower than in 2014. Supply of all types of generation decreased. The aggregate installed capacity utilization factor of Energoatom, Ukrhydroenergo, and TPPs of generating companies operating on the wholesale electricity market based on price bids decreased by 4.09% to 36.45%.

Structure of electricity generation in the Ukrainian UES and share of the market by generation type, million kWh (%)



According to Interfax-Ukraine with reference to data from the Ministry of Energy and Coal Industry of Ukraine.



## Reduction in electricity generation in Ukraine was caused by the following factors:

- A drop in industrial production, slowing consumer demand, and loss of traditional markets
- Unusually low water inflow in the Dnipro and Dnistro rivers
- Retention of limits on the consumption of gas
- Shortage of anthracite coal. The area where deposits of anthracite and lean coal are developed is affected by military operations in Donbas.

In the first quarter of 2015, DTEK Energo imported more than 400,000 tonnes of anthracite coal, mainly from South Africa and Australia, to cover the shortage of flexible capacities in the UES. Ukraine imported a total of 1.6 million tonnes of anthracite coal in 2015.

Imports of coal were restricted due to logistics, commercial, and political reasons. Handling capacity of seaports allows unloading up to 400,000 tonnes of coal per month. At the same time, the tariffs established for TPPs failed to cover electricity production costs based on the price of imported resources. As a result, DTEK Energo ceased buying coal abroad in the second quarter of 2015.

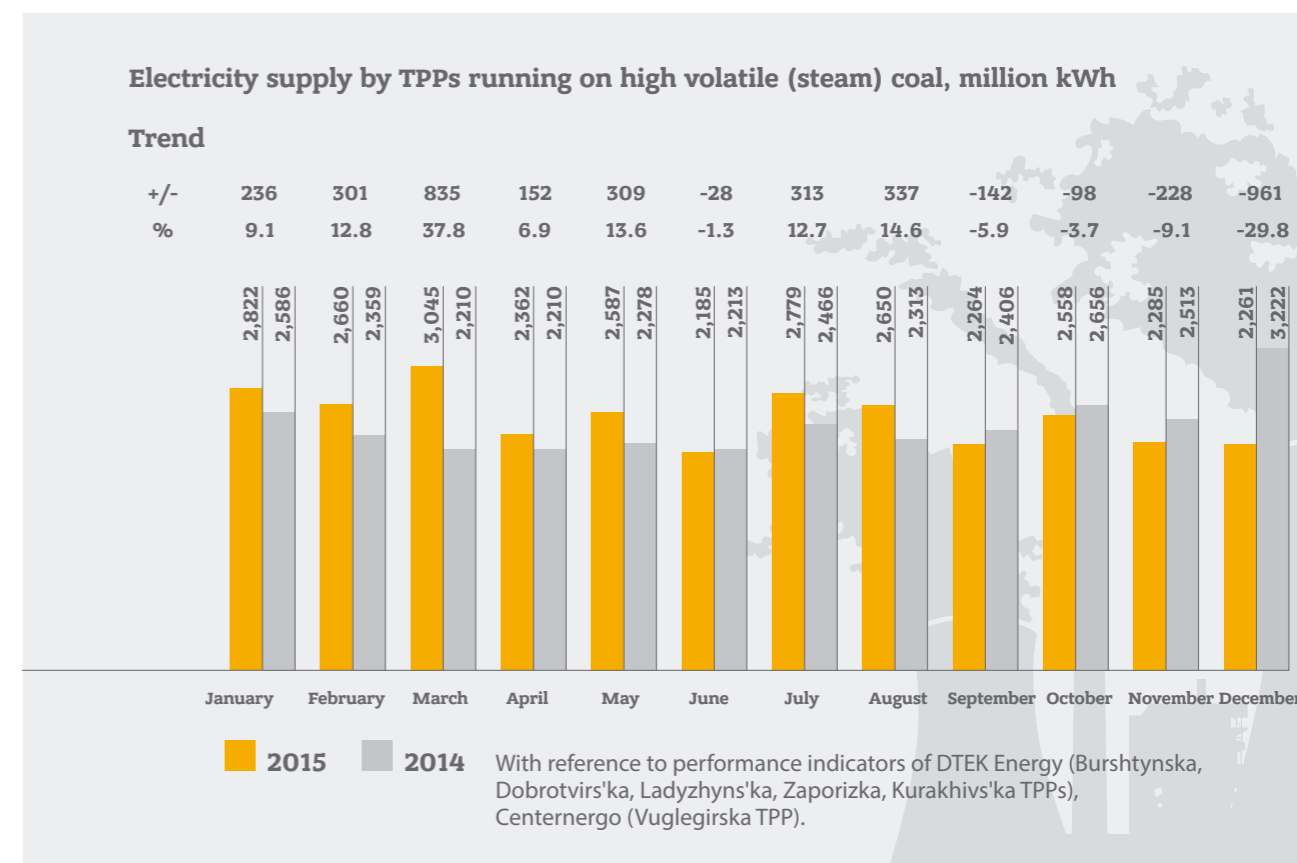
Under these circumstances, the key task was to restore railway service and search for new routes for delivering anthracite coal from Ukrainian mines located in the ATO zone. In August, DTEK helped to restore Nikitovka-Mayorska railway passage that was destroyed during military operations in 2014. These efforts allowed increased production and supply of coal from DTEK Sverdlovanthracite, DTEK Rovenkyanthracite, and DTEK Mine Komsomolets Donbassa mines. In July-December 2015, TPPs of DTEK Energo received 2 million tonnes of anthracite coal from these mining companies, which is 160% or 1.4 million tonnes more year-on-year. In aggregate, the Company's TPPs received 3.2 million tonnes of coal from the ATO zone.

**In 2015, an average tariff of TPPs, the majority of which are privately owned, was 4 cents/kWh (+24,4% in UAH terms year-on-year).**

**The tariff established for other types of generation, which are mainly state-owned, increased by 49.5% (CHPP), 42.6% (NPP), and by 125.3% (HPP) in UAH terms. The increase in tariffs resulted from a 33.14% increase in the wholesale market price (WMP\*) and in household tariffs, and also because the full fuel component in the tariff of generating companies' TPPs was not revised.**

\* WMP is a key indicator of the volume of money to be paid by electricity consumers and allocated between participants of the wholesale electricity market.

High volatile (steam) coal is produced mostly in the territory not affected by military operations. TPPs using this grade of coal as fuel operated under increased and irregular load to compensate for the shortage of capacity of TPPs running on anthracite coal.



Moreover, exports of electricity from the Russian Federation continued from January to April, from August to September, and in November. According to the customs data made available by the State Fiscal Service of Ukraine, 2.3 billion kWh worth USD 84.9 million were imported during the year. In some instances, imports were not justified. Undersupply of electricity from TPPs operated by generating companies was estimated at 800 million kWh in 2015.

For instance, no electricity was supplied from the Russian Federation on business days, while on weekends the supply was irregular, varying from 50 to 900 MW, resulting in the disconnection of some TPP power units of generating companies. Moreover, after the supply of coal from Ukrainian mines located in the ATO zone became regular, TPPs were able to accumulate sufficient reserves for the 2015-2016 heating season. At the beginning of the heating season, electricity imports from Russian became excessive as at that time the UES showed overproduction.

## Structure of electricity consumption in Ukraine

Consumer categories	Consumption, mln kWh				Share in overall consumption, %	
	2014	2015	Change, +/-	Change, %	2014	2015
Electricity consumption (gross)	169,879.2	150,620.0	-19,259.2	-11.3		
Electricity consumption (net)	134,653.0	118,207.5	-16,445.5	-12.2	100.0	100.0
Including:						
<b>Industry:</b>	60,929.8	50,113.2	-10,816.6	-17.8	45.2	42.4
Iron and steel	33,933.2	28,748.9	-5,184.3	-15.3	25.2	24.3
Fuel	7,381.3	4,253.8	-3,127.5	-42.4	5.5	3.6
Machine building	4,367.9	3,646.5	-721.4	-16.5	3.2	3.1
Chemical and oil & gas	3,821.7	3,075.2	-746.5	-19.5	2.8	2.6
Food and processing	4,492.5	4,055.8	-436.7	-9.7	3.3	3.4
Construction materials	2,221.1	2,085.6	-135.5	-6.1	1.6	1.8
Other	4,712.2	4,247.4	-464.8	-9.9	3.5	3.6
<b>Agricultural consumers</b>	3,482.8	3,334.1	-148.7	-4.3	2.6	2.8
<b>Transport</b>	7,342.3	6,786.8	-555.5	-7.6	5.5	5.7
<b>Construction</b>	851.8	751.0	-100.8	-11.8	0.6	0.6
<b>Utilities</b>	16,580.7	15,142.1	-1,438.6	-8.7	12.3	12.8
<b>Other non-industrial consumers</b>	6,493.3	5,895.6	-597.7	-9.2	4.8	5.0
<b>Households</b>	38,972.2	36,184.6	-2,787.6	-7.2	28.9	30.6

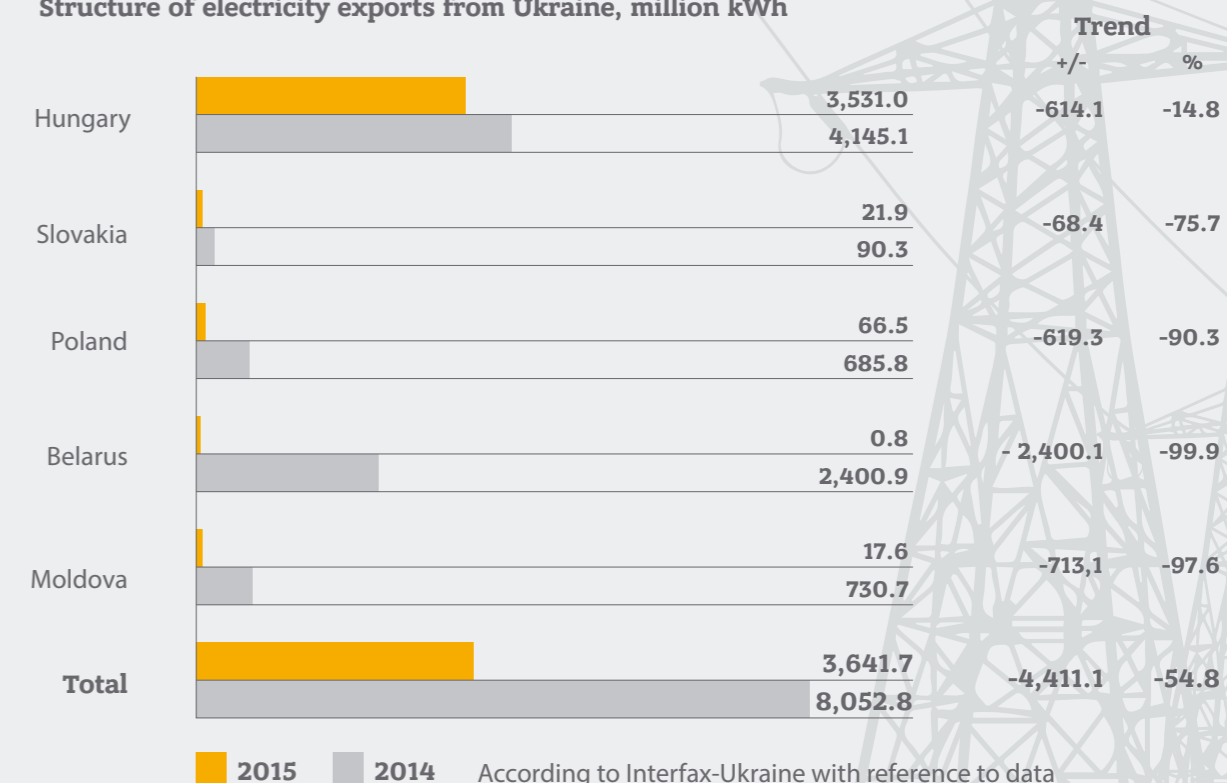
According to Interfax-Ukraine with reference to data from the Ministry of Energy and Coal Industry of Ukraine.

The internal market failed to encourage domestic production because military operations, and devaluation of the national currency adversely affected industrial production and consumer purchasing power (see **Ukraine's macroeconomic indicators in 2015**).

A resolution of the Ministry of Energy and Coal Industry of Ukraine has restricted exports of Ukrainian electricity since August 2014. By the end of 2015, exports under foreign economic contracts had decreased by 54.8% or 4.4 billion kWh to 3.6 billion kWh. According to the data collected by the State Fiscal Service, in monetary terms, Ukraine reduced exports of electricity by 69.2% or USD 337.1 million to USD 150.1 million.

Maintaining electricity exports during falling consumption in Ukraine preserves the efficiency of production both in thermal generation and the coal production segments. Since November 2015, due to excess capacity in the UES, from 20 to 30 TPP's power units with aggregate capacity of 6,000 MW operated by generating companies daily were held in reserve. This affects the operations of the coal production industry, as in the fourth quarter the amount of coal burnt decreased by 5% or by 341,000 tonnes year-on-year.

## Structure of electricity exports from Ukraine, million kWh



In September, Ukraine exported electricity to Poland as part of emergency assistance.

## Electricity transmission

Regional electricity distribution companies (Oblenergos) are responsible for transmitting electricity to all categories of consumers. Independent suppliers that do not own any grids and are able to distribute electricity at an unregulated tariff are also present on the market. Electricity for end consumers is supplied at fixed prices set by the NEURC depending on the voltage class. All consumers are divided into two classes: connected to grids with voltage of 27.5 kV or more (first class) and up to 27.5 kV (second class).

Despite the adoption in 2013 of a package of regulations providing for the implementation of a regulatory asset base model (RAB), which was expected to start operating on 1 January 2014, this new progressive model has still not started working yet. In 2014, the NEURC introduced a zero profit margin for Oblenergos, and in 2015, the regulator made amendments in the legal framework in order to ensure the switch to the RAB model in 2016. Prior to the switch to an incentive-based model, a margin on the regulatory asset base was established at 5%. In 2016, the margin on the regulatory asset base will be revised in line with the country's macroeconomic indicators.

Under the RAB model, the NEURC will set the tariff and the maximum profit margin for Oblenergos once

**Distribution companies are provided with an additional source of income that will be channeled to develop grid infrastructure as a result of a state-guaranteed profit margin on capital investments. Since the tariff is established for the next 3-5 years, companies can forecast their expenses and profits for several years ahead. An opportunity is also created to gradually-reduce critical wear of equipment.**

for several years ahead. Following the switch to the RAB model, a company will have an obligation to reinvest 50% of profits generated by the "old" asset base in the "new" asset base annually. The company will be free to use the remaining portion of profits as it sees fit. However, Oblenergos must comply with the following strict requirements: 100% settlements with Energorynok, evaluation of assets, continuous monitoring and compliance with service quality standards.

On 1 April 2016, changes took effect in the Procedure for setting tariffs under the incentive-based model, to enable the switch to the RAB model on the first day of any quarter. It is expected that the RAB model will be introduced on 1 July in the following companies: Kyivoblenergo, Kirovogradoblenergo, DTEK Dniiprooblenergo, Lvivoblenergo, Vinnytsiaoblenergo, Prykarpattiaoblenergo, Poltavaoblenergo, and Chernigivoblenergo.

## Electricity tariffs for consumers

In 2015, the National Energy and Utilities Regulatory Commission increased tariffs for households twice: in April and in September. In September, the increase varied between 5.1% and 25.2% in UAH terms depending on consumers' voltage class.

In 2015, uniform tariffs for first voltage class consumers increased by 19.9% in UAH terms to 5.7 cents/kWh (year-on-year), and tariffs for second voltage class consumers – by 20.9% (year-on-year) in UAH terms to 7 cents/kWh.

In 2014, uniform tariffs for first voltage class consumers increased by 27.2% in UAH terms to 8.7 cents/kWh (year-on-year), and tariffs for second class voltage consumers – by 21.9% (year-on-year) in UAH terms and reached 10.6 cents/kWh.

### Discounted rates apply to the following categories:

- households and religious organizations;
- consumers using time-of-day tariffs;
- companies that supply electricity for street lighting;
- public electric transportation units;
- legal entities implementing innovative projects.
- Molodaya Gvardiya Children's Center.

Subsidies worth USD 2 billion were granted to these consumer categories in 2015 compared to USD 3.4 billion in 2014.

## Industry regulation

The National Energy and Utilities Regulatory Commission (NEURC) is a state unified body that is under the President of Ukraine and accountable to the Verkhovna Rada of Ukraine.

The NEURC is responsible for regulating energy markets by establishing tariffs, retail prices, marginal prices for energy generating companies, transport infrastructure operations, and consumers. Since the price of products and services is subject to state regulation, the NEURC also develops and approves the procedure for mapping out investment programs for market players.

Presently, the NEURC operates under Presidential decree. Since the commission's independence has not been adequately guaranteed, its decisions are highly influenced by the political situation. Reform of this agency is expected to be a major one in the energy segment.



## Key events of 2015

**Draft law No. 2199a on Amendments to the Law of Ukraine on Fundamentals of the Functioning of the Ukrainian Electricity Market to comply with requirements of the Treaty Establishing the Energy Community of 30.06.2015 was drafted and registered with the Verkhovna Rada of Ukraine.**

As a signatory to the Treaty Establishing the Energy Community, Ukraine undertook to implement the requirements stated by the Third Energy Package applicable to the internal electricity market (Directive 2009/72/EC) starting on 1 January 2015. In connection with this, the priority tasks for Ukraine are to ensure independence of the national regulator, establish independent transmission and distribution system operators, and to deregulate prices of electricity.

Draft law No. 2199a incorporates a restated version of the Law of Ukraine on Fundamentals of the Functioning of the Ukrainian Electricity Market, which was supplemented by certain provisions of the Law of Ukraine on the Electricity Industry. The Law of Ukraine on Fundamentals of the Functioning of the Ukrainian Electricity Market, which entered into force on 1 January 2014, was compliant with the Second Energy Package, i.e., Directive 2003/54/EC concerning common rules for the internal electricity market and Regulation (EC) No 1228/2003 on conditions for access to the network for cross-border exchanges of electricity.

The draft law created conditions for making the authority vested in the national regulator compliant with Directive 2009/72/EC; implementation of this Directive's requirements concerning independence and unbundling of the system operator from all other functions, as well as legal and functional unbundling of distribution network operators from the functions of supply, and implementation of transparent and non-discriminatory procedures for the activities of market entities.

Furthermore, in compliance with directives No. 213-p of 4.03.2015 and No. 346-p of 8.04.2015 issued by the Cabinet of Ministers of Ukraine, the Ministry of Energy and Coal Industry, jointly with the Secretariat of the Energy Community, developed a draft law on the Ukrainian Electricity

Market. This draft law takes into account certain provisions of the Laws of Ukraine on Fundamentals of the Functioning of the Ukrainian Electricity Market and on the Electricity Industry. At the same time, this document fundamentally changes the structure of the existing legislation, which is necessary to implement the Third Energy Package. In particular, the Law of Ukraine on Fundamentals of the Functioning of the Ukrainian Electricity Market supplements the structure of the market segments with an "intra-day" market. Relationships between market entities on this market arise during the day of the physical supply of electricity to reduce the variance between actual generation and consumption from those declared on the day-ahead market. A "trader" was also added to the list of market entities as an entity responsible for purchasing electricity for its further resale, which should have a positive effect on the market's liquidity. Furthermore, the draft law provides for complete implementation of the Third Energy package with respect to legal and organizational unbundling of transmission and distribution functions from all other functions. The draft law was submitted by the Cabinet of Ministers to the Parliament, and passed first reading. The responsible parliamentary committee will hold a number of consultations with experts and market participants to finalize the draft law. Members of parliament expect that the draft law on electricity market reform could be passed in July 2016.

**The Cabinet of Ministers of Ukraine approved and submitted to Parliament the draft law on the National Energy and Utilities Regulatory Commission (registration number 2966).**

This document is aimed at securing the independence of the regulator in compliance with the EU Third Energy Package. A proposal was made to pass a law governing the legal status and organizational structure of the NEURC, competitive selection of its members and the authority vested in them, guarantees of financial and political independence of this agency, and transparency of its decision-making process. In January 2016, the draft law was reviewed by the Ukrainian Parliament and returned to the responsible parliamentary committee for finalization. After the draft was finalized by the committee with the involvement of foreign experts, public organizations, market players, Parliament passed the draft law on first reading. As of May 2016, the draft was prepared and approved by the relevant committee for second reading.

**The Cabinet of Ministers issued Resolution No. 1106 of 23.12.2015 cancelling uniform electricity tariffs as part of the improvement of the existing tariff setting mechanism.**

In compliance with the resolution, the NEURC prepared and published on its website a draft resolution approving the Procedure for setting retail electricity tariffs for consumers. This draft procedure sets out a mechanism of gradual switch to market retail tariffs taking into account the tariff increase threshold.

**The draft Code of Power Grids prepared by the Ministry of Energy and Coal Industry was published.**

The regulation was developed in the furtherance of the Law of Ukraine on Fundamentals of the Functioning of the Ukrainian Electricity Market. Since the draft law on the Electricity Market amends some requirements that apply to the Code, some adjustments were made. In particular, the Code was divided into the Transmission System Code and the Distribution System Code.

**NEC Ukrenergo prepared and published the ten year UES development plan for 2016-2025.**

The plan was formulated to align prospects of development of energy generating sources and power grids to the maximum extent possible. It is expected that only those facilities of power plants and power grids that are capable of increasing installed and transformation capacity will undergo reconstruction and upgrading.

## The industry's main tasks and challenges in 2016:

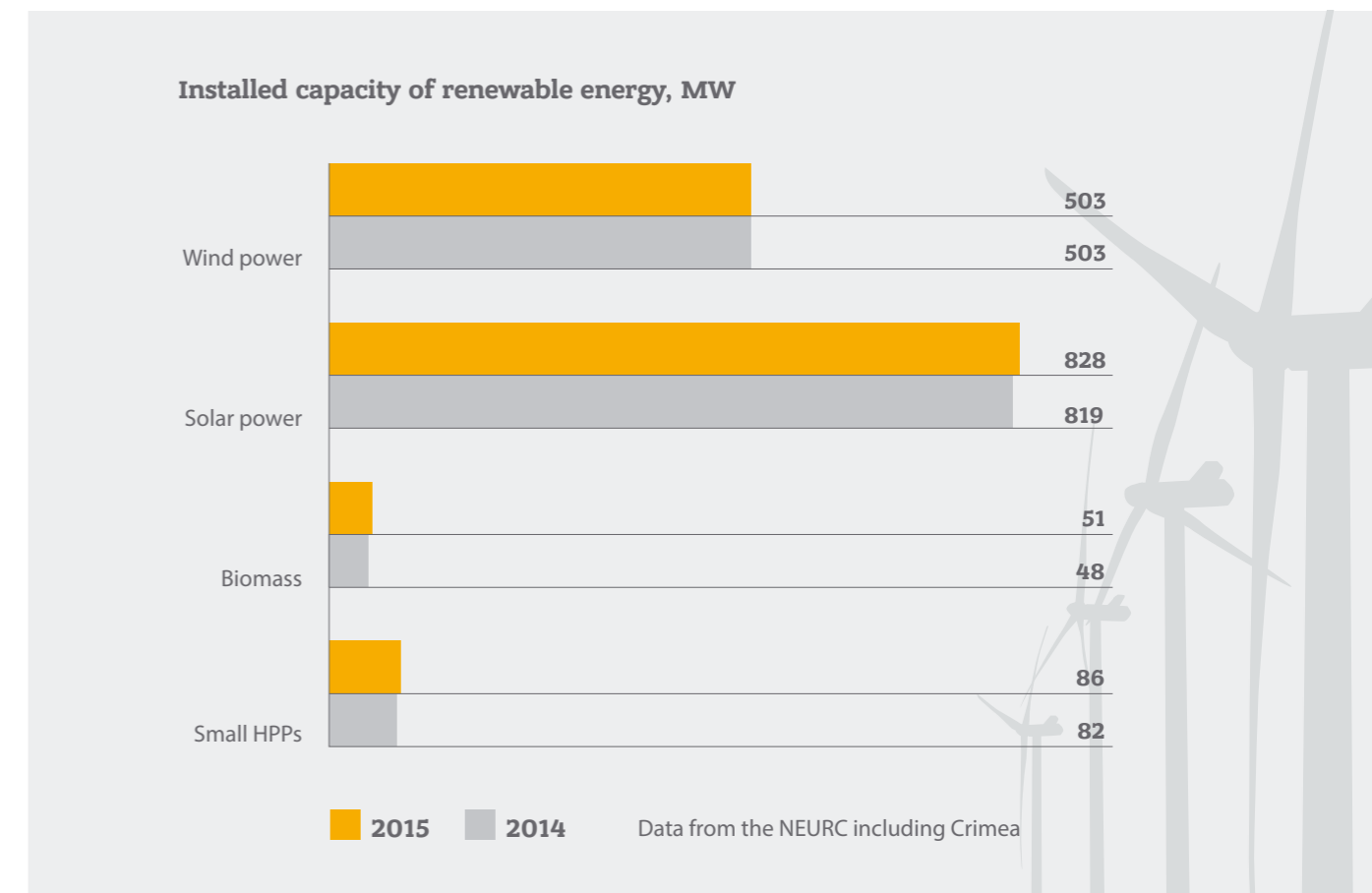
- Adoption of the Law of Ukraine on the Electricity Market of Ukraine, and development and adoption of laws and regulations facilitating the implementation of the Law. In particular, rules governing markets of electricity and ancillary services, day-ahead and intra-day markets, the retail market, and the code of commercial metering are to be developed and approved;
- Adoption of the Law on the National Energy and Utilities Regulatory Commission; and
- Implementation of incentive-based regulation for distribution companies.

# Survey of renewable energy sources industry

## Wind power generation

In 2015, 157.3 billion kWh of electricity were produced in Ukraine, and the segment of renewable energy sources (RES) accounted for 1.5 billion kWh. The share of renewable energy generation in total generation was about 1%, and wind power generation accounted for 0.6%.

In 2015, installed RES capacity in Ukraine was 1.46 GW (including Crimea). The share of RES in the total installed capacity of the Ukrainian energy system is 2.7%. Wind power generation accounts for about 1%.



Electricity produced by wind farms in 2015 was sufficient to satisfy demand of 2.8 million households with average monthly consumption of 400 kWh, or to supply electricity to 4.5 million families residing in blocks of apartments that have average consumption of 250 kWh.

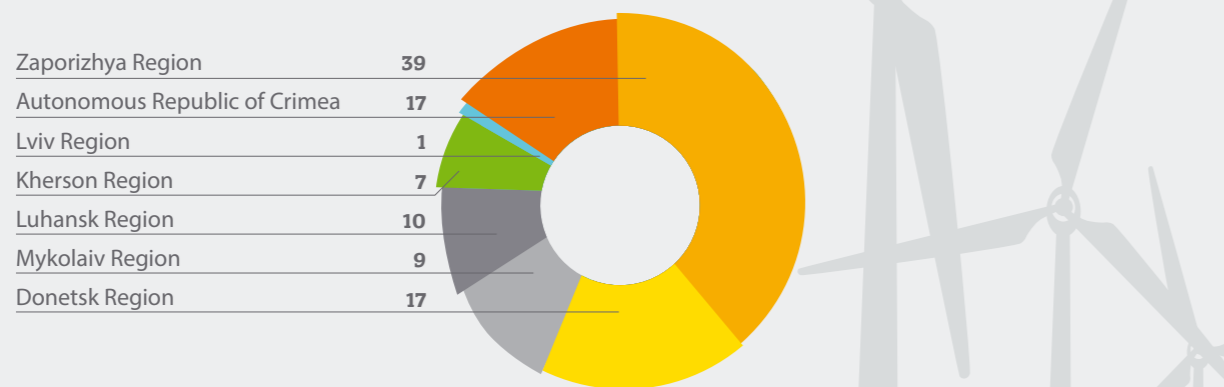
The Ukrainian "green" energy segment comprises 131 companies including 10 wind power generating companies, 61 solar power companies, 48 hydro power companies, and 12 companies developing capacities that generate electricity from biomass and biogas.

### Largest renewable energy players in Ukraine

Company	Type of renewable energy	Capacity as of 1 January 2016
Wind Power	Wind	200.0
Wind Parks of Ukraine	Wind	170.0 <sup>1</sup>
Wind Craft Ukraine	Wind	30.7
Active Solar	Solar	708.0 <sup>2</sup>
<b>Total</b>		<b>1,108.7</b>

Data from the NEURC and Ukrenergo.

### Structure of wind power capacity by region, %



Data from the Ukrainian Wind Power Association

<sup>1</sup> Of which 25 MW are located in Crimea.  
<sup>2</sup> Of which 407.1 MW are located in Crimea.

## Industry regulation

Similar to other European countries, Ukraine enforces measures encouraging development of the alternative energy segment. Such measures include feed-in tariffs denominated in euros and differentiated depending on the type and capacity of power generating units, and also in terms of duration for facilities commissioned prior to 2030. The state undertakes to purchase electricity produced by power plants at the feed-in tariff.

Legislative amendments that influence the development of Ukrainian alternative energy industry passed through two stages. The first stage was reached in autumn of 2012, when the Law of Ukraine on Alternative Energy was adopted (No. 5485-VI of 20.11.2012). This document changed the approach to the calculations made to reduce the feed-in tariff factor; furthermore, the feed-in tariff factor was reduced for solar power capacities, while the same factor was increased for micro and mini hydro power plants. Rules regulating the entry into force of the requirement for a local component and approaches to its calculation also underwent changes.

The second stage started in 2015. This stage had been preceded by severe restrictions on the revision of feed-in tariffs resulting from the introduction of emergency measures in the electricity market. The amended Law of Ukraine on the Electricity Industry (No. 514-VIII of 4.06.2015) was adopted in June:

- while keeping euro indexation of the feed-in tariff, the amended Law stipulated that indexation must be done on a quarterly rather than on a monthly basis;
- balancing accounting was introduced: electricity consumed in-house by the RES facility must be charged at the feed-in tariff;
- the local component rule was cancelled, and instead a mark-up on the feed-in tariff when components of local (Ukrainian) origin are used was introduced;
- feed-in tariff factors were revised selectively: tariffs for small hydro power plants and biopower plants were increased, and tariffs for geothermal electricity were introduced.



## Main events of 2015

### In February-March 2015, the feed-in tariffs were reduced for all types of renewable energy.

Since it was decided to extend the duration of the temporary emergency measures on the Ukrainian electricity market, the NEURC reduced feed-in tariffs (resolution No. 157 of 31.01.2015 on suspending the application of Clause 1 of the NEURC resolution No. 105 of 31.01.2015 and establishing feed-in electricity tariffs as part of the temporary emergency measures on the Ukrainian electricity market; and resolution No. 493 of 27.02.2015 on suspending the application of Clause 1 of the NEURC resolution No 492 and establishing feed-in electricity tariffs as part of the temporary emergency measures on the Ukrainian electricity market):

- in February, the feed-in tariff was reduced by 10% for the majority of RES, including wind power, and by 20% – for land-based solar power plants that were commissioned prior to 31 March 2013 inclusive;
- in March, the feed-in tariff was further reduced by 50% for the majority of RES, including wind power, and by 55% – for land-based solar power plants that were commissioned prior to 31 March 2013 inclusive.

### In June, the legislature introduced laws and regulations promoting the development of the renewable energy sector.

Under the Law of Ukraine on "Amendments to some Ukrainian laws to ensure competitive conditions for generating electricity from alternative energy sources" (No. 514-VIII of 4.06.2015), the feed-in tariff was denominated in euros, and is to be indexed on a quarterly rather on a monthly basis, by application of the relevant exchange rate. At the same time, the rule making the grant of the feed-in tariff subject to compliance with local component requirement was cancelled, and instead a mark-up subject to compliance with the local component requirement was introduced. The Law further provided for balancing metering of electricity consumed in-house by the renewable energy facility.

### Compensation for generating companies in connection with the feed-in tariff was approved for the period from September 2014 to January 2015, when the tariff had not been revised, and also for February-March 2015, when the feed-in tariff was reduced.

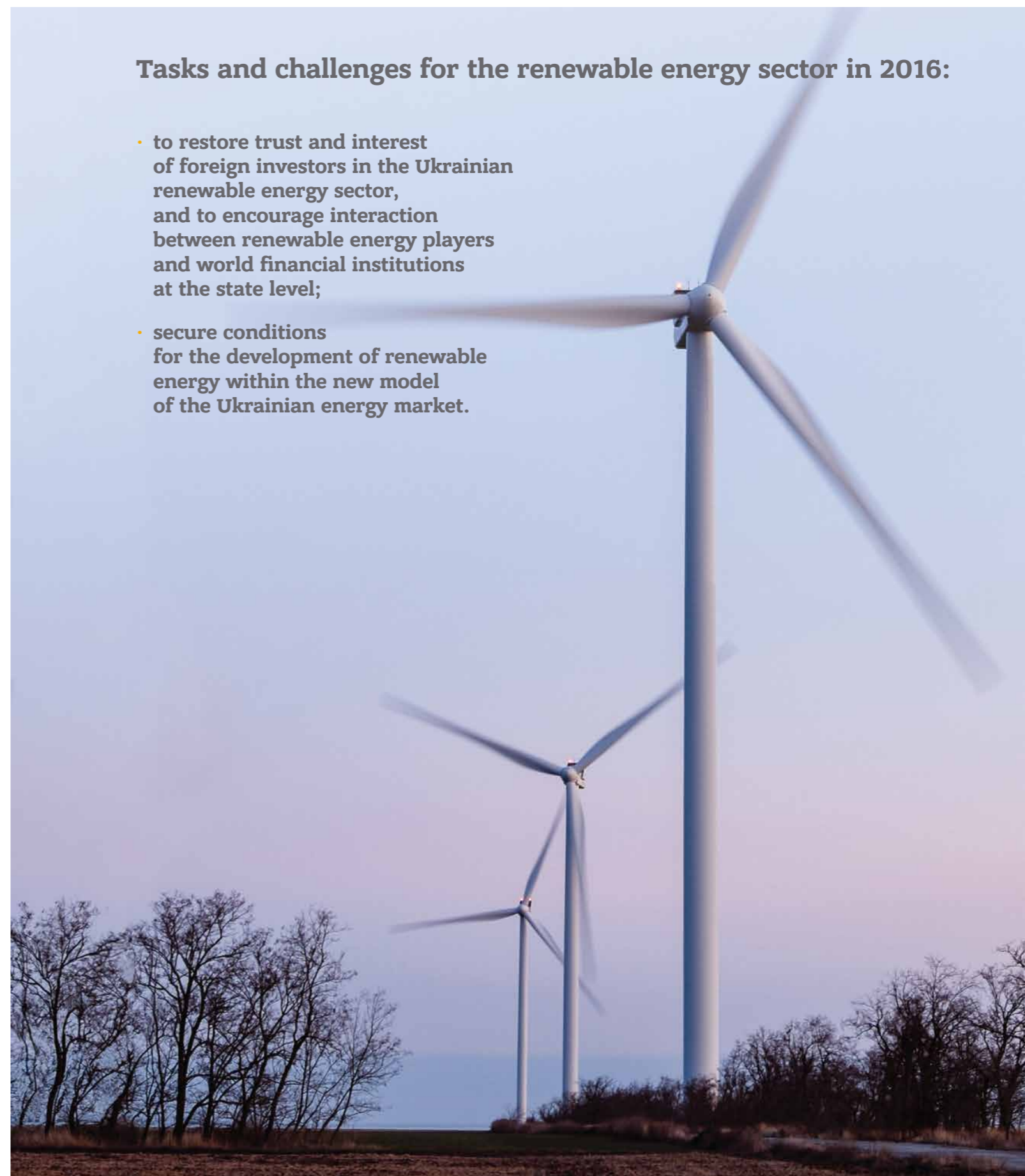
In August 2015, the NEURC approved the compensation payable to generating companies operating on the basis of the feed-in tariff in respect of the period when the tariff had not been revised. The Commission further provided for additional payments for the period from January to June 2016 due to the reduction in the feed-in tariff in February and March 2015 (resolutions No. 2144 of 10.08.2015 and No. 3249 of 30.12.2015).

### The draft law on the Electricity Market was supplemented with a provision providing for financial liability of renewable energy producers for imbalances in the supply of electricity under the new model of the market.

Under this rule, starting in 2020, the guaranteed buyer is expected to receive compensation of 10% of the cost of correcting the imbalance from wind power generating companies that operate on the basis of the feed-in tariff, and this figure will increase. Until 2025, the cost will be compensated only if the actual supply of electricity deviates from the daily schedule by more than 10%. The draft law was approved by the Cabinet of Ministers of Ukraine and now is under consideration by Parliament.

## Tasks and challenges for the renewable energy sector in 2016:

- to restore trust and interest of foreign investors in the Ukrainian renewable energy sector, and to encourage interaction between renewable energy players and world financial institutions at the state level;
- secure conditions for the development of renewable energy within the new model of the Ukrainian energy market.





# Gas Market



## Ukrainian gas reserves

- Proven reserves, % of total volume
- Depletion, %

Carpathian basin  
**13/42**

Dnipro-Donetsk basin  
**81/57**

Black Sea-Crimean basin  
**6/5**

1,000  
2,000  
3,000  
4,000  
5,000  
6,000

**27%**  
of reserves at depths of 5,000-7,000m\*

DTEK Group company Naftogazvydobuvannya drilled the deepest well of

**6,750m**

\* Data from the State Service of Geology and Mineral Resources of Ukraine.

**7,254.3**  
bcm

forecast reserves of free gas in Ukraine equivalent to reference fuel\*



**19%**  
of gas was produced by private companies

**19.9** billion cubic meters  
of gas was produced in Ukraine  
-3 % y-o-y

**3.8** billion cubic meters  
of gas was produced by private companies  
+15.2 % y-o-y

## Gas consumption

In 2015, Ukraine saw the steepest drop in gas consumption during the entire history of the country's independence – to 33.8 billion cubic meters, which is 21% lower than in 2014. This was one of the most significant drops in terms of rate, reduction; a higher rate of 22% was recorded back in 2009, at the height of the world financial crisis.

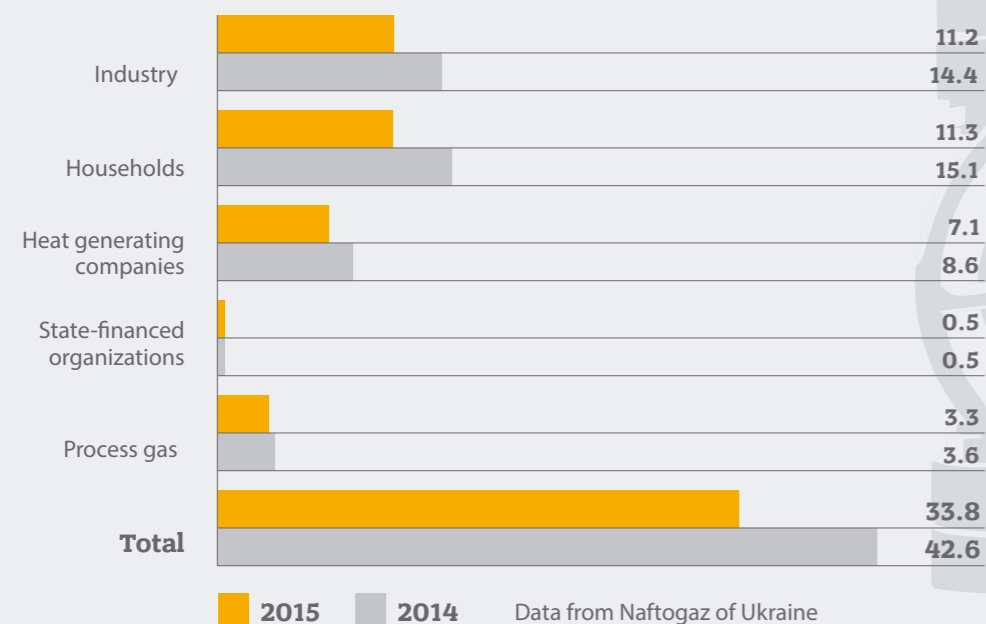
The largest reduction occurred in the household consumer segment: by 25.2% to the level of 11.3 billion cubic meters. The key factor was a one-time increase in the price of gas supplied to households in April 2015. As a result, many consumers turned to other sources of energy, solid fuel being one of them. Other factors included the suspension of gas supply to the temporarily uncontrolled territories and a relatively warm winter. The last two factors led to reduced consumption by heat supply companies providing heating and hot water to Ukrainian households. These companies reduced their consumption of gas by 17% – to 7.1 billion cubic meters.

The drop in consumption by industrial companies continued in 2015: industrial companies consumed 11.2 billion cubic meters of gas, or 22% less than in the previous year. However, the key factors contributing to this drop in consumption were continuing economic recession and reduction of industrial potential as a result of the ongoing military conflict in the east of the country. According to the estimates made by the Ministry of Economic Development and Trade, Ukraine's GDP fell by 9.9% in the past year.

In 2015, technological losses and gas flow through pipelines for in-house needs also remained at a high level: 3.3 billion cubic meters, which accounted for almost 10% of the country's total consumption.

In general, the record-high reduction in consumption of gas in Ukraine lightened the load on the national economy. However, it should be noted that systematic efforts aimed at improving energy efficiency have not been organized. The significant potential for energy saving in all segments is being wasted.

Structure of gas consumption in Ukraine, bcm



## Gas production

In 2015, gas production in Ukraine amounted to 19.9 billion cubic meters, which was 1.4% lower than the figure for the previous year (or more than 3% with consideration of production indicators of Chornomornaftogaz prior to the loss of control over this company). The drop was mainly caused by indicators demonstrated by state-owned companies. The state-owned company Ukrgezvydobuvannya reduced production by almost 4% – to 14.5 billion cubic meters. Ukrnafta, where the state is a majority shareholder, has continued its downward trend: whereas in 2014, production fell by 10%, in 2015 this figure reached as high as 12%.

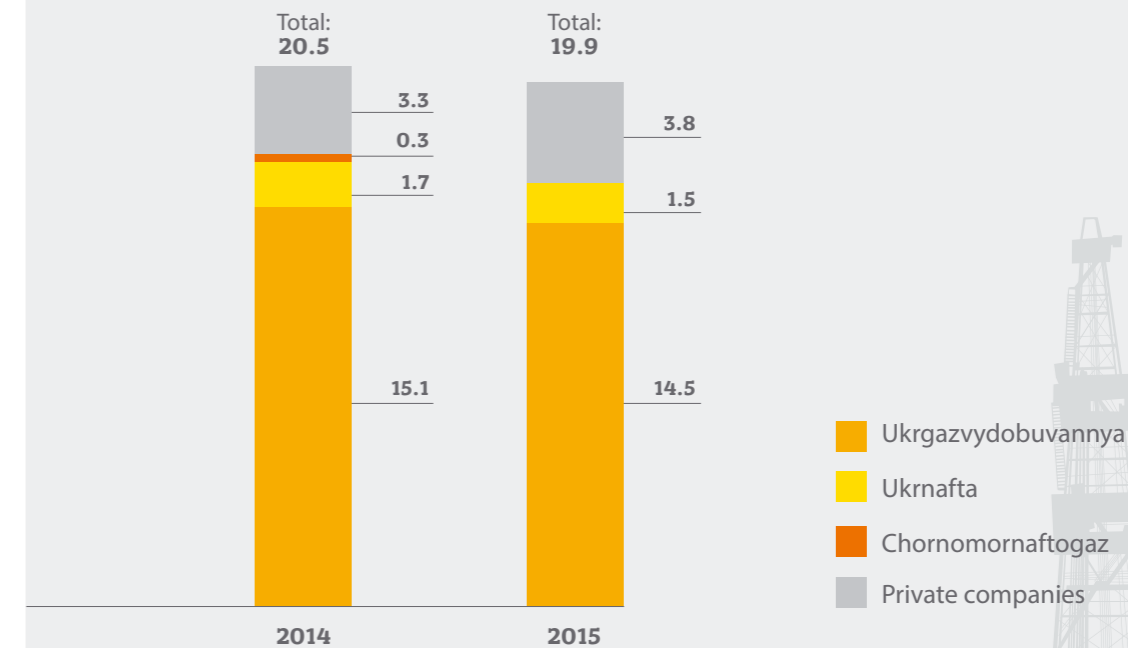
This negative trend in performance indicators of state-owned companies was partially offset by private producers. In an adverse environment for doing business, they managed to maintain a positive trend in their development. Production increased to 3.8 billion cubic meters, which accounts for more than 19% of the aggregate production (in 2014, this indicator for private producers was 16%, excluding performance results of Chornomornaftogaz).

**The main role in preserving a positive trend was played by Naftogazvydobuvannya, which is a DTEK Group company. The company was able to increase production by 73% to 1.3 billion cubic meters and set a record in the history of private gas production in Ukraine. If the results demonstrated by Naftogazvydobuvannya were not taken into account, gas production in Ukraine in 2015 would have dropped by 5%, and the growth rate of private companies would have been lower than 0.2%.**

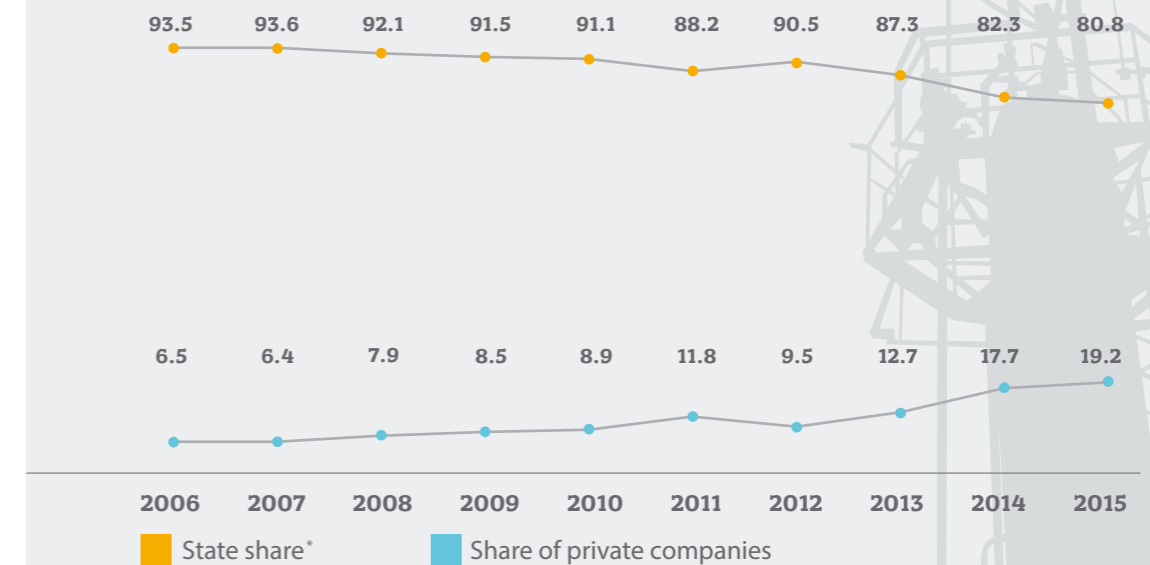
However, the growth of production by Naftogazvydobuvannya resulted from the completion of long-term projects that were launched as far back as in the first half of 2014. In all other aspects, similar to the entire industry, the company was affected by further deterioration in the investment and regulatory environment (see **Regulatory Environment**).

As a result, private gas production lost its momentum, and a negative trend is expected to continue in 2016. For instance, Naftogazvydobuvannya was forced to lower its gas production target from 2 billion cubic meters to 1.5 billion cubic meters, which will make it necessary to import additional volumes of gas.

Structure of gas production in Ukraine, bcm



Ratio of gas production by state-owned and private companies, %



Data from the Ministry of Energy and Coal Industry of Ukraine and Naftogaz of Ukraine.

## Gas Imports

In 2015, gas imports to Ukraine dropped by 17% year-on-year to 16.4 billion cubic meters. The share of imports in total consumption decreased from 46% to 41%. However, increased independence from external suppliers was due to the reduction in consumption caused by the economic and political situation in the country rather than growth in domestic production.

Ukraine was able to double imports of reverse gas from Europe year-on-year – to 10.3 billion cubic meters. The largest volumes of fuel were imported from Slovakia (9.7 billion cubic meter), Hungary, and Poland (0.5 and 0.1 billion cubic meters respectively).

At the same time, gas imports from Russia decreased by 2.4 times to a historic minimum of 6.1 billion cubic meters. As a result, the share of Russian gas in total consumption dropped to 18%. In November, direct imports of gas from the Russian Federation ceased altogether. According to the government's

statement, no further imports would be expected until the end of 2015/2016 heating season.

In 2015, Naftogaz of Ukraine was the main gas importer. Although the share of other importers increased by 7.5 times compared to the previous year, in absolute terms it remained quite low – 1.1 billion cubic meters (7%).

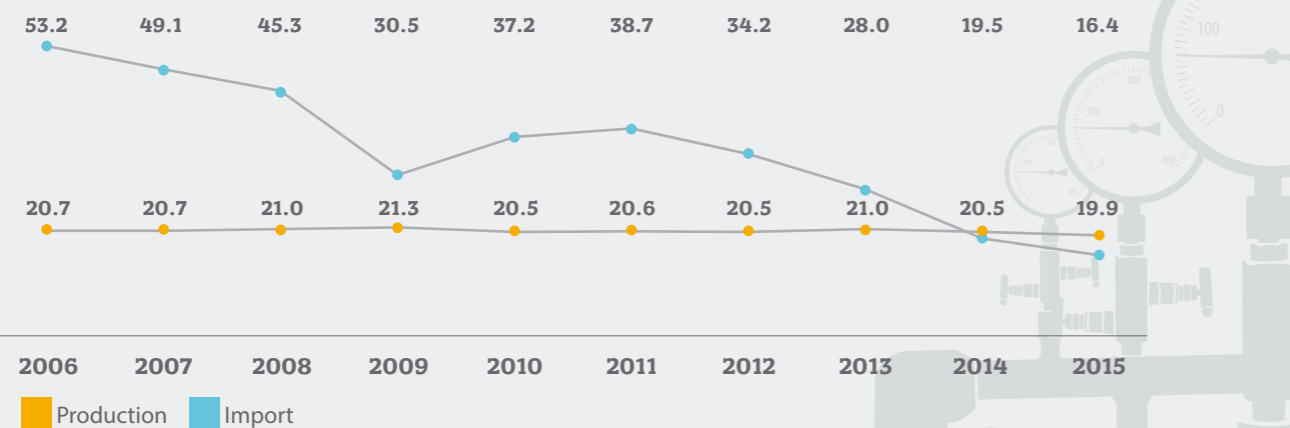
The average price of imported gas decreased in line with world market trends. By way of example, in the first quarter of 2015, Naftogaz of Ukraine imported gas at the average price of USD 315 per thousand cubic meters, while by the fourth quarter this figure fell to USD 228.

In 2016, Ukraine has prospects to continue cutting down gas imports, first of all, from Russia. At the same time, Ukrainian technical capabilities allow the country to continue increasing imports of reverse gas from Europe up to 20.6 million cubic meters a year. As a result, direct imports from the Russian Federation can be cut to a minimum or stopped altogether in 2016.

In 2015, owing to the drop in consumption, the share of domestic gas in the general structure reached a historic peak of almost

# 59%

Ratio of natural gas production and imports in Ukraine, bcm



Data from the Ministry of Energy and Coal Industry of Ukraine and Naftogaz of Ukraine.

## Pricing

In 2015, gas tariffs were increased for all consumer categories. This was due to the following two key factors. First of all, although the price of imported gas in USD equivalent was going down, the devaluation of the national currency caused an increase in its UAH price. Second, the government started aligning tariffs for households with market prices, thus performing its obligations to the IMF.

In particular, the tariffs for households were increased to USD 329/thousand cubic meters. At the same time, the government preserved a so-called "social price" of USD 165/thousand cubic meters subject to a limited volume of consumption. The same price was fixed for companies generating heat supplied to households.

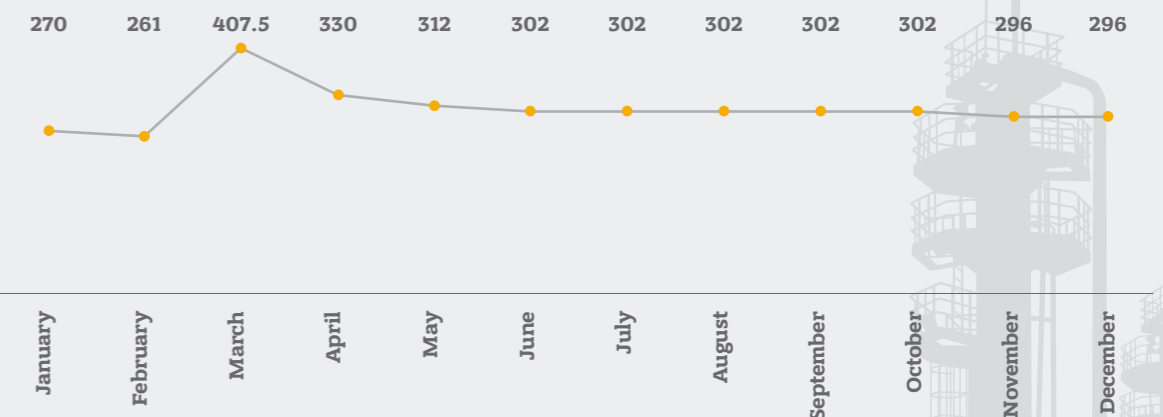
However, the social price was cancelled on 1 May 2016. The maximum retail price of gas for households was established at USD 315/thousand cubic metres, and USD 312/thousand cubic metres for heat generating companies. This increase complies with agreements reached with the IMF, according to which the government undertook to establish the "bottom" price of gas for households and heat generating companies at the level of at least 75% of the cost of imported resources.

When it increased tariffs for gas, the government simultaneously introduced a system of subsidies for households. According to the data collected by the government, around 5 million Ukrainian households are already using the subsidies. At the same time, social tension over increased tariffs is mounting and expected to rise in 2016.

The marginal tariffs on natural gas for industrial companies and state-financed organizations reached their peak of USD 408/thousand cubic meters in the first quarter of the year, after which they went down and stayed at the level of USD 302/thousand cubic meters. When increased by VAT, transportation and supply cost, the final price for consumers exceeds USD 412/thousand cubic meters.

At the same time, in mid-2015, private suppliers supplied gas at a price considerably lower than the marginal tariff and below the price of imported gas. According to market information, at certain points private suppliers sold gas at a price below USD 229/thousand cubic meters (excluding tax and mark-up), which was caused by a seasonal reduction in demand and a drop in volumes of industrial production.

Marginal natural gas prices for industrial consumers in 2015, USD/thousand cubic meters



Data from Naftogaz of Ukraine. USD/UAH exchange rate – 21.84

## Regulatory Environment

In 2015, important prerequisites for the deregulation and liberalization of the gas market were formed. On 1 October, the Law of Ukraine on the Natural Gas Market (No. 329-VIII) entered into force. Outwardly, this piece of legislation complies with European requirements and should secure the right of consumers to choose their gas suppliers freely; ensure freedom of access to networks, unbundling of monopolistic and competitive functions; market pricing, and conditions encouraging the development of competition (no regulated retail tariffs for any consumers whatsoever). However, the implementation of this law is being delayed. A number of by-laws were passed with a significant delay or have not been issued yet. In particular, there is no mechanism for the switch to free market prices; and the unbundling of Naftogaz of Ukraine planned for 2015 was not implemented.

In the gas production segment, the existence of increased rental rates introduced in August 2016 (55% for wells up to 5 km, and 29% for wells over 5 km) remained a negative factor. Due to the absence of sufficient working capital, almost all companies were forced either to reduce to the minimum or completely stop the implementation of their investment programs. Rental rates were reduced on 1 January 2016. However, the consequences of a high tax burden at a time of plummeting energy prices, both globally and in Ukraine, will continue to affect the development of the industry for at least 1.5-2 years.

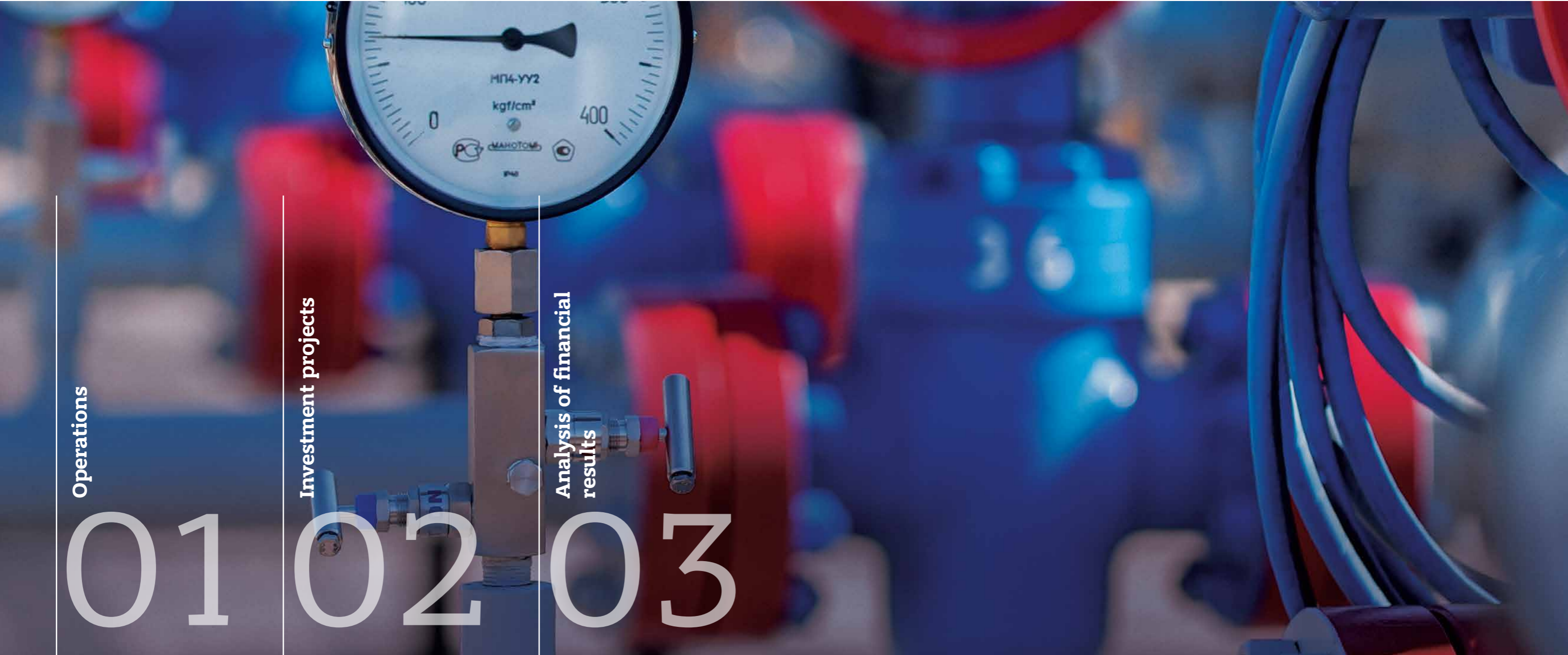
Another negative factor was the adoption of a resolution stipulating that as of 1 January 2016, gas suppliers must create gas reserves in underground storage equal to 50% of the monthly supply, which must be secured by a 20% bank guarantee. At the same time, no justification for these figures was offered. As a result, working capital that could have been channelled into the companies' development, was diverted. The volume of reserves must be brought into compliance with real risks assumed by suppliers.

An imperfect mechanism for obtaining special permits to survey and drill deposits of oil and gas still creates an impediment to investments. Only three auctions for licenses to use mineral resources were organized in 2015. Moreover, the procedure for obtaining licensed fields from local authorities without an auction is not completely transparent. The Mineral Resources Code, updated in line with European standards, will facilitate communication between investors and public authorities on the one-stop-shop principle, thus reducing the number of contacts with public officials to a minimum.

Issues related to the land use must also be dealt with, and procedures related to constructing new facilities must be streamlined. These tasks could be fulfilled by draft law No. 3096 providing for deregulation, which is currently awaiting consideration by the Ukrainian Parliament.



# Performance results



Operations

Investment projects

Analysis of financial results

01 02 03

In 2015, DTEK Group companies mined 28.7 million tonnes of coal (-22.7 % year-on-year), supplied 38.3 billion kWh of electricity (-19.9 %), transmitted 45.1 billion kWh of electricity (-16.2 %), and produced 1.3 billion cubic meters of gas (+73.4 %).

#### DTEK Group key production indicators

Indicators	Unit	2015	2014	Change, +/-	Change, %
<b>Coal production</b>	thousand tonnes	28,692.0	37,122.0	-8,430.0	-22.7
<b>Coal preparation:</b>					
ROM coal preparation	thousand tonnes	19,965.8	26,400.8	-6,435.0	-24.4
concentrate output	thousand tonnes	12,279.4	17,091.8	-4,812.5	-28.2
<b>Electricity generation (supply)</b>	million kWh	38,284.1	47,789.5	-9,505.4	-19.9
including DTEK Renewables	million kWh	634.0	651.4	-17.4	-2.7
<b>Electricity transmission</b>	million kWh	45,086.4	53,809.7	-8,723.3	-16.2
<b>Electricity exports</b>	million kWh	3,555.0	7,988.0	-4,433.0	-55.5
<b>Coal exports**</b>	thousand tonnes	1,387.1	4,057.1	-2,670.0	-65.8
<b>Coal imports</b>	thousand tonnes	404.1	1,687.0	-1,282.9	-76.0
<b>Gas imports</b>	million cubic meters	23.7	0.0	23.7	100.0
<b>Gas production</b>	million cubic meters	1,304.6	752.5	552.1	73.4
<b>Gas-condensate production</b>	thousand tonnes	45.3	29.0	16.3	56.2

\* Excluding DTEK Krymenergo.

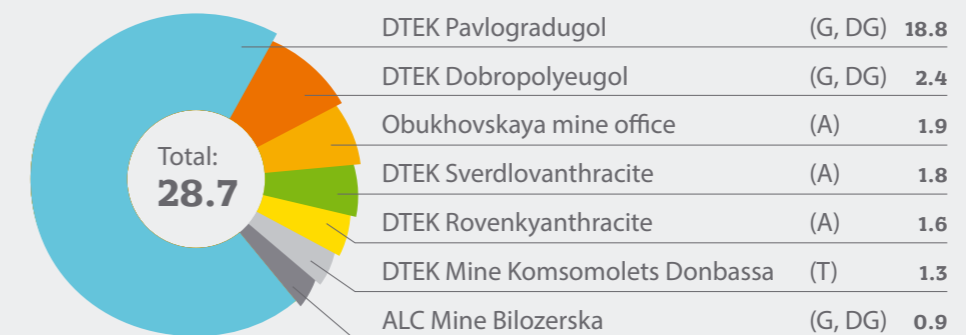
\*\* Including trading operations carried out abroad.

## DTEK Energy Coal production and preparation

The company's miners brought 28.7 million tonnes of coal to the surface in 2015, which is 22.7 % lower than in 2014. As a result, coal preparation plants reduced production: ROM coal processing was down to around 20 million tonnes, and concentrate output fell to 12.3 million tonnes.

In Ukraine, high volatile (steam) coal is extracted from mines located in the territories not affected by military operations, while anthracite mines are located in the ATO zone. Fifty percent of the country's thermal power plants use high volatile (steam) coal as fuel, and the other half generates electricity from anthracite coal.

Coal production by DTEK Energy companies in 2015, million tonnes



G – high volatile (steam) coal, DG – long flame high volatile (steam) coal, T – lean coal, A – anthracite coal

### Coal concentrate production by CPPs of DTEK Energy, thousand tonnes

	2015		2014		Change, +/-		Change, %	
	C	Th	C	Th	C	Th	C	Th
High volatile (steam) coal	76.0	8,062.4	365.1	8,007.4	-289.1	55.0	-79.2	0.7
Lean coal	-	892.2	-	1,827.8	-	-935.6	-	-51.2
Anthracite coal	-	3,248.8	-	7,024.1	-	-3,775.3	-	-53.7

Th – thermal coal (including exports), C – coking coal.

### Main factors affecting production indicators:

- **DTEK Energy miners managed to maintain high volatile (steam) coal production almost at 2014 levels – 22.1 million tonnes.**

From January to September 2015, the Company's miners were ramping up the production of high volatile (steam) coal. Their efforts ensured the operation of TPPs running on this coal grade under increased load and partially compensated for the decrease in electricity production at plants running on anthracite. In the fourth quarter of 2015, further growth of coal production was impeded by excess capacity accrued in the Unified Energy System of Ukraine (UES). A substantial decrease in electricity consumption with continuing imports and restrictions on exports resulted in smaller quantities of coal being burned at TPPs;

**Miners of DTEK Pavlogradugol, which produces high volatile (steam) coal, made a considerable contribution to maintaining stable generation of electricity in Ukraine. At year-end 2015, their labor productivity increased by 2.2 % year-on-year, to 99.5 tonnes per month.**

- **Reduction in anthracite and lean coal production at DTEK Rovenkyanthracite, DTEK Sverdlovanthracite, and DTEK Mine Komsomolets Donbassa by a total of 63.4 % or 8.0 million tonnes**

At the same time, mining companies increased coal production by 59.5 % or 1 million tonnes in the second half of 2015 compared to the first half of the year. This became possible after the Nikitovka-Mayorska railway passage, which had been destroyed during military operations in 2014, was restored in August 2015. After the movement of trains resumed, the production of anthracite coal increased, allowing TPPs to accumulate sufficient volumes of this resource for use during the heating season.

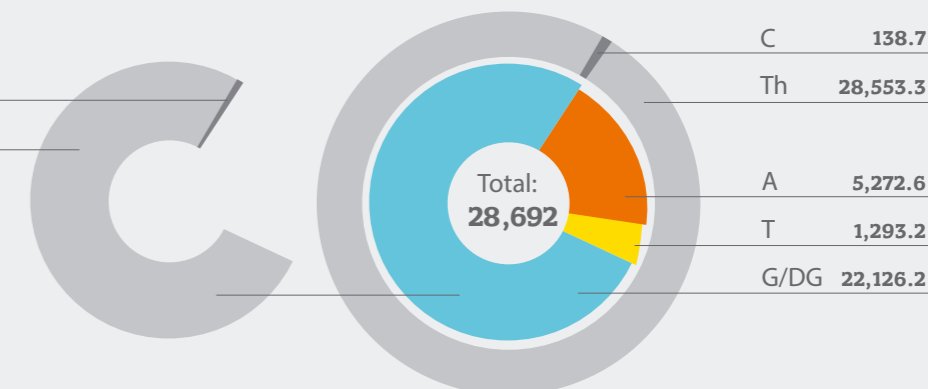
The labour productivity of miners at DTEK Energy's mines in 2015 was 55.7 tonnes per man-month (as compared to 67.1 tonnes per man-month in 2014). The decrease in anthracite and lean coal production was caused by the ongoing military conflict. The resumption of companies' operations and restoration of coal supplies to Ukrainian thermal power plants became a prerequisite for a successful heating season.

At the same time, insufficient financing of the thermal generation segment considerably hinders the development of the coal industry. As a result, mining operations are suspended, and mining companies are not able to upgrade or purchase new mining equipment.

### Structure of coal produced by DTEK Energy, thousand tonnes

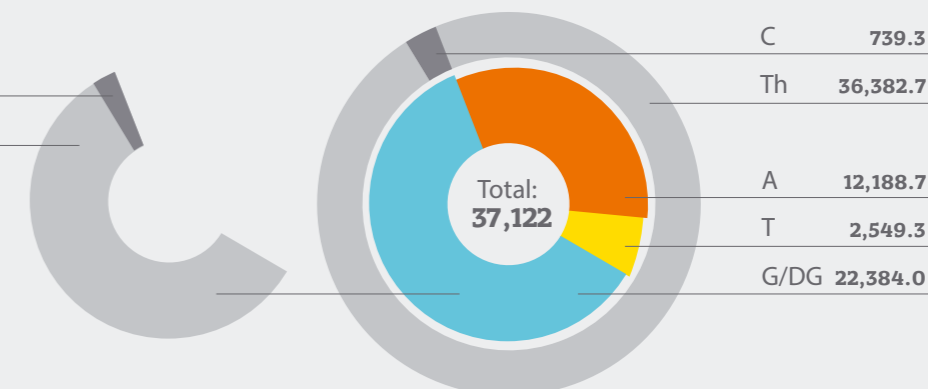
#### 2015

C 138.7  
Th 21,987.5



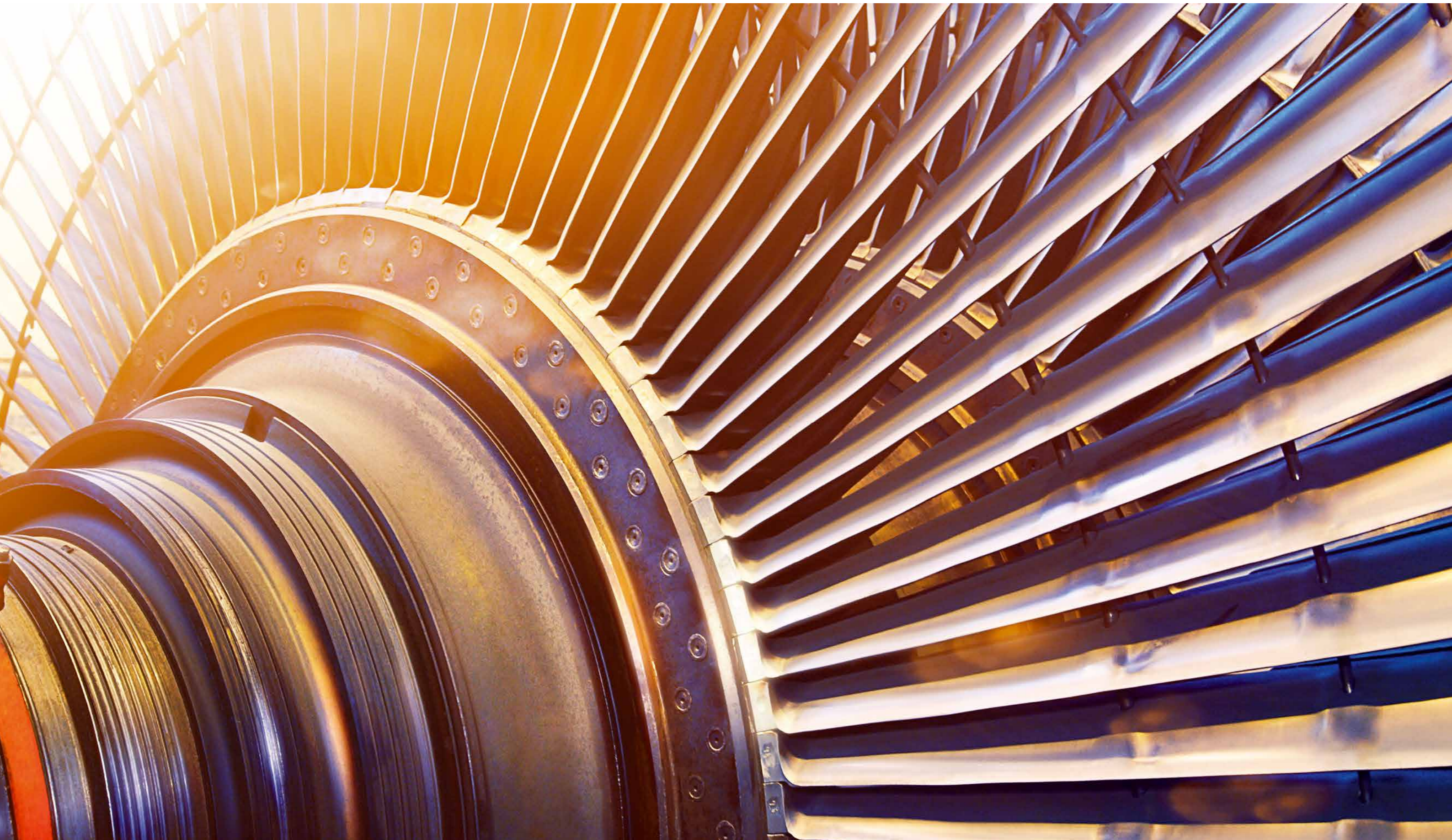
#### 2014

C 739.3  
Th 21,644.7



G – high volatile (steam) coal, DG – long flame high volatile (steam) coal, T – lean coal, A – anthracite coal, Th – thermal coal, C – coking coal.





# Electricity generation

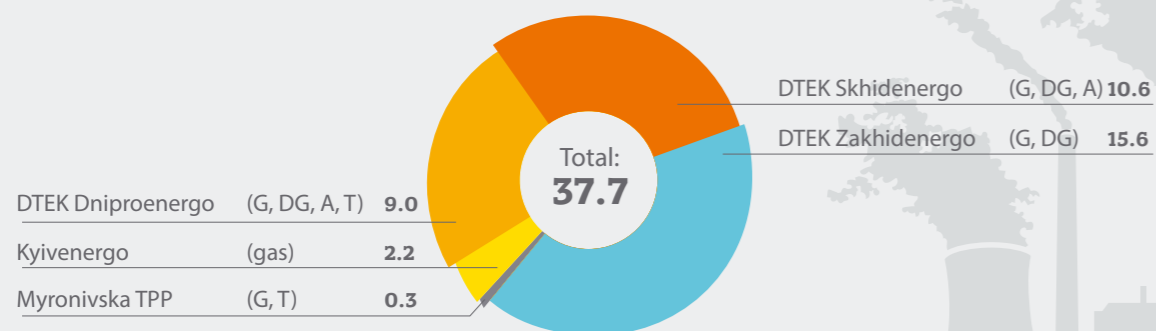
In 2015, the Company's thermal power plants supplied 37.7 billion kWh of thermal energy, which is 20.1% less than in the previous year.

The main fuel for DTEK Energy's TPPs is coal. In 2015, actual coal consumption was 19.6 million tonnes, of which high volatile (steam) coal accounted for 16 million tonnes and anthracite – for 3.6 million tonnes.

In 2015, the share of coal in the fuel mix of generation companies was 98.1%, and gas and oil used to ignite coal accounted for 1.9%.

DTEK Trading was the core supplier of coal to TPPs.

Generation (supply) of electricity by DTEK Energy companies in 2015, billion kWh



## Main factors affecting production indicators:

- **Restriction on electricity generation by TPPs due to the reduction in electricity consumption in Ukraine by 11.3%, or 19.3 billion kWh along with imports from Russia and restrictions on exports.**
- **DTEK Zakhidenergo operating on high volatile (steam) coal maintained the same volumes of electricity supply as in 2014.**

A substantial amount of coal reserves and their availability allowed the Company's power units to run under increased load to reduce the shortage of capacity and ensure stability of operations of the UES. However, smaller amounts of coal were consumed in the fourth quarter due to a significant drop in Ukrainian industrial production and restrictions on exports, which offset the growth in electricity supply by DTEK Zakhidenergo recorded in January through September 2015.

- **DTEK Dniproenergo decreased electricity supply by 40.2% (or 6 billion kWh).**

DTEK Kryvorizka TPP and DTEK Prydniprovsk TPP are designed to use anthracite and lean coal as fuel. The supply of these types of coal from Ukrainian mines located in the ATO zone was restricted as a result of the damage caused to the infrastructure, and the cost of electricity production on the basis of imported resource was not offset by the tariff established for TPPs of DTEK Energy. Nonetheless, the company imported more than 400 thousand tonnes of anthracite in January-March 2015 to cover the shortage of capacity in the UES. After Nikitovka-Mayorska railway passage was restored in the second half of the year, deliveries of coal from the Company's mines located in the ATO zone were resumed, which allowed DTEK Dniproenergo to increase electricity supply by 5.2%, or 228.4 million kWh compared to the first half of the year.

- **Reduction in supply of electricity by DTEK Zuivska TPP and DTEK Luganska TPP of DTEK Skhidenergo and Myronivska TPP of DTEK Donetskoblenenergo of a total of 36.1%, or 3.1 billion kWh caused by military operations in Donbas and destruction of railway and energy infrastructure.**

The destruction of power transmission lines of NEC Ukrenergo disconnected DTEK Luganska TPP from the UES. Since September 2014, this power plant has been operating as an energy island. DTEK Zuivska TPP was disconnected from the UES by Resolution No. 263 of the Cabinet of Ministers of Ukraine on Specifics of the regulation of relations in the area of electricity in the territories where government bodies temporarily do not exercise their authority or partially exercise their authority dated 7 May 2015.

As of 1 January 2016, 1.6 million tonnes of coal were stored at the warehouses of DTEK's TPPs, which is 67% higher than in 2015. Anthracite reserves were five times higher than the figures for 2015.

Generation, ICUF\*, and specific fuel consumption of Ukrainian thermal generation companies

Companies	Electricity generation, billion kWh		ICUF, %		Specific fuel consumption, g/kWh		Change, +/-		
	2015	2014	2015	2014	2015	2014	Generation	ICUF	Specific fuel consumption
DTEK Energy's TPPs**	39.4	49.2	25.9	32.5	396.4	391.0	-9.8	-6.6	+5.4
Centrenergo	8.4	12.5	12.5	18.6	403.3	400.1	-4.1	-6.1	+3.2
Donbasenergo	6.9	7.1	22.7	28.4	407.3	415.0	-0.2	-0.9	-7.7

# 81.17%

The task of TPPs is to increase electricity generation during morning and evening peak hours, i.e. to manoeuvre capacity. Due to changes in capacity in the UES, DTEK Energy's TPPs running on high volatile (steam) coal increased their manoeuvres (the number of boiler startups increased to 3,064 in 2015 as compared to 2,834 in 2014), thus compensating the reduction in electricity supply from anthracite fired power plants.

— coefficient of technical availability of DTEK Energy's power plants in 2015 demonstrates their ability to cover the load schedule of the UES.

\* Installed capacity utilization factor.  
\*\* Excluding Kyivenergo and Myronivska TPP.

## Key operational indicators of DTEK Energy TPPs

Company	Indicators	2015	2014	Change, +/-
<b>DTEK Kurakhivs'ka TPP</b>	Electricity generation, million kWh	5,969.4	5,966.4	+3.0
	In-process electricity consumption (generation), %	10.4	10.4	0.0
	Busbar output, million kWh	5,303.2	5,347.6	-44.4
	ICUF, %	44.9	44.9	0.0
<b>DTEK Zuyivs'ka TPP*</b>	Electricity generation, million kWh	3,274.7	4,338.0	-1,063.3
	In-process electricity consumption (generation), %	7.8	7.7	+0.1
	Busbar output, million kWh	3,005.0	4,004.3	-999.3
	ICUF, %	29.4	38.9	-9.5
<b>DTEK Lugans'ka TPP</b>	Electricity generation, million kWh	2,591.1	4,825.5	-2,234.4
	In-process electricity consumption (generation), %	11.9	11.0	+0.9
	Busbar output, million kWh	2,250.8	4,293.0	-2,042.2
	ICUF, %	19.9	37.7	-17.8
<b>DTEK Prydniprovsk TPP</b>	Electricity generation, million kWh	1,490.4	3,986.4	-2,496.0
	In-process electricity consumption (generation), %	12.2	11.6	0.6
	Busbar output, million kWh	1,266.1	3,525.8	-2,259.7
	ICUF, %	9.6	25.7	-16.1
<b>DTEK Zaporizka TPP</b>	Electricity generation, million kWh	5,895.1	5,552.9	+342.2
	In-process electricity consumption (generation), %	6.8	7.4	-0.6
	Busbar output, million kWh	5,442.4	5,142.3	+300.1
	ICUF, %	18.5	17.5	+1.0
<b>DTEK Kryvorizka TPP</b>	Electricity generation, million kWh	2,578.3	6,944.6	-4,366.3
	In-process electricity consumption (generation), %	10.4	8.1	+2.3
	Busbar output, million kWh	2,279.7	6,380.7	-4,101.0
	ICUF, %	10.2	27.8	-17.6
<b>DTEK Burshtyns'ka TPP</b>	Electricity generation, million kWh	9,727.9	10,039.0	-311.1
	In-process electricity consumption (generation), %	8.9	9.6	-0.7
	Busbar output, million kWh	8,771.3	9,073.2	-301.9
	ICUF, %	47.6	49.2	-1.6
<b>DTEK Dobrotvirs'ka TPP</b>	Electricity generation, million kWh	2,245.5	1,844.2	+401.3
	In-process electricity consumption (generation), %	9.0	10.3	-1.3
	Busbar output, million kWh	2,024.7	1,654.9	+369.8
	ICUF, %	50.3	41.9	+8.4
<b>DTEK Ladyzhyns'ka TPP</b>	Electricity generation, million kWh	5,287.6	5,345.6	-58.0
	In-process electricity consumption (generation), %	8.1	8.0	+0.1
	Busbar output, million kWh	4,839.7	4,918.5	-79.0
	ICUF, %	33.5	33.9	-0.4
<b>DTEK Donetskoblenergo Myronivska TPP</b>	Electricity generation, million kWh	317.5	415.0	-97.5
	In-process electricity consumption (generation), %	17.4	18.2	0.8
	Busbar output, million kWh	260.8	340.0	-79.2
	ICUF, %	13.2	17.2	-4.0

\* Energy companies located in the territories that are temporarily not controlled by the Ukrainian government operate under Resolution No. 263 of the Cabinet of Ministers of Ukraine on Specifics of the regulation of relations in the area of electricity in the territories where government bodies temporarily do not exercise their authority or partially exercise their authority dated.

## Production capacities of DTEK Energy power plants as of 1 January 2016

Power unit no.	Installed capacity, MW	Date of commissioning/ last major overhaul or retrofit	Hours in service	Major overhaul/retrofit
<b>DTEK Zuyivs'ka TPP</b>				
1	325	1982/2009	196,768	Retrofit was completed in 2009; installed capacity was increased by 25 MW
2	320	1982/2008	191,456	Retrofit was completed in 2008; installed capacity was increased by 20 MW
3	300	1986/2006	165,821	Retrofit will be completed in 2017; installed capacity is expected to be increased by 20 MW
4	325	1988/2012	164,020	Retrofit was completed in 2013; installed capacity was increased by 25 MW
<b>Total</b>	<b>1,270</b>			
<b>DTEK Kurakhivs'ka TPP</b>				
3	200	1972/2007	281,471	Retrofit plans are under consideration
4	210	1973/2008	255,990	Retrofit has been planned
5	222	1973/2015	240,071	Major overhaul was completed in 2015; retrofit was completed in 2009; installed capacity was increased by 12 MW
6	225	1973/2013	235,604	Retrofit was completed in 2013; installed capacity was increased by 15 MW
7	225	1974/2010	248,801	Retrofit was completed in 2010; installed capacity was increased by 15 MW
8	225	1974/2012	245,874	Retrofit was completed in 2012; installed capacity was increased by 15 MW
9	225	1975/2015	240,412	Retrofit was completed in 2015; installed capacity was increased by 15 MW
<b>Total</b>	<b>1,532</b>			
<b>DTEK Lugans'ka TPP</b>				
9	200	1962/2007	323,790	Retrofit plans are under consideration
10	210	1962/2012	309,372	Retrofit was completed in 2012; installed capacity was increased by 35 MW
11	200	1963/2004	317,571	Retrofit has been planned
12	175	-	-	Unit is mothballed
13	210	1967/2014	286,691	Retrofit was completed in 2014; installed capacity was increased by 35 MW
14	200	1968/2006	281,390	Retrofit has been planned
15	200	1969/2005	293,832	Retrofit has been planned
TEG no. 4	100	-	-	Unit is mothballed
<b>Total</b>	<b>1,495</b>			

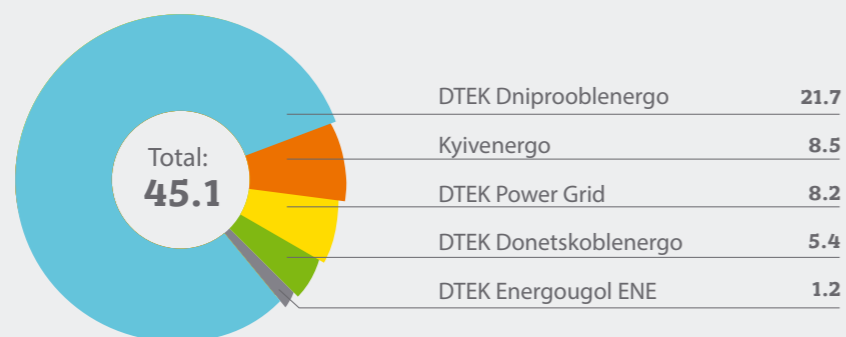
Power unit no.	Installed capacity, MW	Date of commissioning/ last major overhaul or retrofit	Hours in service	Major overhaul/retrofit
<b>DTEK Zaporizka TPP</b>				
1	325	1972/2012	276,794	Retrofit was completed in 2012; installed capacity was increased by 25 MW
2	300	1972/2006	270,070	Retrofit has been planned
3	325	1972/2014	271,278	Retrofit was completed in 2014; installed capacity was increased by 25 MW
4	300	1973/2002	255,536	Retrofit has been planned
5	800	1975/1995	148,998	Fuel oil and gas power unit. Reserve
6	800	-	-	Unit is mothballed
7	800	1977/1992	133,190	Fuel oil and gas power unit. Reserve
<b>Total</b>	<b>3,650</b>			
<b>DTEK Kryvorizka TPP</b>				
1	282	1963/1993	297,496	Retrofit will be completed in 2017; installed capacity is expected to increase by 33 MW
2	300	1964/1998	307,475	Retrofit plans are under consideration
3	300	1965/2012	265,099	Retrofit was completed in 2012; installed capacity was increased by 18 MW
4	300	1966/2005	246,971	Retrofit plans are under consideration
5	282	1967/1994	292,052	Retrofit has been planned
6	282	1968/1995	246,410	Retrofit plans are under consideration
7	282	-	-	Unit is mothballed
8	282	1969/1996	257,421	Planned to be decommissioned
9	282	-	-	Unit is mothballed
10	300	1972/1992	202,893	Major overhaul is planned for 2016
<b>Total</b>	<b>2,892</b>			
<b>DTEK Prydniprovska TPP</b>				
7	150	1958/2013	330,326	Planned to be decommissioned
8	150	1958/2014	352,857	Planned to be decommissioned
9	150	1959/2012	321,567	Retrofit was completed in 2012; installed capacity was not increased
10	150	1960/2006	328,321	Retrofit plans are under consideration
11	310	1962/2001	262,726	Major overhaul is planned for 2016
12	285	-	-	Unit is mothballed
13	285	1964/1997	298,000	Retrofit has been planned
14	285	-	-	Unit is mothballed
<b>Total</b>	<b>1,765</b>			

Power unit no.	Installed capacity, MW	Date of commissioning/ last major overhaul or retrofit	Hours in service	Major overhaul/retrofit
<b>DTEK Burshtyns'ka TPP</b>				
1	195	1968/2010	292,647	Planned to be decommissioned
2	185	1965/2014	274,642	Planned to be decommissioned
3	185	1966/2013	288,776	Planned to be decommissioned
4	195	1966/2014	308,113	Planned to be decommissioned
5	208	1967/2013	299,313	Retrofit was completed in 2013; installed capacity was increased by 13 MW
6	185	1967/2015	302,396	Major overhaul was completed in 2015; installed capacity is expected to increase by 10 MW
7	206	1968/2012	285,143	Retrofit was completed in 2012; installed capacity was increased by 21 MW
8	195	1968/2009	303,361	Retrofit has been planned
9	195	1968/2006	285,221	Retrofit has been planned
10	195	1969/2004	300,614	Retrofit is to be commenced in 2016
11	195	1969/2011	265,864	Retrofit plans are under consideration
12	195	1969/2012	256,761	Retrofit plans are under consideration
<b>Total</b>	<b>2,334</b>			
<b>DTEK Dobrotvirs'ka TPP</b>				
5	100	1960/2010	336,479	Planned to be decommissioned
6	100	1961/2015	330,659	Major overhaul was completed in 2015
7	150	1963/2011	340,810	Retrofit has been planned
8	160	1964/2014	312,796	Retrofit was completed in 2014; installed capacity was increased by 10 MW
<b>Total</b>	<b>510</b>			
<b>DTEK Ladyzhyns'ka TPP</b>				
1	300	1970/2007	247,103	Retrofit plans are under consideration
2	300	1971/2009	240,553	Retrofit plans are under consideration
3	300	1971/2011	229,389	Retrofit plans are under consideration
4	300	1971/2001	235,356	Retrofit has been planned
5	300	1971/2003	219,583	Retrofit has been planned
6	300	1971/2004	230,276	Unit is mothballed
<b>Total</b>	<b>1,800</b>			
<b>DTEK Donetskoblenenergo Myronivska TPP</b>				
1	100	1953/2004	285,814	Retrofit plans are under consideration
2	60	1954/1998	335,195	Reserve
3	115	2004/2013	64,349	Major overhaul was completed in 2013
<b>Total</b>	<b>275</b>			

# Electricity transmission

**In 2015, DTEK's distribution companies transmitted 45.1 billion kWh of electricity via networks, which is 16.2 % less than in the previous year.**

Transmission of electricity by DTEK Energy companies in 2015, billion kWh



## Main factors affecting production indicators:

- Reduction in electricity consumption in Ukraine: by 17.8 , or 10.8 billion kWh by industrial companies, including selective restriction of consumption during the summer months; by 7.2 , or 2.8 billion kWh by households due to warm weather in Q1 and Q4 of 2015, compared to the same periods in 2014.
- Aggregate reduction in electricity transmission by DTEK Power Grid, DTEK Donetskoblenegero, and DTEK Energougol ENE by 15.9, or 2.8 billion kWh caused by ongoing military operations and the volatile social and economic situation in the region.
- Exclusion of DTEK Krymenergo from the production indicators due to the loss of operational control over this company (in 2014, DTEK Krymenergo transmitted 4.3 million kWh of electricity).

Characteristics of DTEK Energy electricity distribution companies as of 1 January 2016

	Total length of transmission lines, km	Total number of transformer substations, units	Total capacity of substations, MVA
DTEK Donetskoblenegero	62,278	13,070	12,396
DTEK Dniprooblenergo	50,113	12,586	11,311
Kyivenergo	13,168	3,942	7,707
DTEK Power Grid	2,705	91	2,485
DTEK Energougol ENE	1,234	425	462
<b>DTEK Energy</b>	<b>129,498</b>	<b>30,114</b>	<b>34,361</b>

Transmission losses: DTEK Energy companies, %

	2015	2014	Change, +/-	Change, %
DTEK Donetskoblenegero	24.28	17.60	6.68	38.0
DTEK Energougol ENE	8.33	4.70	3.63	77.2
Kyivenergo	7.07	7.99	-0.92	-11.5
DTEK Dniprooblenergo	4.57	4.46	0.11	2.5
DTEK Power Grid	1.49	1.32	0.17	12.9
<b>Average for DTEK Energy</b>	<b>7.53</b>	<b>7.05</b>	<b>0.48</b>	<b>6.8</b>
<b>Average for Ukraine</b>	<b>11.5</b>	<b>12.47</b>	<b>-0.97</b>	<b>-15.6</b>

Kyivenergo provides a full cycle of electricity and heating supply services to the capital of Ukraine: production, transportation, and sale of thermal and electric power. The company provides services of central heating and hot water supply.

Heat is distributed and transmitted to consumers via heating networks that are mainly in communal ownership.

Gas is the main fuel used by Kyivenergo to generate electricity and heat. In 2015, Kyivenergo used about 2 billion cubic meters of gas.

The gas came from Naftogaz of Ukraine reserves.

**Kyivenergo's total installed electricity generation capacity is 1.2 GW and 8.8 thousand Gcal/h – for thermal energy generation.**

## Main factors affecting production indicators:

In 2015, Kyivenergo reduced generation (supply) of electricity by 10.6%, or 259.4 million kWh as a result of the adjustment in the forecast balance of the UES made by the Ministry of Energy and Coal Industry to reduce consumption of gas. Electricity transmission decreased by 2.7%, or 237.5 million kWh.

## Key operating indicators of Kyivenergo (CHPP-5 and CHPP-6)

Company	Indicators	2015	2014	Change, +/-
<b>CHPP-5</b>	Electricity generation, million kWh	1,449.1	1,701.7	-252.6
	Electricity supply, million kWh	1,157.1	1,396.4	-239.3
	In-process electricity consumption (electricity generation), %	8.0	7.4	0.6
	In-process electricity consumption (heat generation), kWh/Gcal	55.5	50.7	4.8
	ICUF, %	23.6	27.8	-4.2
<b>CHPP-6</b>	Electricity generation, million kWh	1,190.4	1,221.0	-30.6
	Electricity supply, million kWh	1,034.9	1,055.0	-20.1
	In-process electricity consumption (electricity generation), %	4.8	5.0	-0.2
	In-process electricity consumption (heat generation), kWh/Gcal	56.5	52.0	4.5
	ICUF, %	27.2	27.9	-0.7
<b>Total</b>	Electricity generation, million kWh	2,639.5	2,922.7	-283.2
	Electricity supply, million kWh	2,192.0	2,451.4	-259.4
	Thermal power generation, thousand Gcal	6,004.0	6,370.7	-366.7
	Thermal power supply, thousand Gcal	5,736.3	6,088.5	-352.2
	In-process electricity consumption, million kWh	494.7	497.4	-2.7
	ICUF, %	25.1	27.8	-2.7

## Production capacities of Kyivenergo (CHPP-5 and CHPP-6) as of 1 January 2016

Power unit no.	Installed capacity, MW	Date of commissioning/ last major overhaul or retrofit	Hours in service	Major overhaul/ retrofit
<b>Electricity generation</b>				
<b>CHPP-5</b>				
Power unit no. 1	100	1971/2014	303,816	2014 / 2015
Power unit no. 2	100	1972/2012	301,861	2012 / -
Power unit no. 3	250	1974/2013	269,081	2013 / -
Power unit no. 4	250	1976/2014	216,719	2014 / -
<b>Total</b>	<b>700</b>			
<b>CHPP-6</b>				
Power unit no. 1	250	1982/2013	212,818	2013 / -
Power unit no. 2	250	1984/2012	201,581	2012 / -
<b>Total</b>	<b>500</b>			
<b>Heat generation</b>				
<b>CHPP-5 – 1,874 Gcal/h</b>				
Power unit no. 1	160	1971/2014	303,816	2014 / 2015
Power unit no. 2	160	1972/2012	301,861	2012 / -
Power unit no. 3	324	1974/2013	269,081	2013 / -
Power unit no. 4	330	1976/2014	216,719	2014 / -
180 PTVM Boiler no. 1	180	1972/2008	34,078	2008 / -
180 PTVM Boiler no. 2	180	1972/1994	24,914	1994 / -
180 PTVM Boiler no. 3	180	1977/1997	43,706	1997 / -
180 PTVM Boiler no. 4	180	1992 / -	54,177	- / -
180 PTVM Boiler no. 5	180	1998 / -	39,041	- / -
<b>CHPP-6 – 1,740 Gcal/h</b>				
Power unit no. 1	330	1982/2013	212,818	2013 / -
Power unit no. 2	330	1984/2012	201,581	2012 / -
180 KVGM Boiler no. 1	180	1981/2010	60,724	2010 / -
180 KVGM Boiler no. 2	180	1982/2011	51,664	2011 / -
180 KVGM Boiler no. 3	180	1983/2011	51,464	2011 / -
180 KVGM Boiler no. 4	180	1986/2010	51,044	2010 / -
180 KVGM Boiler no. 5	180	1998/2013	11,368	2013 / -
NAS-209-150 Boiler no. 6	180	2004 / -	10,338	- / -

# Commercial activity

## Different domestic market conditions in the first and second half of 2015 affected the company's export and import operations.

### Coal sales on external and domestic markets

In 2015, the company exported 1.4 million tonnes of coal to external markets, which is 65.8% lower than in 2014. Changes in the structure of coal exports as a result of a shift in the market behavior on the world markets are as follows: exports to the markets of Africa and South America slowed down, while the volume of deliveries to Europe grew.

During the first half of 2015, the domestic market continued experience a shortage of anthracite coal caused by the military operations in Donbas. DTEK rerouted the coal intended for deliveries under foreign trade contracts to Ukrainian TPPs. In addition, in the first quarter, the company imported 0.4 million tonnes of fuel, mainly from South Africa and Australia, to maintain electricity generation. Starting in the second quarter, DTEK stopped importing coal as the tariff established for the company's TPPs was not sufficient to cover expenses incurred in buying coal in other countries and generating electricity.

**In the second half of 2015, the UES had sufficient capacity to cover domestic consumption. Starting in Q4, the UES experienced overproduction of generating capacities. From 20 to 30 power units of Ukrainian power plants with aggregate capacity of up to 6,000 MW were kept in reserve each day.**

### Main factors affecting the indicators:

- Stabilization of supply of anthracite and lean coal from DTEK Sverdlovanthracite, DTEK Rovenkyanthracite, and DTEK Mine Komsomolets Donbassa. In 2015, 3.2 million tonnes of coal were delivered from Ukrainian mines located in the ATO zone, of which 2 million tonnes were delivered in the second half of the year, which is 160% higher than the last year's figure.
- Increase in exports of available coal was hindered by licensing requirements applicable to export operations with anthracite coal, despite stabilization of deliveries from the ATO zone in the second half of the year and excess capacity in the UES.

### Main factors affecting the indicators:

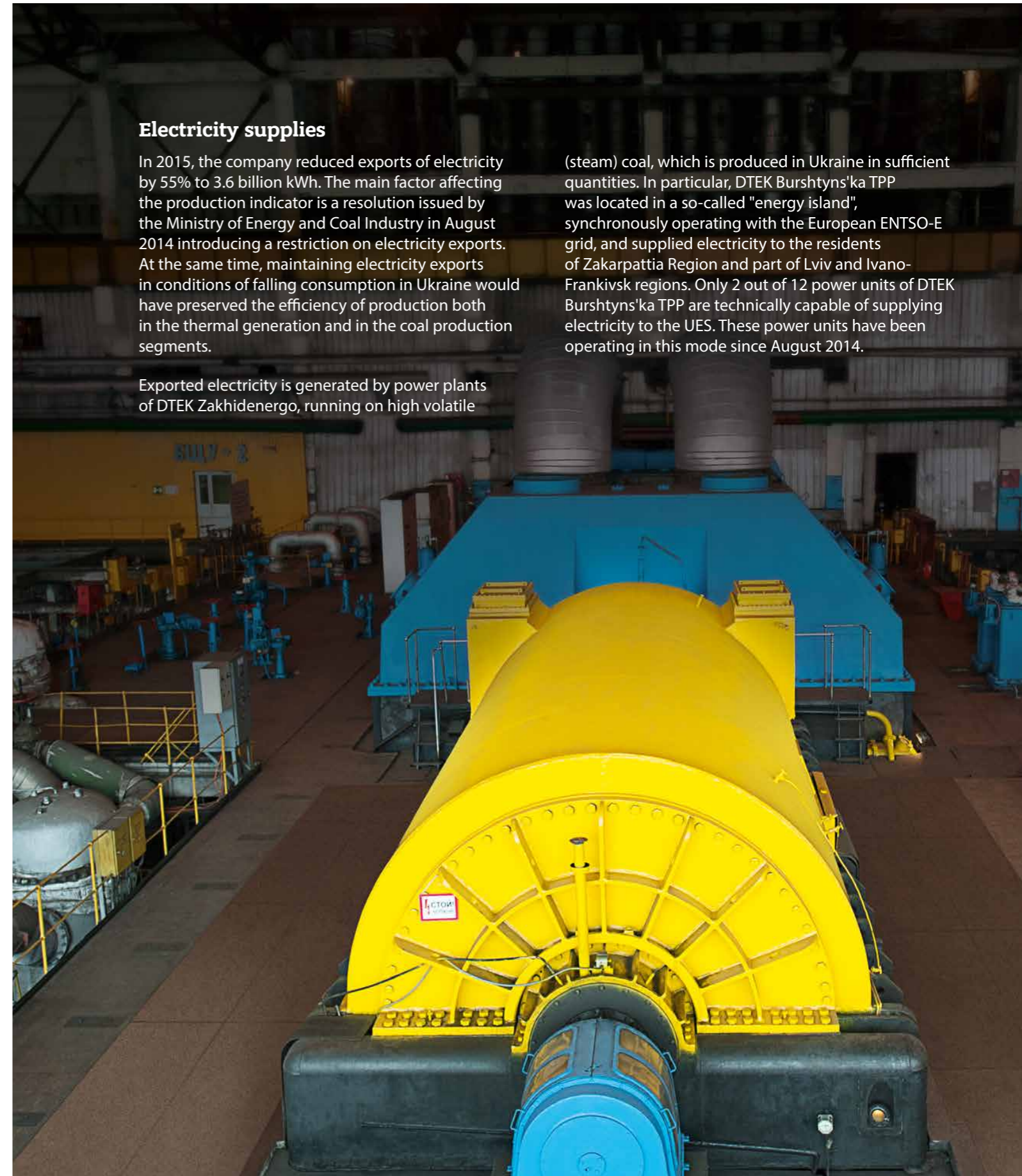
- A shortage of flexible capacities in the UES caused by insufficient fuel and destruction of railway infrastructure in the ATO zone. As a result, shipments of anthracite and lean coal from DTEK Sverdlovanthracite, DTEK Rovenkyanthracite, and DTEK Mine Komsomolets Donbassa mines were significantly restricted in the first half of the year.
- Decrease in supply of coal to Ukrainian industrial consumers by 36% or 449 thousand tonnes due to a 13.5% drop in industrial production in 2015, and deliveries of coal to DTEK Energy's TPPs to create fuel reserves for consumption during the heating season.

### Electricity supplies

In 2015, the company reduced exports of electricity by 55% to 3.6 billion kWh. The main factor affecting the production indicator is a resolution issued by the Ministry of Energy and Coal Industry in August 2014 introducing a restriction on electricity exports. At the same time, maintaining electricity exports in conditions of falling consumption in Ukraine would have preserved the efficiency of production both in the thermal generation and in the coal production segments.

Exported electricity is generated by power plants of DTEK Zakhidenergo, running on high volatile

(steam) coal, which is produced in Ukraine in sufficient quantities. In particular, DTEK Burshtyns'ka TPP was located in a so-called "energy island", synchronously operating with the European ENTSO-E grid, and supplied electricity to the residents of Zakarpattia Region and part of Lviv and Ivano-Frankivsk regions. Only 2 out of 12 power units of DTEK Burshtyns'ka TPP are technically capable of supplying electricity to the UES. These power units have been operating in this mode since August 2014.



# DTEK RENEWABLES

## Renewable energy

**674 thousand tonnes**

– a reduction in carbon dioxide (CO<sub>2</sub>) emissions as a result of operations of the Botievo Wind Farm\*.

In 2015, the Botievo Wind Farm generated 634 million kWh of electricity, which is 10 million kWh more than planned. It became possible to reach these indicators due to favorable weather conditions, a high completion coefficient of wind energy facilities (98.9%), and efficient use of time to perform maintenance of wind turbines and substations of the wind farm.

In June 2015, the wind farm was connected to the Botievo Wind Farm – Melitopol 330 transmission line. As a result, the 20 MW power output restriction was removed, and the operating capacity of the wind farm reached its design capacity of 200 MW.



\*Generation of electricity from fossil fuels produces greenhouse gas emissions. To measure these emissions, "CO<sub>2</sub> Equivalent" is used to bring all greenhouse emissions to a common denominator. To calculate the contribution of renewable energy sources to the reduction of greenhouse gas emissions, specific CO<sub>2</sub> emission per 1 kWh conversion factors are used on the basis of average calculations for thermal power plants. The factor approved by the State Environmental Investment Agency of Ukraine in 2010 is 1,063 kg of CO<sub>2</sub> per 1 kWh.

# DTEK OIL&GAS

## Hydrocarbon production

In 2015, Naftogazvydobuvannya produced 1,304.6 million cubic meters of gas and 45.3 thousand tonnes of gas condensate, which exceeded 2014 indicators by 73 % and 56 %, respectively.

### Main factors affecting production indicators:

- commissioning of six new wells, the drilling of which started in the first half of 2014;
- startup of pilot operations of ultradeep well no. 17 of the Semerenkivske field, which became the deepest (6,750 m) gas well in Ukraine have been gas deposits were discovered and produced;
- completion of a major overhaul of wells no. 60 and 63 of the Semerenkivske field, and well no. 51 of the Machukhske field;
- implementation of measures aimed at increasing the well flow rate of wells at the Semerenkivske and Machukhske fields.

Since its merger with DTEK Group (December 2013), Naftogazvydobuvannya has drilled ten ultradeep wells. The commissioning of new wells together with other engineering measures increased gas production by 2.5 times.





Coal production and electricity generation business is the basis of the Ukrainian economy: everything else stands on the shoulders of coal and electricity. Looking back, you could not even have imagined how gruelling the journey would be. But you have succeeded in building a great company.



Brian Ricketts,  
Secretary General,  
EURACOAL European Association  
for Coal and Lignite

In 2015, DTEK Group invested more than USD 230 million into the development of its production assets.

Capital expenditure were channelled into projects aimed at supporting production targets.

In general, DTEK Group's investment policy focuses on the creation of long-term prospects of operations in all segments of business.

Due to the implemented projects for retrofit and construction of new capacities, DTEK Group companies have built resilience allowing them to carry on operations steadily and without interruptions.

Amount of investments, USD million (IFRS, excluding VAT)\*

Business segment	2015	2014	Change, +/-	Change, %
Coal production and preparation	112.6	252.3	-139.7	-55%
Electricity generation	21.3	87.2	-65.8	-76%
Electricity distribution	19.1	40.4	-21.2	-53%
Kyivenergo	29.5	68.2	-38.7	-57%
DTEK RENEWABLES	0.3	12.8	-12.5	-98%
DTEK OIL&GAS	43.4	78.9	-35.5	-45%
Other	3.3	2.2	1.2	53%
<b>Total</b>	<b>229.6</b>	<b>541.9</b>	<b>-312.3</b>	<b>-58%</b>

\* Excluding cost of intangible assets.

# DTEK Energy

## Coal production and preparation

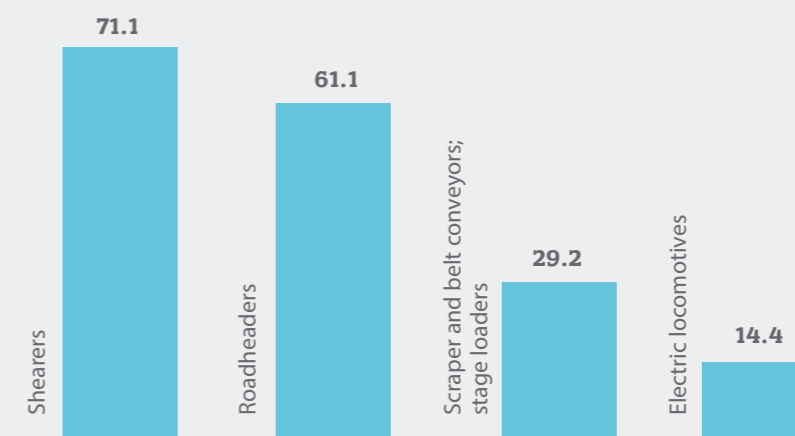
In 2015, DTEK Energy invested more than USD 110 million in outfitting its mines with equipment for mining and drifting faces, in modernizing the underground transportation chain, in upgrading equipment used by preparation plants, and in permanent mine openings.

### Key projects in 2015:

- **DTEK Pavlogradugol:** the construction of a ventilation shaft at the Yuvileina mine continues. Phase one of this project was completed: the shaft was drilled, headgear was installed, and an air ventilator was commissioned. During phase two, a mine hoist will be installed, and a tower head-frame will be constructed. The ventilation shaft provides mining works with the necessary amount of air to ensure steady coal production. The commissioning of the mine hoist will speed up the transportation of miners, thus reducing the time they have to spend inside the mine, and will increase safety and comfort level.
- Implementation of a project aimed at increasing the carrying capacity of the hoisting system at the Geroiv Kosmosu mine that will increase efficiency up to 3 million tonnes a year.
- The retrofit of the first section of DTEK Pavlogradske CPP began. The project is aimed at increasing ROM coal processing capacity up to 7 million tonnes per year, which will help cut costs incurred in connection with third-party coal preparation and increase efficiency of the mine – CPP-TPP logistics chain. After the project is completed, the plant will be able to stop using a sludge tank thus reducing its environmental impact.
- Testing of the world's first frontal cutting complex (FCC) was completed. The development of Cutting-edge equipment for installing assembly chambers in thin coal layers was performed by Corum Group on the initiative of DTEK. Testing was performed in different mining and geological conditions: at the Stepova mine from September 2013, and then continued at the Yuvileina mine. The first set of FCC was purchased by the Pershotravenske Mine Office. It will improve workplace safety and reduce the time necessary to install underground chambers by 30%. Commercial production of FCC is being organized at Corum Svitlo Shakhtaria plant in Kharkiv.
- Testing of a new technology at the Stepova mine: ROM coal is loaded into containers with bottom unloading, and diesel-hydraulic locomotives deliver it by aerial monorail to a dumping station. This transportation method is innovative for the coal industry. Experimental models of containers were designed and manufactured by Ferrit plant.
- **DTEK Oktyabrskaya CPP:** a heavy medium cyclone, which replaced a jiggling machine, was commissioned and successfully operates at the first section of the CPP. This project has increased the capacity of the plant, improves ash content of waste, helps reduce operating expenses, and also secure consistent and accident-free operations of the CPP.

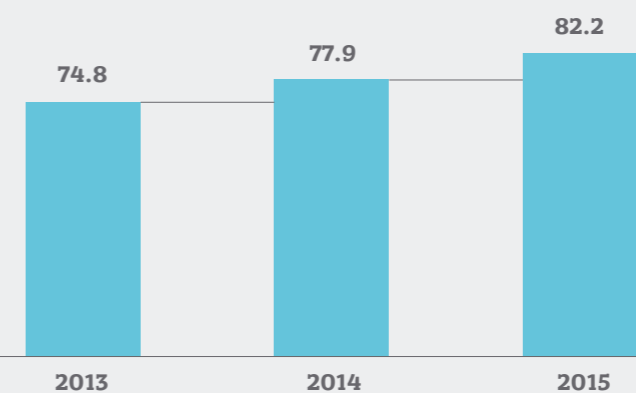
The company consistently implements advanced equipment and technology that improve working conditions for miners and increase the efficiency of underground mining.

Mining equipment upgrade by purchase rate as of 31 December 2015, %



\* Data collected after the companies became members of DTEK Group.

Labor productivity of DTEK Energy miners for high volatile (steam) coals, tonnes per man-month



# Electricity generation

**One of the Company's key tasks was getting TPPs ready for the 2015/2016 heating season.**

The flexibility rate of TPPs running on high volatile (steam) coal significantly increased. Due to the military operations, TPPs running on anthracite coal did not receive a sufficient supply of fuel from Ukrainian mines located in the ATO zone, and thus were forced to reduce electricity generation. As a result, the UES experienced a shortage of flexible capacity, and TPPs using high volatile (steam) coal had to operate under increased load to cover this shortage.

In general, an increase in the number of start-stop cycles results in excessive wear of equipment. It should be noted that 80% of the equipment used by Ukrainian thermal power plants has already exhausted its useful life.

In 2015, the number of startups by turbines of power units operating on high volatile (steam) coal increased by 8% y-o-y to 2,525. Despite difficulties caused by a shortage of capacity in the UES and regulators' failure to make timely decisions to balance the energy system, which, in turn, created problems with required disconnections of equipment for preventive maintenance, sound and targeted channelling of funds to an overhaul program reduced the frequency of emergency shutdowns by 1.8% year-on-year.

Under such adverse circumstances, DTEK Energy successfully completed its overhaul program planned for 2015: core generating equipment, including 55 power units and 10 power installations as well as auxiliary equipment of TPPs, was repaired. The aggregate budget of the overhaul and maintenance programme was USD 69 million.

In 2015, DTEK Energy also completed retrofit of power unit no. 9 of the Kurakhovska TPP. This power plant is located in the frontline zone, and successful completion of the project is the result of efforts made by each employee of the TPP and contractors. As a result of the retrofit, the installed capacity of the power unit was increased by 15 MW to 225 MW, and specific fuel consumption decreased by 6%. The project had a budget of USD 29 million.

The need for modernization and retrofit remains extremely pressing as the main facilities of thermal power plants were constructed back in the 1960-1980s, and their wear is significant. At the same time, the balance of power in the Ukrainian UES is characterised by a lack of flexible capacities that can regulate volumes during peak hours.

**Due to investments in retrofitting power units and proper annual maintenance, TPPs of DTEK Energy operate efficiently under extremely difficult conditions.**

**Since 2007, 17 power units have been retrofitted:**

**3,862 MW** of capacities were saved by decommissioning due to equipment wear

**324 MW** of additional capacity was created as a result of modernization

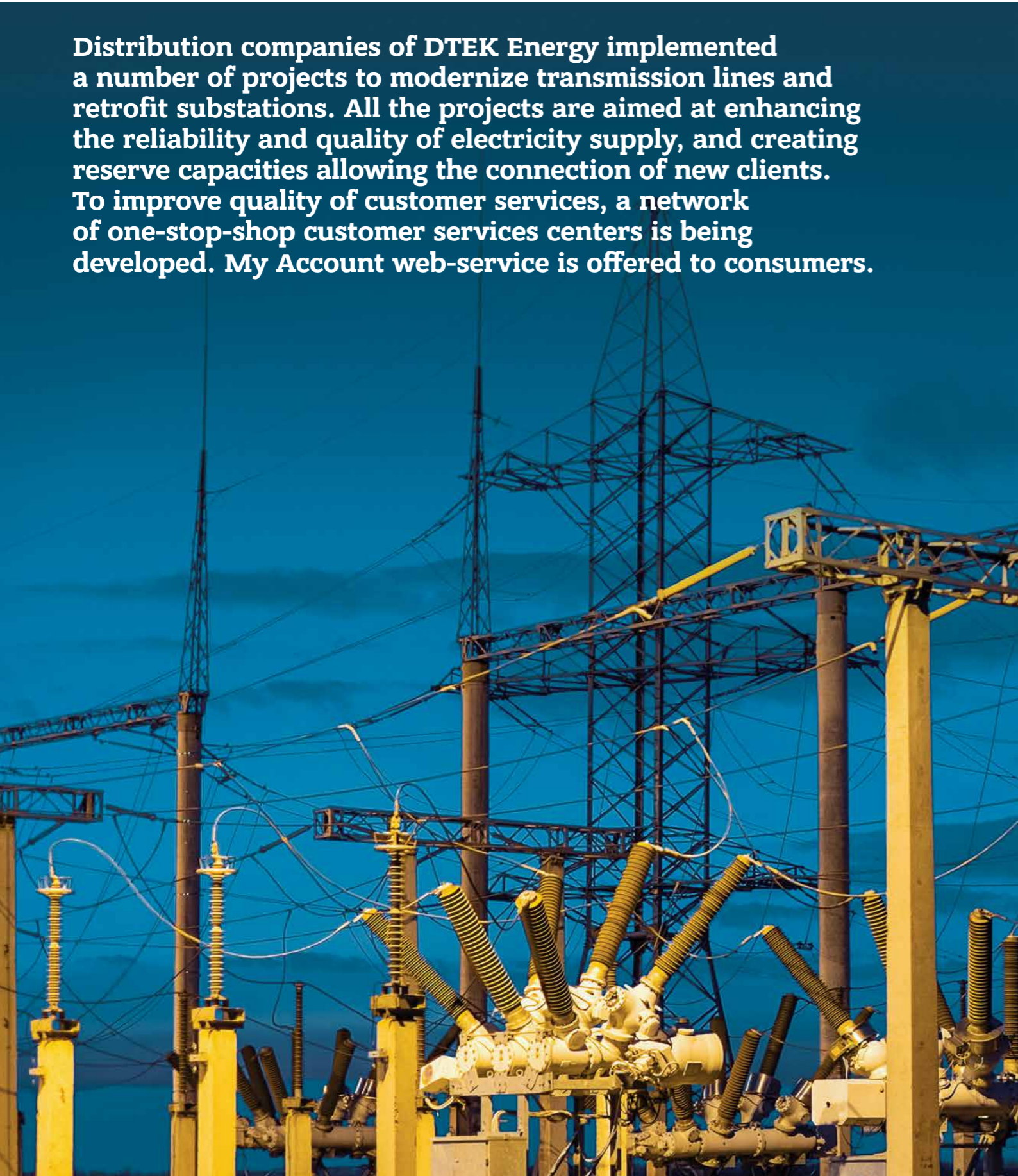
**79 MW** of additional capacity was created as a result of retrofit and maintenance

**By 23.2 times**

the particulate emissions from retrofitted power units were reduced.

# Electricity transmission

**Distribution companies of DTEK Energy implemented a number of projects to modernize transmission lines and retrofit substations. All the projects are aimed at enhancing the reliability and quality of electricity supply, and creating reserve capacities allowing the connection of new clients. To improve quality of customer services, a network of one-stop-shop customer services centers is being developed. My Account web-service is offered to consumers.**



## Major investments projects in 2015:

- **DTEK Dniprooblenergo:** in March, a one-stop-shop customer service center (CSC) was opened in Pidgirne (Dnipropetrovsk Region). The CSC provides services to more than 40,000 households and 1,000 legal entities.
- In April, the corporate contact center started providing customer services to about 1.5 million customer located throughout Dnipropetrovsk Region.
- In September, the organisational structure and sales functions were changed at the level of the CSC to ensure higher quality of customer services: regional power supply divisions operated by DTEK Dniprooblenergo and DTEK Donetskoblenergo were transformed into CSCs.
- The implementation of the Automatic Electricity Metering System continues in Dnipropetrovsk, Kryvyi Rig, and Dniprodzerzhynsk. More than 108 thousand household metering units are already connected to the system, including more than 25,000 connections made in 2015.
- **DTEK Power Grid:** modernization of the Dniprovka substation that supplies electricity to a number of mines, companies and residents of Petropavlivskiy District in Dnipropetrovsk Region was completed. Consumers were not disconnected from supply during the work.

849 thousand of DTEK Energy customers use My Account web-service. The number of corporate users – increased from 21 % in 2014 to 43.6 % in 2015.

**In 2015, many electricity facilities in Donetsk region were damaged during military operations. Damaged power units were restored by personnel of DTEK Donetskoblenergo, DTEK Power Grid and DTEK Energougol ENE. Restoration work still continues. Combat engineers are involved in examination and repair of electricity transmission lines, as quite often the passages and adjacent lands are mined or there is a danger of explosion of blind shells. Although the situation remains hazardous, the Company's distribution companies located in the ATO zone continue with repairs and supplying electricity to consumers.**

## Main efforts are aimed at:

- ensuring the supply of electricity to the most important public amenities (drinking water pumps, sewerage pumps, boiler plants, hospitals, schools, children daycare facilities), and industrial companies;
- restoring the transit 110 kV power grids that ensure the stability of operations of the Donbas energy system.
- ensuring the capability of DTEK Zuivska TPP, DTEK Kurakhovska TPP, and DTEK Luganska TPP to produce electricity;

In 2015, 582 power grids and 554 substations were restored or reconnected, which allowed resumption of the supply of electricity to households and commercial users.

The company takes comprehensive efforts to enhance reliability of electricity supply, and implements projects to create reserve capacities allowing connection of new clients.

#### Renovation of electricity transmission lines by DTEK Energy distribution undertakings in 2013-2015\*

**228.7** CL constructed and modernized, km  
**18,793.7** HVL modernized and repaired, km  
**19,057.0** CL 0.4-20 kV restored after destruction, units

#### Renovation of substations by DTEK Energy distribution companies in 2013-2015\*

**394** SS, TSS and DS constructed and modernized  
**2,995** power transformers of SS, TSS and DS repaired  
**9,384** TSS and DS repaired

HVL – high voltage line, CL – cable line (electricity transmission),  
 SS – substation, DS – distribution station, TSS – transformer substation

#### Customer Average Interruption Duration Index (CAIDI), minutes

2013	141.5
2015	130.5

CAIDI is calculated as the sum of customer-minutes off for all sustained interruptions divided by the total number of customers affected by the sustained interruptions. The unit of CAIDI is minutes.

Data presented with reference to all DTEK Energy distribution companies, including Kyivenergo. Data does not include force majeure and scheduled emergency outages.

\* Data provided with reference to facilities of DTEK Dniprooblenergo, DTEK Donetskoblenergo, DTEK Power Grid, DTEK Energougol ENE, and Kyivenergo.

# Kyivenergo

## In 2015, Kyivenergo implemented a number of important projects to improve the quality of its customer services.

In particular, in 2015, Kyivenergo installed more than 3,000 building heat metering units (compared to 647 meters installed in 2014). Thus, the company fulfilled its obligation to the city despite a huge scope of work and tight deadlines. As a result, 90% of Kyiv resident can already pay for heat according to actual meter readings, and Kyiv has a leading position in terms of heating meters installed in residential buildings. This project improves the transparency of relationships between the consumer and the service supplier, and also encourages every building to save heat. In 2015, Kyivenergo implemented an energy audit seervice for residential buildings to promote energy-saving opportunities. At the residents' request, the company's engineers can design an energy passport for a building, issue recommendations for thermal modernization, and suggest energy-saving opportunities supported by calculations.

The company also continued the implementation of infrastructure projects to improve the quality of heat supply. Today, the extent of wear of Kyiv's heating network is 67%. Every year, between heating seasons, Kyivenergo replaces the most worn and distressed areas of heating networks and repairs other sections. In 2015, Kyivenergo replaced the most worn and distressed areas of heating networks laid between 1950 and 1970. In particular, 13 km of pipelines of the central heating and hot water supply network were replaced with modern energy-saving metal or plastic pre-insulated pipes.

In addition, thermal-imaging aerial mapping was completed in March. Although this was the first time that aerial diagnostics had been used in the Ukrainian thermal system, the world practice considers this approach as the most efficient from the standpoint of the quality of data obtained. Expected effect from using the data obtained during thermal-imaging aerial mapping:

- reduction of operating expenses in connection with maintenance of central heating systems;
- reduction of direct heat losses;
- prevention of breakdowns as a result of prompt discovery of areas that require attention;

- reduction of time required to discover leaks in a heat-transfer medium;
- reduction of the scope of repairs and reconstruction work to eliminate accidents.

As for electricity supply to the capital, Kyivenergo has worked hard to enhance reliability and capacity of equipment. In 2015, Kyivenergo completed construction of a 330 kV gas-insulated switchgear at CHPP-5, which is a strategically important facility for both the capital and the national energy industry. Today, this is the most innovative technological solution in the Ukrainian energy industry. The innovative equipment allows increased reliability and quality of electricity supply to Kyiv as a result of an enhanced connection between the capital's energy system and the Ukrainian UES. This project is particularly relevant due to growing demand: since 2000, electricity consumption has been growing by 4-5% annually.

Major overhauls were also completed at eight substations – Golosievo (Golosiivskiy District), Lepse (Solomyanskiy District), Dovzhenkivska and CT-1 (Shevchenkivskiy District), Kharkivska, Stroitelstvo, and Desnyanska (Desnyanskiy District), and CT-2 (Podilskiy District). In 2015, the company repaired more than 145 km of aerial transmission lines, 120 cable lines, and 697 transformer substations. These efforts will ensure natural growth of electricity consumption and will create reserve capacities for connecting new customers.

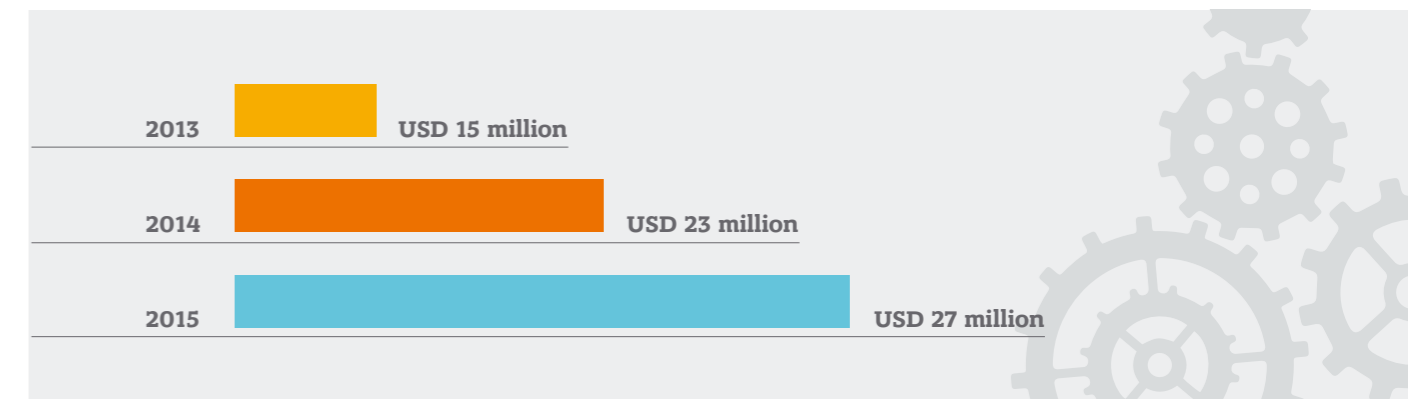
The company continues to improve the quality of customer services. At the moment, 12 CSCs that operate in the capital provide services to about 1 million of individual customers and 28,000 legal-entities. Furthermore, Kyivenergo has offered Kyiv residents a new service. Mobile Customer Service Center is a solution that gives people an opportunity to submit documents necessary to conclude heating, hot water, and electricity supply contracts without having to visit a CSC. Moreover, the mobile service center accepts application for registration and re-registration of subsidies and provides advice on the provision of services.



## Novator: continuous improvement system

Since 2013, DTEK Energy has been implementing the Novator continuous improvement system at its industrial companies. Employees offer their own ideas for improvements, engage in team work to find solutions to improve processes, reduce and eliminate losses, and to improve the quality of products and services.

**USD 65 million** – financial impact of the Novator continuous improvement system



**43** companies have implemented the Novator system since 2013

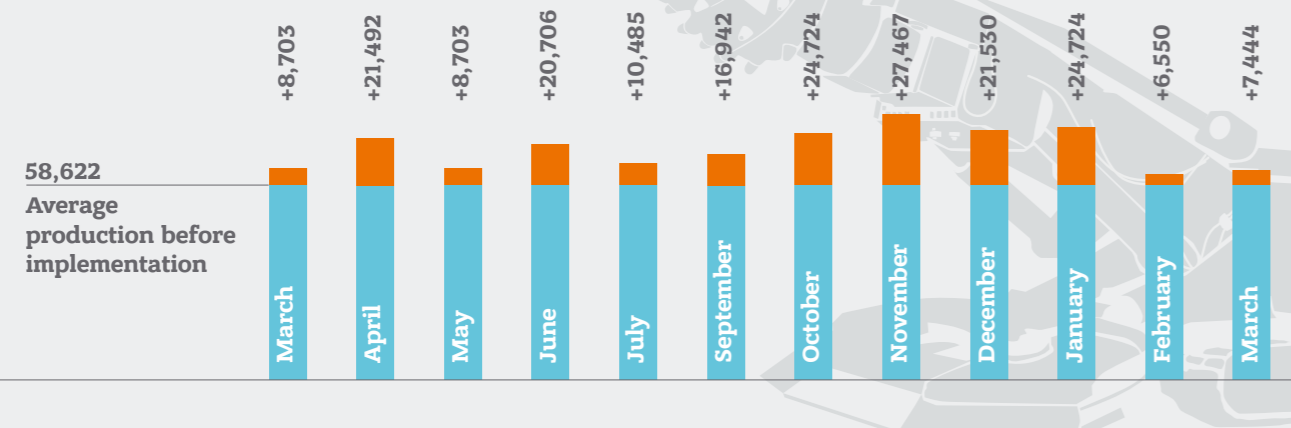
**7,625** ideas were offered by employees, of which **48.6%** have been or are being implemented.

About **9%** of managers and employees are actively engaged in changes (offer ideas, participate in continuous improvement teams, etc.).

## 1 The author of the idea: A. Redka, stope miner supervisor, section 5 of Geroiv Kosmosu mine office

Personnel of the Geroiv Kosmosu mine office increased efficiency of a shearer by installing a second Engine of the same-type. As a result, coal production increased by almost 200.000 tonnes per year, and equipment breakdowns decreased by 43%.

Diagram of coal production growth following modernization of 1KA-200 combination machine, tonnes



## 2 The author of the idea: I. Gretsko, stope miner decreased decreased decreased supervisor, section 1 of Pershotravenske Mine Office

The time required for re-installation of equipment from a depleted mine face to a new one was reduced by six days by applying an optimal logistics solution. The power train for the boundary entry and main gallery has been consolidated and, together with cable products, is delivered to a new mine face by monorail. This arrangement reduces installation time and thus increases coal production.

## 3 The author of the idea: G. Vokhmintseva, grade I engineer with the setting and testing workshop of the production engineering department of DTEK Luganska TPP

Circulation pumps supply cooling water to TPP's turbine condensers, and the volume of this water affects the operating efficiency. When power units are stopped, pumps are overloaded, as more water is supplied than required. A methodology was formulated for calculating the optimum mix of operating pumps and aimed at maintaining an economical vacuum in turbine condensers and thus reducing in-process electricity consumption by TPPs.

## 4 The author of the idea: A. Gotobets, supervisor of boiler-and-turbine workshop no. 1 of DTEK Prydniprovsk TPP

Fuel oil burners were modernized, because droplet spraying failed to ensure complete combustion of fuel. The new burners ensure atomizing, and as a result fuel oil burns faster and produces more heat. Therefore, TPP needs less starting fuel to ignite coal.

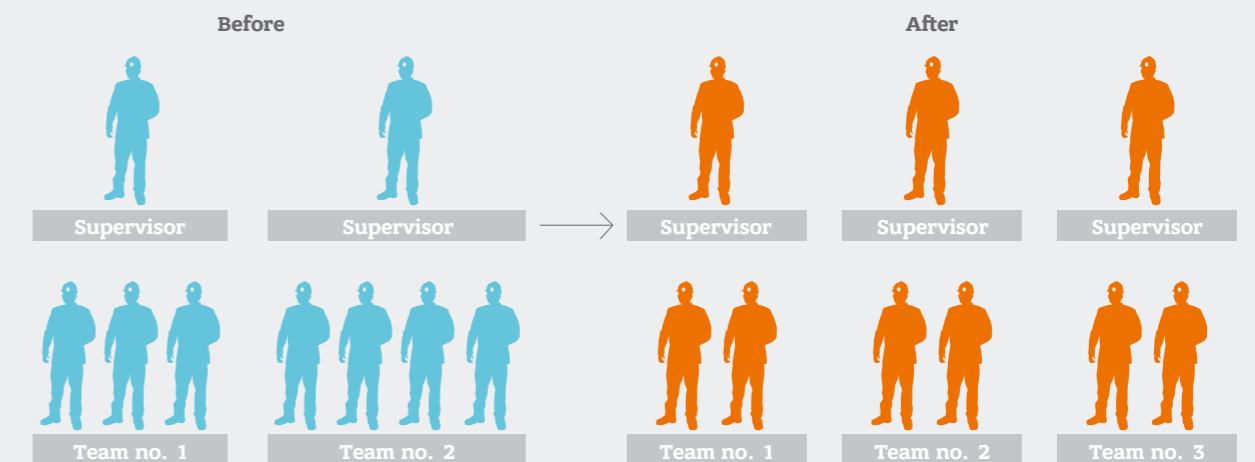
## 5 The authors of the idea: a navigator team of DTEK Dniiproblenergo

One of the strategic tasks of DTEK Dniiproblenergo is to ensure high levels of customer satisfaction with the quality of services. The company's management red-flagged to the navigator team that standard connection of a new consumer took too long, which is a reason for consumer complaints and prevents Ukraine from moving to the top in the rating of best countries for doing business. Measures taken by the navigator team helped prevent many losses, thus reducing by the time required to connect a new consumer by 43%. Loss-prevention efforts continue, which will help bring connection time in line with European standards.

## 6 The author of the idea: D. Bondar, supervisor of the western RES SOP KES Kyivenergo

Kyivenergo increased the number of repairs of cable lines by 38% per month by setting up additional teams without increasing the number of personnel.

Optimum structure of a team under the new preventive maintenance schedule for CL 0.4-10 kV



# DTEK Renewables

## Renewable energy

Construction of the Botievo Wind Farm is the milestone investment project of DTEK. The Company invested about EUR 340 million, of which EUR 245 million were raised from Landesbank Berlin (Germany).

The transaction to attract investment for construction of the phase I of the Wind Farm was recognized as one of the most significant transactions in the Ukrainian energy industry.

Today, the Botievo Wind Farm is the largest wind farm in Ukraine in terms of installed capacity and is among the 5 largest wind farms in Eastern and Central Europe.

The Botievo Wind Farm has capacity of 200 MW. The most advanced V112 turbines installed at the Botievo Wind Farm were manufactured by Vestas, the world leader in turbine manufacturing, with single capacity of 3 MW. This is the highest single turbine capacity in Ukraine. The ICF of these turbines is around 40%, which is higher than the world average ICF.

Since its commissioning three years ago, the Botievo Wind Farm has generated 1,577.17 GWh of electricity. This quantity is sufficient to provide electricity to 110,000 households with average consumption of 400 kWh per month.

# DTEK OIL&GAS

## Hydrocarbon production

In 2015, DTEK Group's company Naftogazvydobuvannya commissioned six new wells 5,000 meters or more in depth. Drilling started in the first half of 2014. This is the main factor in the growth in hydrocarbon production. The 6,750 meter deep well no. 17 of the Semerenkivske field was commissioned for pilot commercial production.

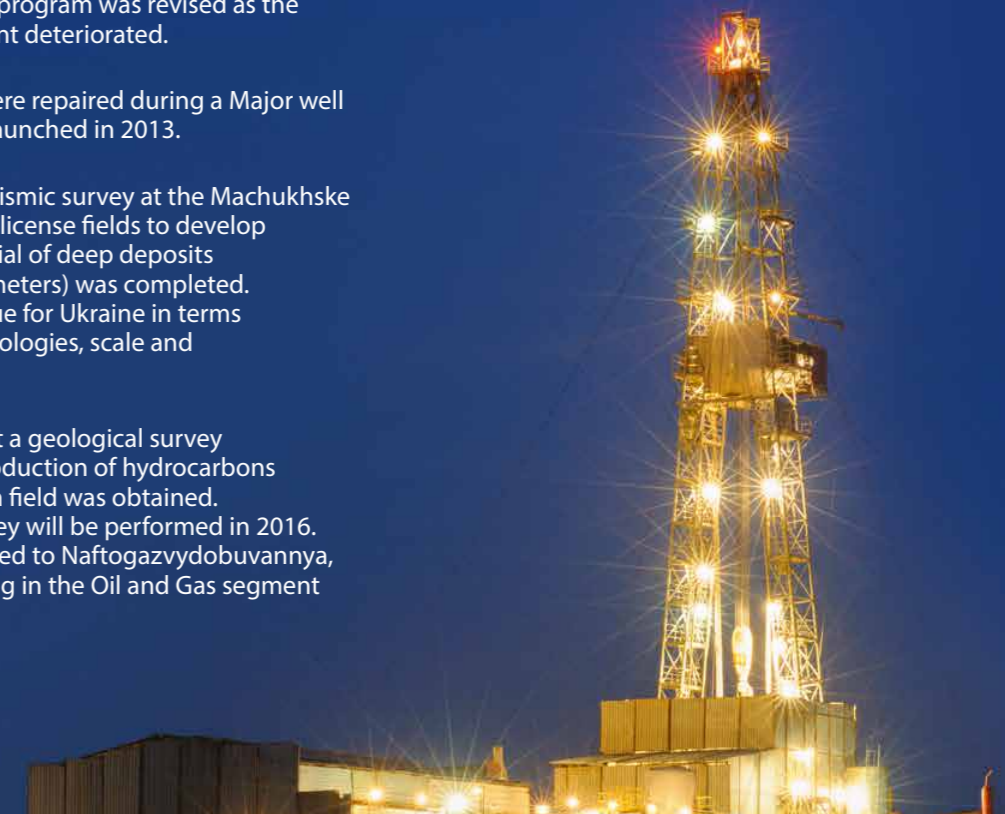
This well is the deepest one in the eastern Ukraine. It opened access to the deposit of hydrocarbons at the depth of 6,650 metres and produces commercial gas flow. This is a record not only for Ukraine, but also for Europe. Until then, gas reserves at such depths were considered unlikely, and the commercial extraction of such gas appeared impossible.

Naftogazvydobuvannya drilled the deepest productive well in Ukraine –

# 6,750<sup>m</sup>

### Key projects in 2015:

- Drilling of three new wells with a depth of more than 5,000 m each started at the Semerenkivske field. The business plan called for drilling eight wells but the investment program was revised as the external environment deteriorated.
- Three deep wells were repaired during a Major well overhaul program launched in 2013.
- Wide azimuth 3D seismic survey at the Machukhske and Semerenkivske license fields to develop the resource potential of deep deposits (up to 6,500-7,000 meters) was completed. This work was unique for Ukraine in terms of the level of technologies, scale and sophistication.
- A license to conduct a geological survey and subsequent production of hydrocarbons at the Khoroshevska field was obtained. The geological survey will be performed in 2016. The license was issued to Naftogazvydobuvannya, a company operating in the Oil and Gas segment of DTEK Group.





# Analysis of financial performance 03

**Consolidated revenues of DTEK Group totalled USD 4,367 million in 2015. Distribution cost increased by 9.2 % in UAH terms and made USD 3,998 million. In 2015, the company recognized a net loss of USD 1,918 million compared to the net loss of USD 1,649 million recognized in 2014. Net operating cash flow decreased by 75 % to USD 240 million compared to USD 945 million in 2014. Capital expenditures decreased by 58 % to USD 230 million.**

**Dynamics of DTEK Group consolidated financial indicators, million USD\***

	2015	2014	Change, +/-	Change, %
Revenue	4,367	7,823	-3,456	-44
Cost of sales	(3,998)	(6,709)	(2,711)	-40
Other operating income	32	113	-81	-72
Other operating expenses	(364)	(233)	+(131)	+(56)
EBITDA	344	1,346	-1,002	-74
EBITDA margin	8%	17%	-9 bp	-
EBIT	(86)	708	-794	-112
EBIT margin	-2%	9%	-11 bp	-
Net Profit/Loss	(1,918)	(1,649)	+(269)	+(16)
Assets	4,990	7,038	-2,048	-29
Capital expenditure	230	542	-312	-58

\* All data included in the Analysis of Financial Results section is presented with reference to audited consolidated financial statements of DTEK B.V. Reporting currency for the Company is UAH. For the purposes of this Annual Report all amounts were converted in USD in line with NBU exchange rates for respective periods.

## Revenue

DTEK's revenue are generated by wholesaling electricity to State Enterprise Energoynok; coal, gas and gas condensate sales; and the transmission and sale of electricity and heat to end consumers.

Revenue from the sale of electricity to end consumers in Ukraine and export of electricity in 2015 accounted for 49.1 % of consolidated revenues, while 36 % was from wholesale of electricity to State Enterprise Energoynok, 4.4 % from coal sales, 6.8 % from heat sales to end consumers, and 3.5 % from gas and gas condensate sales.

The company generated most of its consolidated revenues – 94 % (including compensation for the difference in heating tariffs) – on the domestic market. DTEK's export revenue decreased by USD 472 million from USD 747 million earned in 2014 to USD 275 million in 2015. The share of export revenue in DTEK's consolidated revenues was 6 % in 2015.

### The following changes in revenue occurred in key segments of the business in 2015:

- revenue from coal sales decreased by 57 % to USD 190 million compared to USD 445 million in the previous year. The decline was mainly due to the reduction in coal production. Revenue from exports of coal amounted to USD 145 million compared to USD 307 million in 2014;
- revenue from electricity generation decreased by 47 % to USD 1,572 million compared to USD 2,963 million in 2014;
- in 2015, revenue from the transmission and supply of electricity on the domestic market made USD 1,996 million compared to USD 3,237 million in 2014;
- revenue from thermal energy generation, including heat tariff compensation, increased by 6.8 % in UAH terms and made USD 298 million. The increase was due to the increase in the amount of thermal energy sold;
- revenue from the sale of gas dropped by USD 178 million in 2015 to USD 151 million compared to USD 329 million in 2014.

## Cost of sale

In 2015, DTEK's cost of sale increased in UAH terms by 9 % and made USD 3,998 million.

The increase was caused by a high rate of inflation, due to which expenses for the purchase of process fuel, equipment and consumables rose. These factors contributed to the increased cost of sale despite a decrease in production, including a drop in coal production of 8.4 million tonnes, and a decrease of 9.5 billion kWh in electricity generation by thermal power plants.

Gross profit in 2015 was USD 369 million, which is 56 % or USD 132 million lower than in 2014. Gross margin dropped from 14.2 % in 2014 to 8.4 % in 2015.

## Operating income and expenses

Total general and administrative expenses increased by 13.8 % in UAH term and made USD 122 million in 2015. The main items of general and administrative expenses were personnel costs, including payroll taxes, which accounted for 69.6 % of all general and administrative expenses in 2015.

Other operating expenses increased by 56 % to 364 million. An increase in other operating expenses was mainly due to the creation of provision for trade and other receivables and impairment of property, plant and equipment of companies located in the non-controlled territory.

Other operating income decreased by 72 % to USD 32 million. The decrease in other operating income was mainly due to the lack of recovery of receivable provisions.

## Liabilities and Equity

The company's borrowings made USD 2,626 million. In 2015, the Company did not raise any further financing, and the increased borrowing in UAH terms was due to significant devaluation of the national currency – by 52% since the beginning of the year.

Non-current financial liabilities increased by 30.8% in UAH terms in 2015 mainly due to the increase in liabilities for future payments in connection with the lease and concession of DTEK companies. Current financial liabilities decreased from USD 454 million recorded in 2014 to USD 263 million in 2015 due to the reduction of the fair value of financial instruments (swaps) as a result of termination of transactions with Barclays and VTB.

At the end of 2015, DTEK's trade and other payables increased by 29.7% in UAH terms and decreased by 15% in USD terms from USD 735 million to USD 625 million. Prepayments received as of 31 December 2015 increased by 62% in UAH terms and 6% in USD terms to USD 222 million mainly due to the reduction in prepayments received by DTEK Group companies for future supplies of electricity, coal, and gas.

## Assets

In 2015, DTEK's total assets increased by 8.1% in UAH terms and reduced by 29% due to devaluation effect in USD terms year-on-year, and amounted to USD 4,990 million. The net book value of non-current assets increased by 16.6% in UAH terms to USD 3,896 million. The increase in the value of non-current assets was due to a revaluation of property, plant and equipment of some of the Company's facilities. The revaluation was performed in accordance with the accounting policy, which stipulates that property, plant and equipment must be recorded in the balance sheet at their fair value as of the reporting date.

Current assets decreased by USD 850 million: from USD 1,944 million in 2014 to USD 1,094 million in 2015. This change was due to a reduction in cash and cash equivalents.

## Cash flows

In 2015, net cash flow from operating activities dropped by 75%, or USD 705 million, to USD 240 million. The key reason for this reduction was the decrease in operating profit caused by aggregate changes in gross profit, distribution cost, other operating earnings and expenses.

In 2015, net cash flow from investing activities amounted to USD 279 million compared to USD 850 million in 2014. Due to the economic situation that existed in the country, one of the Company's key objectives in 2015 was to optimize capital expenses.

This is why plans for upgrading and retrofitting of production facilities were revised, and capital expenditure in assets located in the area of the armed conflict were cut.

In 2015, net cash flow from financing activities amounted to USD 157 million.



# Corporate governance

Corporate governance structure

01

Supervisory Boards  
of operating companies

02

Dividend policy

03



# Corporate governance structure 01

**DTEK conducts business openly and transparently by developing its corporate governance system in accordance with the world's best practices followed by public international corporations.**

Proper corporate governance facilitates successful development and raises the investment attractiveness of the Company, while giving additional guarantees to shareholders, partners, and clients, and helping to strengthen internal control systems. In their day-to-day activities, DTEK Group companies are guided by the corporate values of professionalism, responsibility, pursuit of excellence, unity, openness, and principles of corporate ethics.

**In 2014, DTEK completed the formation of a business management system.**

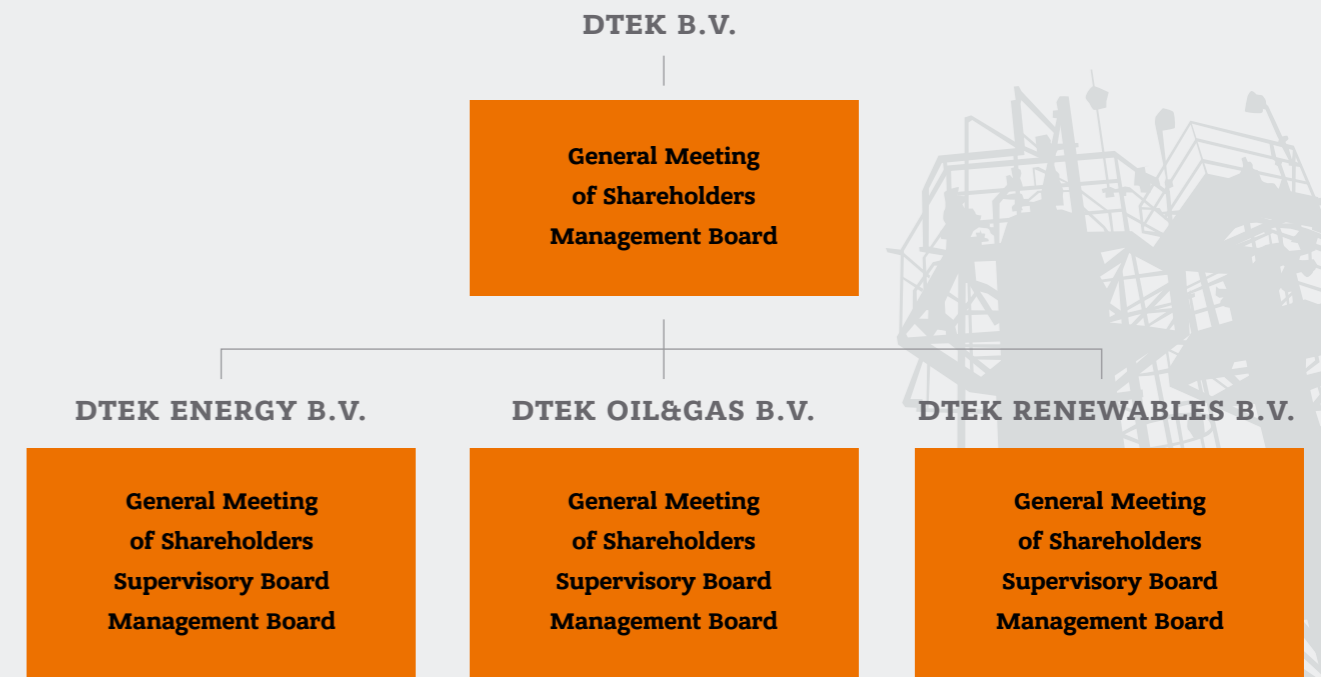
**Strategic holding company DTEK B.V. performs general management of three operating companies:**

**DTEK ENERGY B.V.**, which manages coal mining, thermal power generation and distribution assets,

**DTEK RENEWABLES B.V.**, which manages alternative energy assets, and

**DTEK OIL&GAS B.V.**, which manages gas production assets.

## Corporate governance structure of DTEK Group



## Key advantages of the new structure of DTEK Group

### Increased efficiency of managerial decisions

The concentration of responsibility for long-term planning at the strategic holding level enables operating companies to focus on their operations.

Operating companies are the centers of industry expertise.

The new model helps avoid duplicating and overlapping functions.

### Division of businesses

The division of the businesses allows financing projects of operating companies without negative implications for the loan exposure of DTEK Energy.

Splitting of the operating companies helps to engage different partners in different types of business.

### Transparent structure

Changes in the ownership structure and improvement of the corporate governance system make DTEK Group more transparent and open for investors and partners.

# Supervisory Boards of operating companies 02

## Membership of the Supervisory Boards of operating companies

### DTEK ENERGY B.V.

Oleg Popov  
Damir Akhmetov  
Irina Mykh  
Sergey Korovin  
Johan Bastin  
Catherine Stalker  
Robert Sheppard

### DTEK OIL&GAS B.V.

Oleg Popov  
Damir Akhmetov  
Irina Mykh  
Sergey Korovin  
Robert Sheppard

### DTEK RENEWABLES B.V.

Oleg Popov  
Damir Akhmetov  
Irina Mykh  
Sergey Korovin  
Johan Bastin

Corporate Secretary of the Supervisory Boards  
of DTEK ENERGY B.V., DTEK OIL&GAS B.V. and  
DTEK RENEWABLES B.V. (without voting rights) –  
Aleksy Povolotskyi



### Oleg Popov

**Chairman of the Supervisory Boards of DTEK ENERGY B.V.,  
DTEK OIL&GAS B.V. and DTEK RENEWABLES B.V.;**  
General Director of SCM JSC

Oleg Popov graduated from Donetsk Polytechnic Institute in 1991 and from Donetsk State University in 1996. From 1991 to 2000, he worked in various state institutions.

He was invited to join SCM in 2000 as deputy general director and in 2001-2006 held the office of executive director. Oleg Popov has been General Director of SMC since January 2006.

He chairs the Supervisory Boards of DTEK operating companies, Shakhtar FC and FUIB PJSC.

He approves key financial, investment and personnel decisions related to both the management company and SCM Group's assets, and assesses the performance of their directors.



### Damir Akhmetov

**Member of the Supervisory Boards of DTEK ENERGY B.V.,  
DTEK OIL&GAS B.V. and DTEK RENEWABLES B.V.;**  
Deputy Director of SCM Advisors (UK) Limited.

From 1998 to 2006, Damir Akhmetov attended Institut Le Rosey (Switzerland) under its International Baccalaureate Diploma Program.

In 2010, he graduated from Sir John Cass Business School (City University London) with a Master of Science in Finance.

Since 1 February 2013, he has been working at SCM Advisors (UK) Limited, and currently holds the office of Deputy Director.



### Sergey Korovin

**Chairman of the Supervisory Boards of DTEK ENERGY B.V.,  
DTEK OIL&GAS B.V. and DTEK RENEWABLES B.V.;**  
Director of Energy Business Development of SCM JSC

In 1993, Sergey Korovin graduated with honours from the Faculty of Applied Mathematics and Cybernetics of Lomonosov Moscow State University. In 2002-2008, he worked at the Danish and Russian offices of leading international consultancy McKinsey & Company.

Starting in 2008, Sergey Korovin was responsible for working with telecommunications organizations and served as member of the Board of the Microsoft office in Russia. He has been Director of Energy Business Development at SCM JSC since 2010.

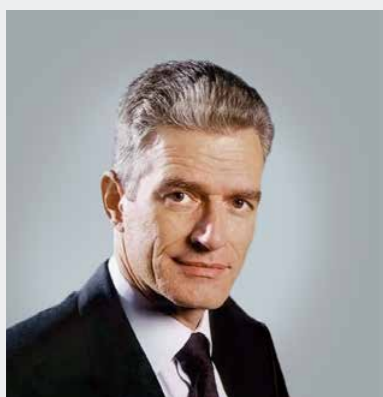


### **Irina Mykh**

**Member of the Supervisory Boards of DTEK ENERGY B.V., DTEK OIL&GAS B.V. and DTEK RENEWABLES B.V.; Senior Lawyer at Voropayev & Partners.**

Irina Mykh graduated from the law school of Ivan Franko State University in Lviv in 1994. She later studied at Osgoode Hall Law School, York University, Toronto, Canada.

From 1996 to 2006, she was a senior lawyer at Silecky and Partners, an affiliate of Squire Sanders & Dempsey LLP, where he became a partner in 2006. From June to October 2008, she was a legal adviser to Ukrainian Agrarian Investments Group owned by Renaissance Capital. She then worked as Head of the Legal Department of Klub Syra Ltd. until June 2009. She is currently a Senior Lawyer at Voropayev & Partners law firm.



### **Johan Bastin**

**Member of the Supervisory Boards of DTEK ENERGY B.V. and DTEK RENEWABLES B.V.; Independent Director and Managing Partner of Iveaghhouse Capital Investment Advisors**

Dr Bastin holds a Ph.D. in Regional Planning with a speciality in public finance from the Universite de Montreal in Canada and an M.Sc. in Urban Planning from the Eindhoven University of Technology in the Netherlands. From 1985 to 1992, he served at Harvard University's Institute for International Development (HIID) (Indonesia). From 1993 to 2002, Dr Bastin held several senior management positions with the European Bank for Reconstruction and Development in London (Great Britain), lastly as Business Group Director responsible for debt instruments and equity investments in infrastructure, transport and energy utilities, municipal and environmental services and energy efficiency. He then worked as the managing director at Darby Private Equity, a 100% subsidiary of Franklin Templeton Investments. From 2009 until 2015, Johan Bastin was the CEO of CapAsia, an international asset management company based in Singapore and focusing on private equity investment in infrastructure and energy sectors of Emerging Asia. Since mid-2015, Dr Bastin is managing partner of Iveaghhouse Capital Investment Advisors, a Netherlands based investment boutique.



### **Robert Sheppard**

**Member of the Supervisory Boards of DTEK ENERGY B.V. and DTEK OIL&GAS B.V.; Independent Director and Chairman of IPM Advisors**

Robert Sheppard graduated from the University of Wyoming in 1972 and has a bachelor's degree in Physics and Mathematics. He graduated from the Columbia Business School in 1991 with an Executive MBA degree. He began his career in the oil industry at Amoco in 1972. He worked as Chief Operating Officer, and then as President of Sidanco from 1998 until it merged with BP. From 2002 to 2004, he was a Senior Vice President at BP responsible for overseeing assets in Russia. Later on, he was appointed as General Director of Soma Oil and Gas. He is currently the Chairman of consulting company IPM Advisors and non-executive director of Soma Oil and Gas.



### **Catherine Stalker**

**Member of the Supervisory Board of DTEK ENERGY B.V., Independent Director**

Catherine Stalker graduated from Heriot Watt University in Edinburgh (UK) with a Bachelor's degree, and obtained her Master's degree from the London School of Economics. She began her career in 1991 with the Bank of England as a research analyst and banking supervisor. From 1995 to 2007, she worked at PricewaterhouseCoopers in Moscow and Berlin, where she was the Partner in charge of HR Consulting Services in the CEE-CIS region. She led client projects on executive compensation, organizational restructuring and human resource management. Catherine is now based in the UK where she advises a range of companies on corporate governance, with particular focus on the effectiveness of their boards.



### **Aleksey Povolotskyi**

**Corporate secretary of the Supervisory Boards of DTEK ENERGY B.V., DTEK RENEWABLES B.V. and DTEK OIL&GAS B.V.; Director of the Corporate Governance Department of DTEK LLC; advocate**

Aleksey Povolotskyi graduated from the law school of the University of Internal Affairs (Kharkiv). Later on, he obtained a master's degree from the Scarman Centre at the University of Leicester (Great Britain). Before joining Squire Sanders & Dempsey LLP, an international law firm, as an associate, Mr. Povolotskyi taught law and held a position of the director of internal relations department at the Kharkiv University of Internal Affairs.

He joined DTEK in 2010. He currently leads the corporate governance department responsible for the corporate governance of more than 60 DTEK Group companies located in Ukraine, the Netherlands, the Great Britain, Switzerland, Hungary, the Russian Federation, and Cyprus. He is a member of the Board of the Professional Association of Corporate Governance, and a member of the Ukrainian Bar Association.

# Committees of the Supervisory Boards

The committees, as advisory bodies to the Supervisory Boards, consider and prepare recommendations on specific issues for further approval by the Supervisory Boards. The committees meet regularly in accordance with the annual action plan.

**Audit Committees of the Supervisory Boards of DTEK ENERGY B.V., DTEK RENEWABLES B.V. and DTEK OIL&GAS B.V.**

**Chairperson: S. Korovin  
Committee Member: I. Mykh**

**Main tasks:**

- to supervise the internal controls and risk management system, as well as external and internal audit activities;
- to analyse and make decisions regarding the reliability and accuracy of DTEK's financial statements and other financial records;
- to consider issues regarding the operation of risk management, internal controls and legislative compliance systems;
- to prepare recommendations for the Supervisory Boards regarding the selection of auditors for DTEK's financial statements;
- to assess the scope and quality of audit procedures as well as the independence and credibility of the auditor.

**Health, Safety and Environment Committees of DTEK ENERGY B.V. and DTEK OIL&GAS B.V. Supervisory Boards**

**Chairperson: R. Sheppard  
Committee Member: I. Mykh**

**Main tasks:**

- to identify risks in occupational safety and environmental protection and develop measures to mitigate them;
- to develop approaches to promoting safe behavior of employees;
- to hold emergency drills at DTEK Group enterprises.

**Nomination, Remuneration and Corporate Governance Committee of the Supervisory Board of DTEK ENERGY B.V.**

**Chairperson: C. Stalker  
Committee Member: O. Popov**

**Main tasks:**

- to support senior executives in improving the efficiency of HR management and corporate governance system;
- to monitor the company's performance and advise management on the company's non-market strategy (social initiatives, reputation management, social partnership, and GR);
- to monitor and advise management on the implementation of best practices in the system of corporate governance, and also on issues of motivation, appraisal, remuneration and development of DTEK's top managers;
- to prepare recommendations for the Supervisory Board on the appointment of top managers;
- to prepare recommendations on the selection of members of the Supervisory Board and its committees.
- to control compliance with main principles and legal requirements in the area of corporate governance that apply in jurisdictions of operations, and also with corporate governance standards in place in DTEK Group.

## Dividend policy 03

DTEK's dividend policy is based on maintaining a balance between the need to invest in the development of its production facilities and observation of the rights of shareholders to receive a portion of the Company's profit. This approach is a defining factor in the long-term growth of DTEK's shareholder value.

# Sustainability



Sustainability

01

Society

02

Employees

03

Occupational health and safety

04

Environmental protection

05

Sustainable energy

06

Applications 1-3

07



# Sustainability

## Your Hometown Begins with You Project in 2015

Implemented in **15** towns and cities  
**140** participated in the project  
**5,918** local residents participated in the project

## The Energy-Efficient Schools Project was recognised as the best social project in Ukraine.\*

<b>50</b> schools	<b>29 thousand</b> schoolchildren	<b>100</b> schools in Kyiv	By <b>12,3%</b>	<b>50</b> children's energy-efficient projects	<b>22</b> participating schools
<b>14</b> towns and cities	<b>23 thousand</b> parents	competed also to reduce electricity consumption	reduced electricity consumption in their schools	received grants from DTEK	performed an energy audit within the scope of the grants received

\* The Energy-Efficient School Project was awarded the grand prize of the Best Ukrainian Social Project All-Ukrainian competition organized by the Centre for Social Leadership with support from the Ministry of Social Policy of Ukraine. Around 200 projects representing 22 Ukrainian regions participated in the competition.

### The company's stakeholders have not changed since 2012.

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• Employees and their families</li> <li>• Residents in areas of operation</li> <li>• Non-governmental organizations</li> <li>• Local authorities</li> </ul> | <ul style="list-style-type: none"> <li>• Experts and analytical centers</li> <li>• Academic circles and scientific community</li> <li>• International organizations</li> </ul> | <ul style="list-style-type: none"> <li>• Media</li> <li>• Population of Ukraine as a whole</li> </ul> |
|--|--|---|

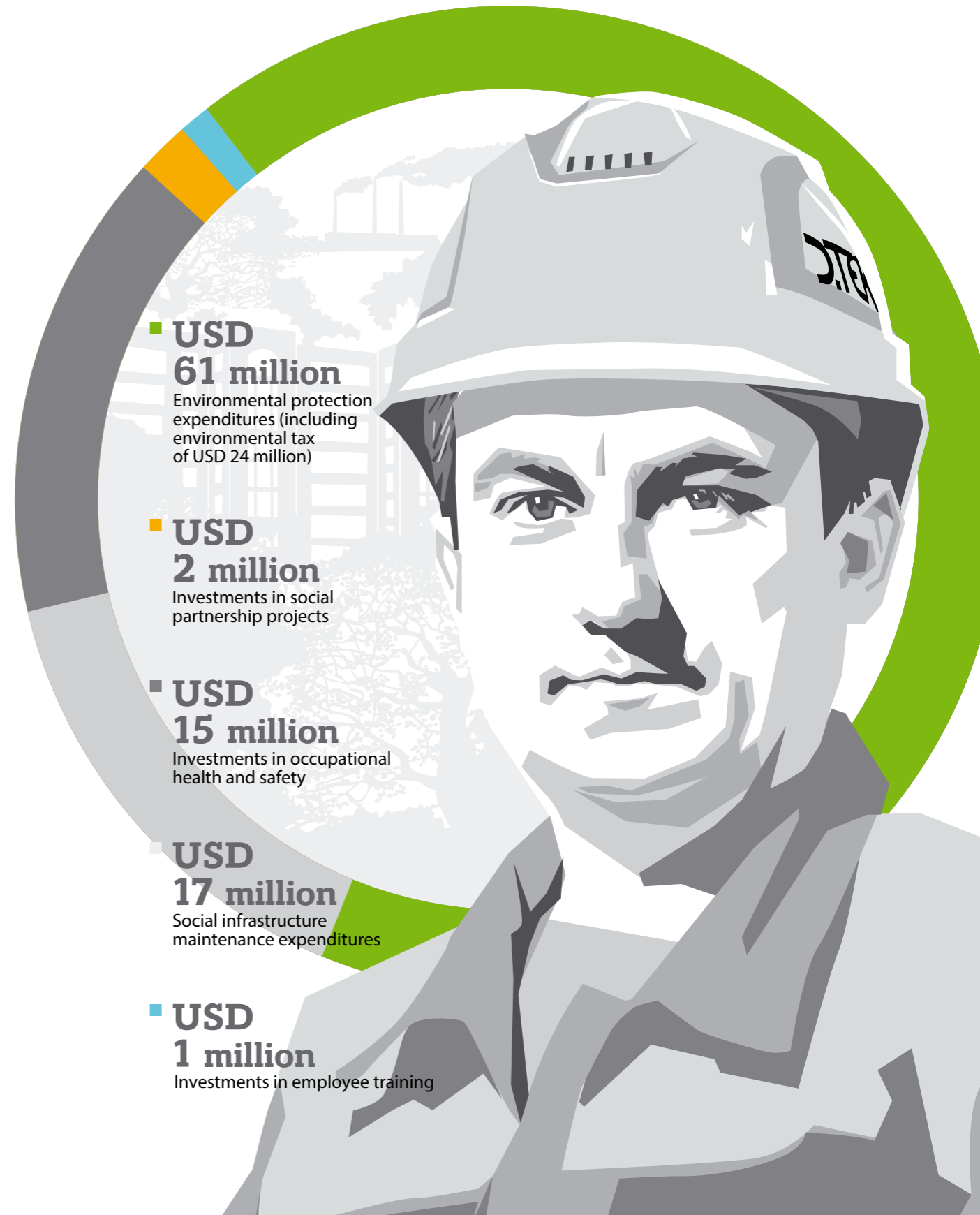
Level 1



Level 2



Level 3



## Sustainability Objectives

**Sustainability objectives: all efforts should always meet the interests of the society and be integrated in the Company's business strategy.**

DTEK strives to upgrade its technologies, production and management processes, invest in the development of its employees and occupational safety, promote the best practices in industrial and environmental safety to mitigate environmental impacts, protect the health of its employees, and improve industrial safety. The Company respects human rights and fulfils its obligations owed to its employees, as well as to society, complies with rules of corporate ethics and ensures sustainable use of resources. The Company informs all stakeholders about crucial development issues.

DTEK shares SCM's long-term sustainability objectives, and operates in compliance with the Sustainability Policy of SCM Group and the Corporate Social Responsibility Policy of DTEK. In 2015, the Company focused its efforts on the following areas:

- creating a system to preserve the health and life of employees and extend their employment longevity;
- creating conditions for social and economic development of the regions of operations, and improving the quality of life of local communities;
- compliance with the highest international standards of business ethics and the best business practices;
- using the best industry practices in the area of efficient use of fuel and energy resources;
- enhancing energy awareness of Ukrainian organisations, companies and citizens.

## Compliance and corporate ethics

**Ethical business conduct is one of the key elements of preventing corruption and complying with regulatory requirements.**

DTEK openly declares its internal anticorruption standards. In 2013, the Company adopted a new Code of Ethics and Business Conduct. The document contains principles that deal with corruption, relations with governmental authorities, and conflict of interests. Implementation of the requirements set out in the Code and the compliance policy is the responsibility of the Compliance Management Department. The Company has implemented the following approaches in its compliance policy:

- the Anti-corruption Program was approved, and employees responsible for counteracting corruption were appointed at the Company's businesses to meet anti-corruption requirements;
- a transparent and easily accessible system for accounting and approval of business gifts and entertainment was developed. This approach constitutes one of the key elements of the best anti-corruption practices;
- contractors' due diligence is regularly checked for corruption risks and compliance with international sanctions;
- the Department holds regular training sessions for executives and employees to inform the staff about the Company's ethical standards. In 2015, the Compliance Management Department held an annual declaration of conflict of interest where executives and employees filled out more than 1,228 declarations.

The Compliance Management Department holds meetings with representatives of state authorities and the business community. DTEK's compliance officer is a member of the Compliance Club of the American Chamber of Commerce in Ukraine. The Department's officers actively take part in the development and work of the Competency Centre of the SCM Group, which was established to exchange best practices and their application in practice.

## Sustainability Management

**In 2012, the Sustainability Committee (managed by the Management Board) and the Social Development Department were established by the Company to manage its sustainable development.**

The Sustainability Committee is headed by the General Director. The Committees' objectives are:

- to identify problems;
- to approve social development strategies for the regions of operations;
- to approve plans for reforming social infrastructure;
- to develop the system of occupational medicine;
- to implement the environmental protection strategy;
- to consider issues not related to the Company's operations that can materially affect the fulfilment of its business objectives.

The Social Development Committee, which is part of the Regional Policy Directorate of DTEK Energy, is responsible for planning, implementation, monitoring and assessment of the effectiveness of social projects undertaken in the regions of operations, and is also in charge of interaction with stakeholders, development of corporate social responsibility in Ukraine, and participates in Ukrainian and international initiatives in this area.



## Membership in Associations, International and National Organizations

DTEK is a participant of the UN Global Compact network and a member of the Global Compact Alliance in Ukraine, and it chairs the Environmental Protection Committee within the UN Global Compact.

DTEK is one of the founders of Energy for Society, a global social initiative of the world's largest energy companies.

DTEK joined the international partnership within the UN Business for Peace (B4P) Platform. This Platform assists companies in implementing peaceful business initiatives in conflict-affected and high-risk areas.

DTEK is the only representative of Ukrainian business in the United Nations Livelihood/Early Recovery Cluster. The Cluster engages the International Organization for Migration, the United Nations Development Programme, the UN Refugees Agency, the International Renaissance Foundation, People in Need Czech Humanitarian Organization, Professional Development Fund, and the United States Agency for International Development.

DTEK is a member of the Centre for Corporate Social Responsibility Development, an expert organization, whose objective is to promote corporate social responsibility to ensure comprehensive and profound changes in Ukraine.

# Public recognition and key events of 2015

- **The Energy Efficient School Project was awarded the grand prize of the All-Ukrainian competition Best Ukrainian Social Project.** About 200 projects participated in the competition organized by the Centre for Social Leadership with the support of the Ministry of Social Policy of Ukraine.
- **DTEK volunteer projects Clean City and Get a Child Ready for School for children displaced from the ATO zone won in two categories ("Improving the Quality of Life" and "Environment") of the All-Ukrainian Competition Corporate Volunteer Programmes in Ukraine 2014-2015.** The competition was initiated by the Eastern Europe Fund in partnership with the UN Global Compact network in Ukraine and the Ukrainian Philanthropists Forum.
- **DTEK won first place in the energy sector and received third place in the overall rating of the Global Transparency and Accountability Index of Ukrainian Companies based on an assessment of companies' websites according to the Beyond Business international methodology. The assessment was made with respect to the first 100 companies in the Forbes' 200 Largest Ukrainian Companies rating.** The index was calculated by experts with the Centre for the Development of Corporate Social Responsibility.
- **DTEK Academy was selected one of the six official language partners of Coursera, a global online education project.**

## January

**Lviv.** The intensive care cardiology department of the Lviv City Clinical Emergency Hospital was modernized. Patients with a history of myocardial infarction, can receive modern and intensive treatment. The total budget of this project amounted to USD 64 thousand.

**Western Donbas.** An additional group for 20 children and a separate room for playing sports and music lessons were opened at the Romashka child care centre (Dmitrovka village) with financing provided by DTEK Energy to renovate the building. New jobs were also created at the child care centre.

## February

**Western Donbas and Vinnytsya regions.** The general medicine ward of the Pershotravensk city hospital was repaired and equipped with modern medical devices; and the emergency department of the Ladyzhyn Territorial Medical Association was renovated. Everything was done to ensure comfort for patients during their hospital stay and proper working conditions for hospital staff; and the departments were equipped with modern medical equipment.

**Donetsk Region.** A presentation of business opportunities in Velyke Dobropillya was held for current and potential entrepreneurs. The event was held as part of the Development of the Business Environment in the Velyke Dobropillya project, implementation of which started in 2013.

## March

**Kyiv.** A conference on the Role of Local Communities Initiative in the Development of Territories was organized and held by DTEK Energy. The participants discussed options for voluntary associations of communities, issues of decentralization, and cooperation with the State Regional Development Fund. Following the conference, some local authorities launched processes for regional consolidation of communities.

The design of strategies for the development of areas of DTEK Energy activities for 2016-2018 (2016-2020 for some areas) was initiated **together with the cities**. The new strategies are focused on the main problems experienced by the cities and strategic projects for solving such problems.

**Donetsk Region.** A reserve water supply system for boiler plants in Bilytske, Bilozerske, Novodonetske and Vodyanske was built. Forty thousand residents of the region are supplied with uninterrupted heating and service water despite regular accidents on the South Donbas water pipeline due to the ATO. An individual heating supply plan was developed for each of the cities: water was supplied from reservoirs, closed mines, and drilled wells.

## April

**31 regions of the Company's business.** Seven thousand of the company's employees participated in the Clean City annual event. Volunteers collected 525 tonnes of waste and planted 390 trees. A playground was set up in Poltava Region. Employees also glazed apartments and houses, which were affected by military operations, of 160 veterans of DTEK Luhansk TPP in Shchastya.

**Western Donbas.** In Pavlograd, wells were drilled to provide local residents with proper-quality drinking water during emergency disconnections of the Dnipro-West Donbas water supply system. Seven water wells were built and operate in the municipalities. The company also continues to fund research on Pavlograd groundwater deposits – an assessment of groundwater resources was conducted and their quality is being determined.

## May

**Ivano-Frankivsk Region.** Under the Memorandum of Cooperation with Galytskyi District, financing was provided for projects aimed at the development of social and economic infrastructure of settlements adjacent to the area of operations of DTEK Burshtynska TPP.

## June

**14 business development regions.** The third wave of the Energy-Efficient Schools Project was completed. Sixty participating schools received grants for energy efficiency projects created by students. The company allocated USD 78 thousand for the implementation of the projects. Another 100 schools in Kyiv took part in a competition to reduce electricity consumption. In two months, they managed to reduce electricity consumption by 179.1 thousand kW·h, or by 12.3% compared to the same period of the past years.

**Western Donbas.** A major overhaul was made on the CT scanner in Pavlograd City Hospital No. 4. USD 87 thousand was allocated to this project, of which USD 55 thousand was provided by DTEK and USD 35 thousand was allocated by the local budget. Residents of three cities and five districts of the region can now receive high quality CT diagnostics.

## July

**Kyiv.** DTEK Academy became a Ukrainian partner of Coursera, a global online education project. As a result of DTEK's involvement, Successful Negotiations: Essential Strategies and Skills and Introduction to Public Speaking courses are now available in the Ukrainian language.

**14 business development cities.** The Your Hometown Begins with You annual contest was finalized. A total of 140 mini-grants were given for the implementation of ideas aimed at solving local problems to winners, who came from 15 cities in 7 regions of Ukraine. In 2015, a new option was added to the contest in four cities: Internet voting. Local residents were given an opportunity to study the applications and vote for the best ones. These votes were taken into account by the jury.

**Donetsk Region.** A water supply line and a pump station that supply water to the residents of Dobropillya and Bilozerske were renovated. An investment of USD 25 thousand was made.

**Vynnytsya, Donetsk, and Dnipropetrovsk regions.** Ladyzhyn, Dobropillya and Ternovka became parties to the European project on public involvement in urban space planning.

## August

**Donetsk Region.** A round table on the Prospects and Practical Solutions for the Development of the Labour Market on Mono-Territories was held with participation of the Director of the United Nations Development Programme in Ukraine Ian Thomas Hiemstra and the Head of the State Employment Service. On the Company's initiative, an agreement was reached to establish an interdepartmental working group at the level of the Cabinet of Ministers that will consider the challenges and prospects of the labour market in the energy sector. The working group includes representatives of the Ministries of Energy and Coal Industry, Economic Development and Trade, Social Policy, and business. A draft Memorandum was prepared, which is expected to be signed in 2016. This event helped the Company to raise issues of employment in mining mono-cities and mitigation of social risks arising from restructuring of the mining industry, address them on the national level and attract attention from international donors.

## September

**Kyiv.** SCM, DTEK and the State Agency for Energy Efficiency and Energy Saving signed a Memorandum on Cooperation to develop the Ukrainian Energy Index (UEI). The Index shows the efficiency of the use of energy resources by industry in each region of the country and compares the results with the same indicators of the EU countries. Analysis and assessment will be performed in ten segments of the processing and mineral industry, agriculture, construction, services and utilities.

**Ivano-Frankivsk.** DTEK entered into a partnership contract with the Ivano-Frankivsk National Technical University of Oil and Gas. The parties agreed to cooperate in three areas: training young specialists; professional development and studying for a second higher education degree; joint research and development projects, implementation of engineering projects and research.

## October

**Lviv.** The Industrial Parks and Industrial Development: Opportunities and Challenges international conference was held during the XV International Economic Forum with financial and organizational support provided by the Company. The Company shared its experience in the creation of industrial parks. During the conference, investors' expectations from industrial parks were determined; changes in regulations necessary to create and operate industrial parks in Ukraine were submitted; and conditions necessary to enhance cooperation between companies, investors, local governments and institutions for economic development, and stakeholders were discussed.

**Donetsk Region.** A new group at the Skazka child care centre (Kurakhovo) was organized for children from families relocated from Marinka District which was affected by military operations. The Company provided financing of USD 23 thousand to renovate the premises.

**Western Donbas.** A water pipeline in Troitskoe village was renovated, which provided high-quality water to residents and social facilities. Reconstruction was carried out as part of the company's strategy of social partnership with Pavlograd District, as well as by combining the efforts of the authorities, the village community, farmers, and foreign investors.

## November

**Tbilisi, Georgia.** The first sub-regional conference on Support for Employment and Sustainable Development in Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine was held. The forum, which brought together more than 130 experts in the area of sustainable development, was organized by the World Bank, the United Nations Development Programme, the International Labour Fund, and the Swiss Cooperation Office. DTEK Energy shared its experience in the development of its business environment in regions of operations.

## December

**Lviv.** OKHMATDET Lviv Regional Children's Clinical Hospital became the fifth hospital in the region to be connected to the Ukrainian Telemedicine network as a result of support provided by the company. Doctors were given an opportunity to communicate and consult with leading medical professionals from foreign hospitals.

**Western Donbas.** Equipment in boiler plants of the Petropavlovsk central district hospital, Dmytrivka general practice ambulance station of family medicine, and Vasytkivsk school was upgraded. Modern pellet boilers operating on coal were installed. DTEK invested USD 87 thousand in this project.

**Lviv and Zaporizhia.** The Y. Bochkarev Scholarship Fund established by DTEK granted scholarships and awards for scientific achievements in power engineering to students and teachers of Zaporizhia National Technical University and Lviv Polytechnic National University.



Спортивний майданчик  
(скейт-парк) облаштовано  
за підтримки  
енергетичної компанії ДТЕК

**DTEK**



I know at least one company that intends to invest in such cities as Dobropillya, and this company is DTEK. In my opinion, a solution to the city's problems can be found in the long-term cooperation with DTEK because this company is a real partner in the economic development of the city.



Ian Thomas Hiemstra,  
Country Director of the United Nations  
Development Programme in Ukraine

## Social Partnership

The Company strives to improve the living standards in areas of its presence and uses all resources, which include financial and organizational support and expertise, in order to assist regions in finding growth areas that would produce the maximum economic effect.

The core objective of the social partnership is to improve the living standards in the regions where DTEK companies operate by developing initiatives of local communities. Reforms and investments will not achieve their goals without active involvement of local communities.

In 2015, the company initiated and financed the mapping out of **strategies for the development of business territories for the next three to-five years**. The strategies define the key points of growth capable of producing a maximum effect for the economy and social life of cities, making them more sustainable and wealthier. In 2016, the Company will provide co-financing for projects developed within the framework of the strategies.

In 2015, DTEK completed the implementation of the three-year social partnership strategies developed in cooperation with local communities in 2012 and aimed at finding comprehensive solutions to the most acute problems. These strategies outline five main areas for cooperation which not only proved their effectiveness but also became more relevant in the crisis conditions. At the same time, the implementation of social partnership strategies

in areas of anti-terrorist operation has been put on hold. The Company, together with SCM Group businesses, participated in the work of the Rinat Akhmetov Humanitarian Center that was established to provide maximum help to all the civilians in the Donetsk and Luhansk regions who suffered from military operations. DTEK engineers and volunteers have been restoring the destroyed grid and implemented humanitarian initiatives aimed at providing support to internally displaced persons.

### Social investments by core activities in 2015, USD thousand

Area of activity	Investment
Socially important infrastructure	635
Energy efficiency in the utilities sector	583
Health care	462
Increasing local communities' activity	149
Development of the business environment	42
<b>Total</b>	<b>1,871</b>

## 1. Energy efficiency in the utilities sector

### Improving energy efficiency in the utilities sector, enhancing the quality of energy and heat supply

Energy efficiency is the crucial factor in raising the country's competitive abilities and energy independence. Understanding the importance of this area of activity, DTEK continues to implement programmes that increase energy efficiency in the utilities sector in the regions of its operations.

In 2015, a number of projects aimed at ensuring reliability and cost-effectiveness of energy supply to social infrastructure, reducing consumption of electricity and heat, and modernization of municipal lighting were implemented.

- Pershotravensk: internal temperature in 2/3 of residential and office buildings was returned to normal. Old equipment consumed more electricity and water, which created additional burden on the city's budget. Following repairs and replacement of equipment, the consumption of water and electricity decreased by 20%.
- Ternivka: a major overhaul of the heating system in the municipal boiler plant that reduced consumption of coal (by 1,500 tonnes) and electricity (by 245 MW) during the heating season was carried out. These efforts delivered savings of about USD 46 thousand to the city's budget).
- Pavlogad: modernization of the heating system in the municipal maternity ward, which is the only maternity ward that provides medical services to 200,000 residents of Pavlograd and Ternivka and also Pavlogradskyi and Yurievskyi districts of Dnipropetrovsk Region.
- The Petropavlovsk central district hospital, Dmytrivsk general practice ambulance station of

family medicine, and Vasylkivsk school: modern pellet coal boilers were installed. As a result, 29,000 of the region's residents can receive medical treatment and diagnostics and 80 schoolchildren and 32 teachers can be taught and teach in comfortable conditions. Modernization will ensure savings of at least USD 27.5 thousand for the district hospital, USD 3.7 thousand for the ambulance station, and around USD 7 thousand for the school each heating season.

- Kovalivka village: financial support was provided to replace windows and doors in the school building. Energy-saving windows and doors, and a solid-fuel boiler were also installed in the ambulance station of primary family medicine.
- Kyiv: an energy-efficient lighting system was installed in Troyeshchyna municipal district as part of the Energy-Efficient Evening Kyiv Social Project implemented by DTEK and Kyivenergo. This is the first project in Ukraine that allowed local residents to create a lighting image of their district by indicating places where LED street lamps had to be installed on a special website [www.mystreet.com.ua](http://www.mystreet.com.ua). Better lighting and increased safety of the neighborhood were achieved without increasing the city budget's expenses and even allowed savings about 9,000 kWh per year. Kyiv also received design documentation to improve lighting in another neighborhood.
- Projects for the installation of energy-efficient street lighting systems were also implemented in the villages of Prybuzhany, Dolyna, Perekalky, Ruda of Kamenka-Buzhska District in Lviv Region, and Korostovychi and Prydnistrovya of Galytskyi District of Ivano-Frankivsk Region.

## Inter-Regional Energy-Efficient Schools Project

The goal of the project is to educate schoolchildren on energy-efficient and environmentally-friendly behavior, to engage them in activities aimed at reducing consumption of resources, and also to influence adults by encouraging children to use knowledge and skills received in everyday life.

The Energy-Efficient Schools program was launched in 2010 as part of the USAID Municipal Heating Reform Project. Since the duration of international projects is limited, DTEK, as a responsible company, expanded the initiative and, since 2012, has been implementing the project on its own to continue development. Methodological and organizational support for the project is provided by the Local Development Institute, a Ukrainian charitable organization.

The project is aimed at schoolchildren in grades 6 to 8, who receive education and practical trainings in energy efficiency as part of a special course on the Fundamentals of Energy Supply and Energy Efficiency. During the course, they engage in laboratory classes, organize information campaigns in schools and nearby areas, participate in competitions between schools to reduce energy consumption, and learn how to perform a heat audit of buildings, develop projects to improve the energy efficiency of school buildings. At the end of the course, children develop projects to improve energy efficiency of their schools.

In particular, the third wave of the project that involved about 30,000 schoolchildren, 2,300 teachers, and 24,000 parents was completed in 2015.

**The Company carried out three waves of the Energy-Efficient Schools Project, that engaged 216 schools in 24 Ukrainian cities and towns. About 86,700 persons were directly involved in the project. Children and teachers say that now they take good care to use energy resources rationally, and teach their friends and families how to save energy.**

Sixty participating schools from 14 cities of Ukraine received USD 78 thousand in grants to implement energy efficiency projects created by students. The grants were used by the schools to improve efficiency of their heating systems, reduce losses of heat and electricity, and to insulate buildings.

In addition, 100 Kyiv schools participated in competitions between schools to reduce energy consumption. As a result of organizational, informational and minor engineering efforts, schools succeeded in reducing energy consumption by 12.3% compared to previous periods.

In 2015, the project offered something new: a contest of ideas for social advertising: 140 pictures from 35 schools entered the contest. The best pictures received awards and became the basis of an informational campaign with the slogan "Children Know How to Consume Responsibly". Billboards were placed in Pavlograd, Pershotravensk, Pavlograd and Petropavlivka districts, Zelenodolsk, Dnipropetrovsk, Energodar, Burshtyn, and Kyiv.

## 2. Health care

### Improving access to high-quality medical services and increasing people's motivation to follow a healthy lifestyle.

Health care is particularly important for the sustainability of both the Company's areas of presence and the Company itself. DTEK invests in healthcare facilities in each city to ensure that its employees and their families have access to high-quality medical services.

- Lviv: an intensive care cardiology unit of the Lviv municipal clinical emergency hospital was upgraded. Every year, more than 1,000 patients will be able to undergo coronary catheterization, stent angioplasty, thrombolytic therapy and be under constant monitoring which will speed up their recovery. The Company also financed the purchase of modern medical equipment to rehabilitate patients with multiple sclerosis, post-stroke patients, and patients with spinal cord injuries.
- Dobrotvir: a district rehabilitation treatment ward was opened. A hospital that was on a brink of closing as part of healthcare reform was saved as a result of support from the Company which provided financing and equipment during implementation of the Social partnership strategy.
- Pershotravensk: a therapy ward of the municipal hospital, which provides services to 45,000 residents of the city, Petropavlovsk and Mezhevsk districts, was repaired and outfitted with modern equipment. Comfort for patients during their hospital stay and a proper working environment for hospital staff were created: new energy-saving doors and windows were installed, floors and ceilings were repaired, water supply and heating systems were replaced, new bathroom fixtured and energy-saving lighting fittings were installed. The number of beds was increased from 25 to 30. Modern medical furniture and disinfection equipment were provided for a procedure room.
- Ladyzhyn: an emergency department of the Ladyzhyn territorial medical association was upgraded as a result of joint efforts of the Company and the Vinnytska Ptitsefabrika LLC. The department received a wider ramp for ambulances, a waiting room and consulting rooms were upgraded, and all furniture, windows and doors were replaced. Doctor Eleks, a system developed to automate key processes of the hospital, was also installed. Earlier, the Company provided financing to purchase the equipment for this department.
- Pavlograd: high-quality computer diagnostics are now available to the residents of three cities and five districts in Dnipropetrovsk Region at Pavlograd Municipal Hospital No. 4. A major overhaul of the CT scanner was made with the Company's support. General practice ambulance stations of family medicine no. 7, 8, and 9 of the Centre for Primary Medical Assistance also received two passenger cars, hematology analyzers, a biochemical analyzer, an ECG machine, an ECG suite, anti-bacterial radiants, gynecological examination chairs, and an inhaler device.
- Kurakhovo: a children's inpatient department was opened at the municipal hospital. DTEK supported investments made by the municipal authorities, and provided financing of USD 15 thousand to purchase furniture for patient rooms.
- Energodar: in 2015, more than 150 children received vision correction treatment using Ambliocor 01, a modern vision correction device. The device was purchased by the Company for the vision protection ward of the children department at medical unit No. 1 at the end of 2014.
- Shyshaky: a ventilating machine, a mobile X-ray machine, double-channel syringe dosing devices, a defibrillator, intensive care and surgical monitoring devices, an ECG machine, and an ambulatory blood pressure monitoring device were purchased for the central district hospital.

## Inter-Regional Telemedicine Project

Telemedicine creates an opportunity for doctors to share their experience and receive new knowledge more actively, arrange video-conferences and broadcast complex surgeries to improve their professional skills. The experience and level of expertise of the doctor are the core indicators of the quality of medical treatment. For patients, telemedicine, is first of all an opportunity to receive advice from a single-discipline specialist without having to leave their hometown. During consultations, doctors can digitize their patients' medical records and send the data to specialists using secure communication channels.

In 2015, OKHMATDET Lviv Regional Children's Clinical Hospital became the fifth hospital in the region to be connected to the Ukrainian Telemedicine Network as a result of the initiative of and financing from the company. In December, a joint project organized by Shriners Hospitals for Children (Boston, USA), the Ministry of Healthcare of Ukraine, and the Healthcare Department of the Lviv Region State Administration was launched. The project provides for consultations, examination and treatment for children with orthopedic conditions, post-burn cicatricial deformities and contracture, and cicatricial deformity and contracture of non-burn etiology. Ukrainian and American specialists examined 130 children from various Ukrainian regions aged from several months to 18 years. Thirty children have undergone surg.

The Ternivka Central Municipal Hospital held 10 telemedicine consultations with the I. Mechnikov Dnipropetrovsk Regional Clinical Hospital. In eight

**DTEK has been developing a network of telemedicine since 2011. The project has been implemented in more than 20 medical facilities, 12 cities and towns, and one district. A new stimulus to the development of telemedicine came from the Ministry of Health Care of Ukraine that issued order no. 681 on the use of telemedicine in healthcare sector dated 19 October 2015.**

cases, patients were either referred to specialists, or further examination was ordered for them right away. In two cases, patients continued undergoing treatment at the inpatient facility of the Ternivka Central Municipal Hospital as the consultation was sufficient to diagnose them.

The overall goal of performing electrocardiography is to obtain information about the structure and function of the heart. This method allows diagnosis of coronary insufficiency, myocardial infarction, arrhythmia, and preinfarction syndrome. Eight general practice ambulance stations of family medicine in Pavlograd District received a single ECG system connected to a diagnostics suite installed at the cardiac emergency unit of Pavlograd Municipal Hospital No. 4. This solution created an opportunity for the remote transfer of data, computer reading of an ECG record, and consultations with a cardiologist using telemedicine. In addition, the ability to save the results of the patient's previous EKG tests in the database of the ECG machine is crucial for monitoring changes in a patient's cardiac condition.



### 3. Socially important infrastructure

**Improving the quality and accessibility of social services, addressing major problems of vital infrastructure elements, and improving opportunities for pre-school and primary school education as well as cultural and outdoor activities**

In summer of 2014, the Siverskyi Donets-Donbas Canal was damaged during military operations. For more than two months, residents of 30 cities and towns in Donetsk region did not have central water supply as there were no reserve sources of water in the area. DTEK organized deliveries of drinking water to local residents and decided to invest in the construction of facilities providing uninterrupted water supply.

Reconstruction of a pipeline and a water pumping station located in **Zolotoy Kolodets** village was completed. Today, the village pumping station supplies water to half of Dobropillya. In the event of any accidents on the Siverskyi Donets-Donbas Canal, the pumping station will become a reserve source of water for 70 % of the residents of Dobropillya, and 30 % of the residents of Bilozerske. A reserve water supply system for boiler plants in **Bilytske, Bilozerske, Novodonetske and Vodyanske** was also built. An individual heating supply plan was developed for each of the cities: water was supplied from reservoirs, closed mines, and drilled wells. Moreover, in order to ensure secure water supply, a 984 m section of the water pipeline between Biletske and **Vodyane** was replaced. As a result of DTEK's efforts to maintain water supply, 40,000 residents of the region were provided with uninterrupted heating and service water supply regardless of the condition of the South Donbas water pipeline. Seven drinking water wells were drilled in **Pavlograd** with support provided by the Company. Water from these wells complies

with sanitary regulations and also tastes good. In addition, the Company continues to finance a survey of the Pavlograd underground water deposits: an assessment of reserves and their quality is in progress. An old pipeline in **Troitske** village in Pavlograd District was reconstructed, which allowed the supply of good-quality water to the village residents and social facilities. The reconstruction was completed through the joint efforts of the Company, the village community, public authorities, farmers, and foreign investors. To supply water to **Kurakhovo**, when the city was left without water supply after the pipeline was damaged during military operations, DTEK provided financing for the installation of a water treatment system. Thanks to these efforts, 20,000 local residents and internally displaced people received a supply of drinking water. The system pumped water from the Kurakhovskiy reservoir and treated 500 cubic meters a day. This volume lasted for several days. Power sector employees and local residents lived in these conditions for more than 150 days.

**DTEK supports infrastructure and invests in improving the quality of social services in the regions where its businesses operate. In 2015, there was special focus on finding solutions to problems with water supply and expanding facilities of child care centers to accommodate children relocated from the ATO zone.**

The Company financed major construction and renovation work at the Romashka child care centre (Dmytrivka village in Petropavlivka District). Following the renovation, an additional group for 20 children and a separate room for playing sports and music lessons were opened. Now 60 children from Dmytrivka village, and Bazhany, Vidrodzhennya, Kardashi, Olefirivka, and Chumaky villages can enjoy different experiences in comfortable conditions provided by the renovated premises. Also, with the Company's

support, a new group in the Skazka child care centre (Kurakhovo) was organized for children from families relocated from Marinka District, which was affected by military operations. After the group was opened, the child care centre was able to provide day care to 25 more children. Unit 3 of the Rosynka child care centre in Bilozerske was also reopened, and new furniture, beds, and household appliances were purchased for three additional groups in Svetlyachok child care centre.



## 4. Development of the business environment

**Creating favorable conditions for the development of small and medium businesses, creating new job opportunities, increasing budget revenues, expanding the services range and developing social entrepreneurship**

In 2015, the Company continued its efforts aimed at creating three industrial parks in Ivano-Frankivsk, Lviv, and Dnipropetrovsk regions. Implementation of the project will lay the groundwork for the development of the cities for many years to come. In 2015, local development agencies and entrepreneurship support funds established on the basis of agencies created on the initiative and support from DTEK also continued their operations.

Successful projects in development of business environment include a capon farm and a workshop producing linen fabrics in Burshtyn, and a dairy factory in Dobrotvir. SPK Dobrotvoretz is the first production cooperative in Western Ukraine that supplies dairy products, and according to the assessment of the Ministry of Agrarian Policy of Ukraine, this facility has set an example for development of the dairy business.

Issue of creating new jobs in mining cities has become extremely pressing amid the crisis in the energy industry. For instance, in Dobropillya, one of the most important issues of the city's development is diversification of the city's economy.

As a result, the development of small and medium business along with professional retraining of miners is the core task for both Dobropillya and the majority of mono-cities in Donbas.

In 2015, a round table on the Prospects and Practical Solutions for the Development of the Labour Market in Mono-Territories was held in Dobropillya with the participation of the Director of the United Nations Development Programme in Ukraine Ian Thomas Hiemstra and the Head of the State Employment Service. During the event, the Company brought the issue of finding solutions to employment problems to the national level. The round table helped participants to reach an agreement on creating an inter-departmental working group supervised by the Cabinet of Ministers of Ukraine, comprising representatives of the Ministries of Energy and Coal Industry, Economic Development and Trade, Social Policy, and business. The working group will deal with issues and prospects of the labor market in the energy industry. A draft Memorandum was prepared, which is expected to be signed in 2016.

**Developing the business environment, attracting investors to regions, and most importantly, creating new jobs, are the fundamental goals of the Company's social policy. The Company's facilities are mainly located in mono-cities. In modern conditions, in order to ensure successful development of the economy and society, businesses have to be diversified to ensure that people have a choice of employment in different areas. This is why it is extremely important to develop the business environment by attracting investors and encouraging the establishment of new businesses.**

Back in 2013, DTEK launched a campaign to create new jobs in the cities of Velyke Dobropillya. The Development of the Business Environment in Velyke Dobropillya project aimed at providing support to small and medium business has already been implemented. The project covered consultations, training, and assistance with preparing business plans to attract investments. In 2015, the Company managed to attract to attention of international donor organizations to the employment issues that exist on mono-territories. Fourteen business plans with a total value of USD 1 million were prepared and implemented with the Company's involvement and with financial support provided by the International Organization for Migration, and the United Nations Development Programme. Implementation of these projects created 44 new jobs. In particular, development and entertainment centres for children, a mini bakery, car service centre and other small businesses were opened. More than 100 people also received self-employment grants to develop their own business (USD 900 each). Overall, the Company helped to create 238 new jobs in Velyke Dobropillya in 2015.



## 5. Increasing the activity of local communities

**Forming a new mentality among population, developing leadership, proactivity, responsibility of the residents by encouraging self-organisation, increasing the ability of active citizens to solve problems in their areas**

The development of leadership qualities, independent behavior, and responsibility of people residing in the areas of the Company's operations, and also encouraging initiatives aimed at cooperation between local residents and state authorities to find solutions to local problems, are the core tasks of the Company.

### Your Hometown Begins with You Project

For the past three years, the Company has been helping the most active residents to improve their living standards, by developing the Your Hometown Begins with You Project. Hundreds of projects have been implemented during this time. But the most important thing is that the Company has managed to convince people that they are capable of developing their hometowns and society themselves. This is an important stage in the journey of changing a paternalistic perception of life, when instead of taking a proactive approach people expect the state to solve their problems.

Almost 6,000 people participated in the implementation of mini-projects in 2015. The most original projects include the arrangement of a bus stop with a book exchange window and an open-air theater in Dobropillya; a salt room for children in Pershotravensk; an art therapy studio and a neighborhood club in Zelenodolsk. An aviary for decorative birds at the young naturalists' station in Pavlograd was constructed, and a hospital yard was given a new look by landscape designers and architects.

A playground in the national style to study history was arranged and a park installation the Heart of Peace and Love was erected in Energodar. A dry swimming pool filled with balls to improve health and the psychological and emotional state of children with special needs was arranged in Burshtyn, while in Ladyzhyn an open-air eco-class and a school sound record studio were created. In Dobrotvir, a summer camp for recreation and study was organized on the basis of a library, and life-saving jackets were purchased for a children and youth sports school. In Shchastya, an Academy of Traffic Lights Sciences playground was created to teach children safe behaviour on the road, and a multi-functional Faraway Kingdom sports and play ground was organized.

**In 2015, 140 mini-grants with a total value of USD 147 thousand were issued to initiative groups that won the contest to implement their ideas for finding solutions to local problems in 15 cities of 7 Ukrainian regions. The maximum amount of each grant was USD 1.4 thousand.**

**In 2015, a new option was added to the contest in several cities: Internet voting. Local residents were given an opportunity to study all the applications and vote for the best ones. These votes were taken into account by the jury.**



# Corporate volunteering

**The development of corporate culture and creating conditions for the fulfilment of employees' potential, and making a real contribution to the development of local communities are the main goals of the corporate volunteering initiatives of DTEK. In 2015, the Company's volunteers continued to implement initiatives to help internally displaced people who that were affected by military operations. In addition, environmental initiatives and initiatives aimed at promoting healthy lifestyle are being developed.**

In 2015, employees of nine of the Company's businesses became involved in DTEK's initiative to help internally displaced people. Volunteers delivered warm clothing and footwear to module cities or to social services.

In July 2014, DTEK Kurakhovska TPP organized the first station for collection of humanitarian supplies, and continued to collect clothing and other items in 2015. In total, the Company's employees collected and delivered to those in need five shipments of humanitarian supplies that included more than 1,500 items of clothing, shoes, bedding, pharmaceutical products, personal care products, and food. The volunteers also took care of the children who were relocated from Marinka District: more than 640 articles of warm clothing and school supplies were delivered to city schools. More than 600 articles of stationery for schoolchildren were collected and delivered by the volunteers to schools No.1, 2, 3, and 5 in Kurakhovo.

Employees of DTEK Pavlogradske mine office collected more than 400 items of warm clothing and footwear for internally displaced people living in a module city in the PZTO district of Pavlograd. Miners of DTEK Dniprovskaya mine office organized a station for collecting supplies for displaced children living in Petropavlivskiy District.

Employees of DTEK Luganska TPP glazed windows that were damaged during military operations in houses where the plant's 160 unemployed retirees live. In Dobropillya, DTEK provided support to the Beauty Will Save the World exhibition of art works created by people relocated from the ATO zone. Art works were presented to the exhibition by 28 artists from Gorlivka, Donetsk, Debaltseve, and other Donbas cities. They included children

and adults taking art classes in Velyke Dobropillya. More than 200 art works made in different styles and techniques were exhibited: embroidery, pictures, quilting, dough artworks (made of salt dough), bead embroidery, hair accessories, modeling clay crafts, designer theater costumes, corrugated paper crafts, photography, folk costumes, and other art works. Proceeds from the sale of exhibits were used to help displaced people living in the region.

In November 2015, employees of DTEK Zaporizka TPP joined an international initiative and organized an information campaign on World No Tobacco Day. About 30 employees and 30 schoolchildren from Energodar school No. 2 organized a flash mob, exchanged candies for cigarettes, and also had a contest for the best story "I quit Smoking. Ask me how". The healthy lifestyle campaign was also supported by medical professionals of DTEK Service. Volunteers distributed flyers with interesting facts, and also exchanged tasty candies for harmful cigarettes. A similar campaign involving schoolchildren of Ladyzhyn school No. 2 was held in May at DTEK Ladyzhynska TPP.

Employees of DTEK Zaporizka TPP collected and delivered 112 kg of used batteries and accumulators for recycling (two times more than in 2014) within the framework of the Recycling for Batteries national environmental campaign. Their initiative was supported by employees at other power plants. In 2015, DTEK Kryvorizka TPP collected and recycled 60 kg of used batteries. DTEK Ladyzhynska TPP recycled 14.7 kg of accumulators. Accumulators contain heavy metals such as mercury, nickel, lithium, lead and others. Batteries contaminate the environment and cause damage to humans if disposed of improperly. One regular AA battery can pollute 400 liters of water with toxic chemicals.

In April, DTEK volunteers participated in the Clean City annual event held in 31 cities of Ukraine. Within several hours, 7,000 power plant employees and miners collected 525 tonnes of waste and planted 390 trees in cities where DTEK undertakings operate.

A playground was arranged in Poltava region. In October, another 6,000 employees of the Company participated in the Green City autumn campaign, which has already become a tradition. They planted trees, collected organic waste, cleaned illegal dumping sites, repaired fences, benches and playgrounds.



**People are the key asset and pride of DTEK. In 2015, the social climate in the Company greatly improved. According to a GfK survey, the employee engagement index rose from 3.90 to 4.02 (the survey uses a five-point grading scale). This result was achieved through consistent efforts: management showing concern for employees, building confidence in stability and prospects for business development, and timely payment of salaries.**

At DTEK, the HR management system is built in accordance with applicable Ukrainian laws, industry-specific regulations, and internal policies and guidelines. The HR management system regulates employee recruitment, remuneration, career advancement, training and development. The main aims of DTEK's HR policy are as follows:

- to attract the most talented employees available on the labor market;
- to provide competitive remuneration and incentives to employees;
- to identify and develop employees' potential;
- to establish a single corporate culture.

This policy is an effective tool which leaves open opportunities for the employee initiatives.

DTEK respects employees' right to set up trade unions and other associations that represent their interests. The Company cooperates with these bodies and engages in an open dialogue with them. This approach guarantees the discovery of all potential problems and helps to find timely solutions. DTEK pays special attention to compliance with the industry agreement and collective agreements. Each year, the Company's executives report on the fulfillment of their conditions. Collective agreements are another guarantee of employees' protection since they specify conditions of labor

remuneration, social benefits, payments to retirees, and the Company's occupational safety and personnel training liabilities.

Compensation was paid to the Company's employees working in conditions posing a high risk to their health and life in the zone of military operations. At the same time, a number of highly-qualified personnel left the Company's enterprises located in Donetsk and Luhansk regions during the ATO. Electronic databases with information about potential candidates were used to select personnel for vacant positions, and staff recruitment was done in compliance with the Recruitment Policy. Although active military operations have ceased, the plants in the demarcation zone continue experiencing a shortage of highly qualified personnel. Job duties were distributed among remaining employees and they receive the relevant additional remuneration.

Employees and their families who suffered from military operations received targeted humanitarian relief under program organized by the Rinat Akhmetov Humanitarian Center. Employees also received aid to restore their houses that were damaged during military operations.

As of 1 January 2016, 819 of the Company's employees were called up for service during first three waves of mobilization, and during the fourth wave of mobilization their number increased to 898. As of the beginning of 2016, 929 members of the Company's personnel were in the armed forces.

## Performance Evaluation, Remuneration and Incentives

DTEK has been completing the introduction and unification of a remuneration system using Hay Group methodology. A graded remuneration system allows an assessment of the contribution made by each job position to the Company's aggregate performance results, and unifies and standardizes approaches to determining remuneration. In 2015, the graded remuneration system was introduced at DTEK Dobropolyeugol, Kyivenergo, DTEK Dniproblenergo, DTEK Power Grid, DTEK Donetskoblenergo, and DTEK Energougol ENE.

DTEK continues its efforts to automate HR management processes. The Single Processing Center combines both payroll services and payroll fund management functions. The pilot commercial system was developed, tested, and introduced at three pilot facilities: DTEK Dniprovska mine office, DTEK Dniproenergo and DTEK Dniproblenergo.

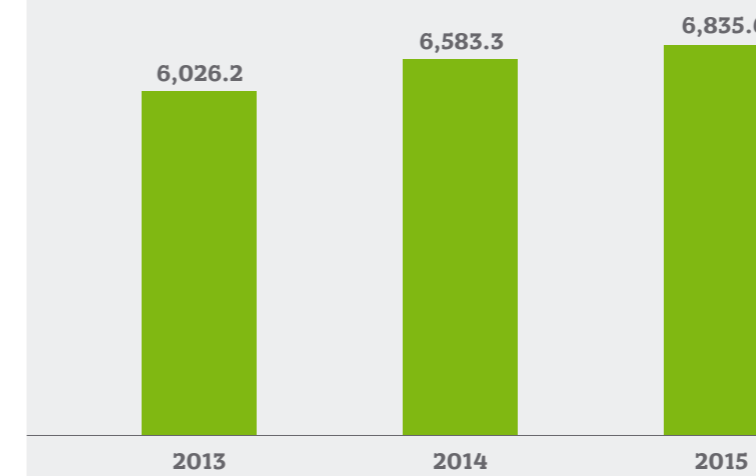
The process for collecting data via internal website was partially automated to allow the introduction

of the HR management assessment system. Commercial operation of an automated timekeeping system was launched at DTEK Pavlogradugol and DTEK Zuivska TPP. The system helped to optimize time expenditures by unifying all standard processes, thus reducing manual processing and hard-copy paperwork, increasing the efficiency of report preparation and preventing the influence of subjective factors on the data entered into the timekeeping system.

Personnel performance is evaluated annually in the first quarter of the year. The results allow for determining remuneration, setting objectives for the next year, approving training and development programs and suggesting candidates for a personnel reserve.

In 2015, implementation of a target-setting system for the management of tiers 1-4 began at all DTEK enterprises. The objective of this system is to increase the Company's operating efficiency.

**Trends in average monthly wages at DTEK Group companies, UAH**



## Compensation and Benefits Scheme

The structure of social packages applied at DTEK companies is regulated by current legislation, collective agreements and industry agreements. In 2014, due to the ATO, a decision was made to include targeted aid to families of dead and injured employees, as well as financial and non-financial aid in case of property destruction in current social packages.

DTEK companies allocate funds to finance recreation and health care for their employees and members of their families. The funds necessary to purchase vouchers for vacation centers are provided to trade union committees, which then search for and select appropriate recreational facilities based on requests and recommendations provided by medical professionals.

The operating companies are continuing implement a system of voluntary medical insurance financed by the Company: in 2015, this system was implemented at Kyivenergo.

Power generation plants also pay financial aid to an employee who gets married for the first time, an employee who becomes a father or a mother, employees on maternity leave until the child reaches the age of three, and an employee who has a disabled child under 18. They also pay financial aid to an employee's family in case of his/her death, and financial aid is provided to an employee in case of the death of his/her close relatives.

## Ways of Communicating Employees' Opinions to the Company's Executives

The Company arranges monthly meetings between the management of production plants and employees. Quarterly meetings of heads of production units and trade unions are held to discuss the most important issues and reports on the fulfillment of requirements set out by collective agreements at the plants.

Information distribution among employees and feedback is done via:

- a direct telephone line with the Company's management when employees can receive answers to all questions important to them;
- corporate media, i.e. a newspaper and a web portal, that highlight the most important events and issues of the Company's operations;
- a hot line with SCM that helps employees to notify the company about deficiencies in operations and unethical behavior;
- regular surveys conducted among employees in order to identify their overall mood and level of satisfaction with the work in the Company;
- collecting employees' requests and suggestions in comment and suggestions boxes placed at plants;
- employees' personal appointments with plant directors and HR executives.

## Personnel Training and Development

DTEK provides all employees with an opportunity to develop their professional, managerial and leadership potential in a corporate university, DTEK Academy, which in five years after it was opened has become an educational and development center of a European standard.

DTEK Academy is a member of International Business School Associations – CEEMAN and EFMD, and it cooperates with the leading Business Schools – Kyiv Mohyla Business School (Ukraine) and INSEAD (France). The Academy's training program includes training sessions on competency development, professional programs and corporate MBA programs. In 2015, six modules of the corporate MBA programs for participants of the Personnel Reserve and TOP-50 projects were conducted. A total of 100 people received training.

DTEK Academy has 14 branches that provide vocational training and skill enhancement courses to the Company's employees. Training classes have been set up at all branches, and a network infrastructure connecting 47 locations throughout Ukraine was upgraded to give the employees an opportunity to enjoy all the benefits of distance learning. Online courses on different subjects, from the basics of economy, labor and employment laws to metal work and energy safety are available. The courses were developed with consideration of the conditions of actual production processes.

A Test Expert testing system helps assess the knowledge obtained. Special modular training programs were developed to improve vocational skills. As a result of these efforts, all employees can receive the knowledge and skills required for production operations whenever convenient for them and without having to take a leave from work. In 2015, 49,981 workers and engineers employed by the Company received training and education at branches of DTEK Academy.

An institute of internal trainers that operates on a permanent basis was established to ensure efficient education and development of the Company's personnel. In 2015, it was the first time that conferences of internal trainers had been held. The Company employs its own resources to train and perform certification of internal trainers. In 2015, 43 new trainers joined the institute.

By providing education to employees using internal resources, developing the institute of internal trainers and by enhancing the skills and competences of internal teachers, the Company reduced its expenditures on education.

**Today, DTEK Academy offers 51 online courses on its web portal; in 2015, 17 online courses were developed in-house.**

## Contribution to Education

DTEK has established partnership with six leading Ukrainian technical universities: the National Technical University (Krasnoarmeisk, since 2009); the National Mining University (Dnipropetrovsk, since 2010), The National Technical University Kyiv Polytechnic Institute (Kyiv, since 2011), Lviv Polytechnic National University (Lviv, since 2012), Donbas State Technical University (Alchevsk, since 2013), Ivano-Frankivsk National Technical University of Oil and Gas (Ivano-Frankivsk, since 2015).

The Company continues to implement cooperation programs with Ukraine's leading specialized institutes and universities. The goal of the program is to reduce the time necessary to train and orient young professionals. DTEK Group invites the best students specializing in pertinent areas to participate in a special training program with subsequent employment at the Company. Students are educated in accordance with training schedules at the Company's production facilities, where each student works with a mentor. The students also receive an additional educational allowance from DTEK.

DTEK Dniproblenergo continues to implement an educational program aimed at training young professionals for its enterprises from among the children of the Company's employees. Under the program, the Company provides a scholarship to study at Prydniprovskiy Energy Construction College for an associate's degree in Installation and Operation

of Electrical Equipment of Power Plants and Energy Systems. In 2015, 20 young specialists successfully completed their education and received jobs, and 17 student continuing their education.

DTEK initiates the upgrade of professional standards. In 2015, the Ministry of Education and Science of Ukraine approved five state standards of vocational education that were developed on the basis of the Company's corporate standards: "Stope Miner", "Shaft Worker", "Underground Installation Operator", "Substation Electrician", and "Electric Metering Equipment Electrician".

**DTEK Academy was selected as one of the six official language partners of Coursera, a global online education project. As a result of DTEK's involvement, Successful Negotiations: Essential Strategies and Skills and Introduction to Public Speaking courses became available in the Ukrainian language in 2015. In 2016, DTEK Academy will offer several other training programs.**



# Occupational Health and Safety 04

## Occupational Health and Safety

DTEK has always adhered to the highest standards of industrial safety. Safety should not be a burden but rather philosophy embraced by everyone. Safe behavior at the workplace should become an ingrained habit of every staff member. In 2015, programs aimed at instilling an occupational safety culture became a focus area of all the Group's production companies. Special-purpose working groups analyze and classify psychological factors behind violations. In 2016, a system for monitoring the psychological and physiological state of employees is expected to be implemented. After this is done, employees will be trained to assess risks existing at their workplaces and possible consequences of rash behavior.

Efforts aimed at increasing occupational safety, on the one hand, have the objective of ensuring the safety of employees. On the other hand, their goal is to prevent the occurrence of emergencies. To this end, all the available methods and techniques are employed: from the implementation of new occupational safety standards to the creation of incentives encouraging observance of rules. There are cardinal rules in place at mine offices and TPPs aimed at increasing responsibility

of employees for compliance with occupational safety requirements: anyone who violates safety rules is liable up to dismissal.

DTEK's investment priorities related to occupational health and safety remain unchanged and focus on the following:

- creating a safe environment at workplaces;
- providing employees with effective means of personal protection;
- training and increasing the levels of safety knowledge among employees;
- providing personnel with medical support;
- protecting employees against workplace hazards;
- bringing the main assets to compliance with occupational safety legislation and regulations.

## Certification of the occupational health and safety management systems in accordance with international standards

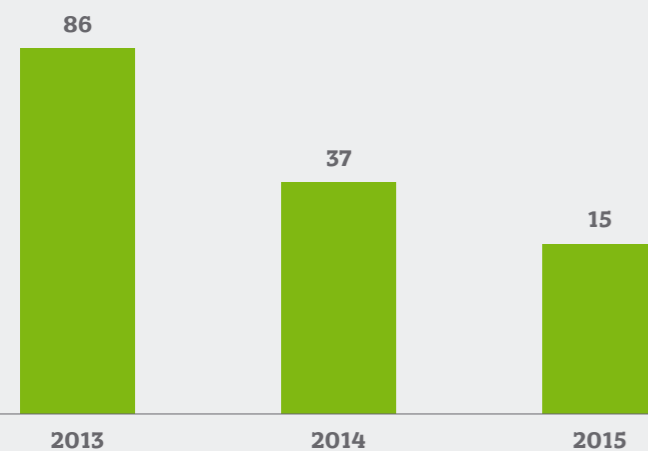
The work environment at almost all DTEK production companies complies with OHSAS:18001 standards. In 2015, the corporate occupational health and safety management systems in place at DTEK Skhidenergo, DTEK Dniproenergo, and DTEK Zakhidenergo successfully passed re-certification audits and surveillance audit for their compliance with OHSAS 18001:2007 standards. This indicates not only the proper organization of the work environment but also safety awareness of employees. The occupational health and safety management system implemented by Naftogazvydobuvannya, DTEK Dniprooblenergo and DTEK Power Grid also successfully passed certification and surveillance audits for its compliance with OHSAS 18001:2007 standard requirements. The process of implementing the occupational health and safety management system in accordance with OHSAS 18001:2007 standards is in progress at DTEK Sverdlovanthracite and DTEK Rovenkyanthracite.

In 2015, the Company's generating companies started to implement another program – the Single Monitoring System. This System allowed discovery of 14,500 potential hazards, the majority of which were successfully eliminated by the power sector employees. Moreover, more than 1,200 instances of hazardous behavior by employees that could have resulted in injuries were discovered.

The three-level occupational safety and assignment control system remains in place at mine offices.

**DTEK Energy's TPPs have started implementing a HAZOP standard. HAZOP is a risk management method of assessing a production process in terms of safety. Using this method, a TPP team of HAZOP-trained experts will be able to discover the hazards posed by equipment and a production process. Then the experts will assess the severity of the hazards, and develop and implement an action plan to prevent potential risks. Thus, the new standard is a logical continuation of efforts made to implement OHSAS. In 2015, a pilot project to introduce the standard was launched at DTEK Kryvorizka TPP. A team of experts applied the HAZOP technique to examine potential risks associated with operations at the fuel transportation workshop and suggested measures to prevent hazards. From the beginning of 2016, the project will be launched at all other TPPs of DTEK Energy.**

Occupational Safety Investments, USD million





## Occupational Safety Training

DTEK has developed safety training programs to maintain the required level of competences and skills of its employees and promote their readiness to perform their professional duties while complying with occupational safety requirements. Occupational safety trainings are carried out by work safety briefings, trainings and skill tests.

### Key approaches to occupational health and safety trainings:

- using visual aids during training sessions (educational films and slides);
- holding video briefings;
- grading employees by level of qualification and specialization;
- ensuring active engagement of all members of personnel in the training process;
- performing multi-level assessment of knowledge.

All coal mining enterprises have a system of pre-shift video briefings. A computerized skills-testing system based on PROTEK software is used to examine employees. This system comprises various occupational safety programs covering both statutory and corporate requirements. In 2015, PROTEK software was used to train and test knowledge and skills of almost 37,000 employees.

**In 2015, more than 50,000 DTEK employees received training in occupational health and industrial safety.**

TPPs employees have an opportunity to study and enhance their skills and competences at vocational training centers. The vocational training centers of DTEK Skhidenergo, DTEK Dniproenergo, and DTEK Zakhidenergo are unparalleled in Ukraine. These centers use unique educational computer software and simulators, up-to-date equipment and hardware. They teach employees occupational health and safety, fire safety, and operation of equipment. Trainings can be received in the form of distance learning. By attending training centers, the employees gain the skills required to ensure safe and efficient operation and repair of equipment used by TPPs.

The Company's distribution enterprises conduct educational trainings and contests on a regular basis. DTEK Dniproenergo uses the Mezhirich educational training ground to provide practical training in performance of operational tasks to personnel. In 2015, a practice drill on safe repair and operation of distribution networks was held on the training ground for production teams. The personnel training and development center provided trainings and education to 1,003 employees, including 365 employees, who attended first-aid trainings, and 579 employees, who upgraded their skills in occupational health and safety.

## Motivation to Observe Industrial Safety Rules

Since 2013, a system of financial and non-financial incentives has been implemented at coal and power enterprises. The competitive environment helps to create an occupational safety culture and encourages development and implementation of innovations that promote occupational safety. For instance, in 2015, 4,000 employees of the Company's coal enterprises received total to USD 78 thousand in awards for reaching the performance targets in occupational health and safety, including 164 employees who were rewarded for identifying unacceptable risks.

The coal mining enterprises continue to use a system for assessing performance results delivered by the top management in the areas of occupational health and safety. This approach encourages management to pay more attention to occupational safety issues, as their effective performance in this particular field is measured both in terms of quality and quantity. In 2015, the top management assessment criteria were revised to increase the extent of their involvement in occupational safety management matters.

In order to increase employees' personal responsibility for compliance with occupational safety requirements, the Cardinal Rules enacted in 2014 are applied at coal mining and preparation plants. Failure to comply with these Rules leads to dismissal. In 2015, 359 employees who committed gross violations of occupational safety requirements were dismissed on the grounds set out in the Cardinal Rules.

To inform employees about fatalities at the Company's enterprises, special short video films – Lessons Learned – are created and broadcast. These films explain the reasons why the fatalities happened, and lessons that should be learned to prevent such accidents from happening in the future.

The Culture of Occupational Safety program was introduced at the distribution enterprises. The program's objective is to change the mentality and behaviour of each member of the enterprise's personnel by combining leadership and support from top management and junior management and encouraging the employees to engage in occupational safety efforts to preserve their life and health.

## Natural Disaster Protection

### The following measures are being developed to protect industrial facilities from natural disasters:

- plans of organizational and technical measures to prevent emergency situations (ES);
- plans of accident containment and recovery;
- plans of interaction with the general committee of emergency situations during mitigation of the emergencies;
- schedules of civil defence and fire safety trainings;
- programs of civil defence and technogenic safety briefings.

### The following events are regularly organized at the enterprises to practice skills and rehearse emergency situations:

- training management and specialists at the methodological and educational centers of civil defence and life safety;
- individual education of employees in civil defence at the workplace;
- trainings at the headquarters for mitigation of ES consequences in power grids in cooperation with the headquarters for mitigation of natural disasters set up by the local state authorities;
- trainings at the headquarters in emergency response to accidents at radioactive and chemically hazardous facilities;
- trainings for employees in acting during shelling of residential locations (employees sheltering in basement and semi-basement structures).

## Employee Health Protection

The main objective of the Company's medical service is to preserve the life and health of its employees and to prolong their active life span. In 2013-2015, the Company focused on reducing the morbidity rate of its employees. In 2015, a single occupational medicine management system was introduced. All of the Company's medical facilities received access to a single information space. Automated record-keeping allows a quick response to changes in key indicators, and optimizes the efficiency of data collection and processing.

A system of sectorial doctors has been implemented at TPPs and DTEK Pavlogradugol mine offices. Their tasks are as follows: to give first aid and monitor the health of employees through prevention, health assessment and medical examinations. In 2015, the sectorial medical service of DTEK Dniproenergo was reorganized, and the sectorial medical service of DTEK Zakhidenergo was reinforced with single-discipline specialists.

Preventive medications and treatments are the regular practice. In 2015, 8,863 employees and retirees of the Company's production facilities were covered by preventive measures. Flu vaccination was provided to 1,500 employees. Employees with a risk of cardiovascular diseases are examined on a daily basis before shifts at DTEK medical facilities. Such employees account for 5% of the total number of employees at mines, for 12.6% – at coal preparation plants, and for 9% – at TPPs. Regular medical examinations help to prevent coronary fatalities at workplace.

Despite the ongoing hostilities, 26 medical facilities located in the ATO zone continue to provide medical services to the employees of DTEK Energy undertakings. At the most difficult times, the medical professionals delivered medicines and bandaging materials to DTEK Zuivska, DTEK Kurakhovska, DTEK Luganska TPPs,

and Mospino CPP. It is essential to preserve and strengthen the psychological health of the employees at the plants that continue operations in the ATO zone. To address this issue, the medical facility at DTEK Zuivska TPP developed a program to reinforce stress tolerance and personal development that engages all the employees of the plant. Fifty-three lectures on stress tolerance and personal development, 50 group sessions, 12 psychological trainings, and 124 one-on-one sessions for psychological adjustment were conducted; 310 psychological consultations were given, and 127 psychological assessments were performed. Medical and psychological treatment and rehabilitation are provided to the Company's employees who were demobilized at the Samara medical and recreational facility.

Medical professionals continue to upgrade their skills and competences. Forty-nine medical professionals employed by DTEK Service attended scheduled courses at various Ukrainian educational facilities. In 2015, employees of DTEK Zakhidenergo completed trainings in first aid that were organized by the medical center. Every day, medical facilities at all enterprises give lessons to enhance first-aid skills. Medical professionals who work at the Company's medical facilities also teach employees the basics of premedical care. These efforts increase the employees' preparedness to act in emergencies posing a threat to health and life. The ability to give first aid as healthcare professionals helped to provide proper treatment in 2,900 instances.

**The measures implemented by the medical service, whose main task is to preserve health of the employees, resulted in a decrease in the morbidity rate from 68.3%, which was recorded in 2014, to 68.1% recorded in 2015, and in terms of days, by 2.4%, i.e. from 896.05 to 874.76. As shown by a GfK survey, 97% of the employees are satisfied with the quality of medical services provided to them.**



## Injury Rate

Along with state inspections, every injury case is thoroughly investigated within the enterprise to discover its cause. Based on the investigations, corrective measures are developed to prevent such injuries from happening in the future.

In 2015, during repairs conducted at DTEK Power Grid, two group incidents were recorded, including fatalities (four employees died, and three were injured), that were caused by combat operations. Another four employees sustained injuries and one person died at DTEK Donetskoblenergo. These employees were affected when they performed repair works on the damaged power grids.

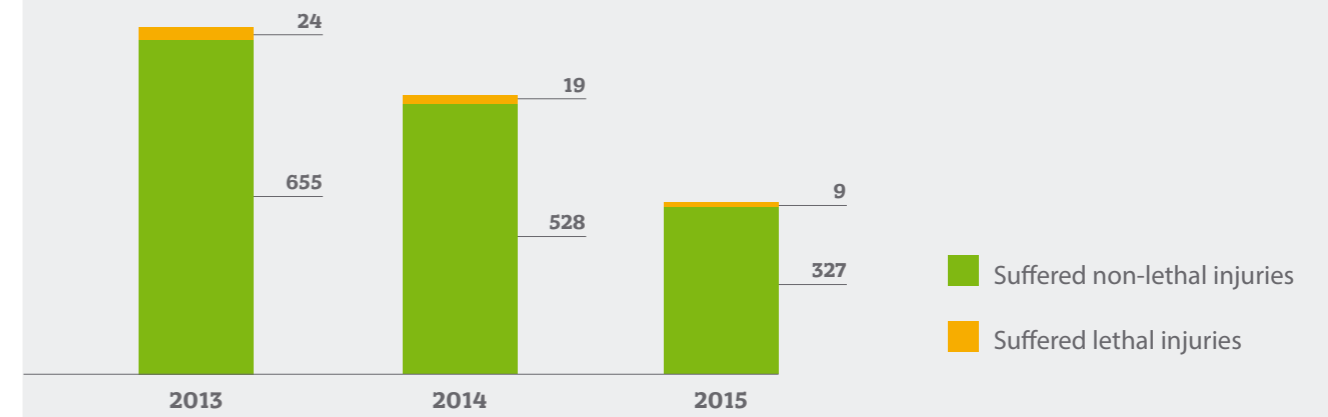
In 2015, no fatalities were recorded at generating companies. Four instances of job-related injuries with loss of work capacity, including two instances of minor injuries, were caused by shelling of DTEK Luganska TPP. Two instances of job-related injuries with loss of work capacity were reported by DTEK Dniproenergo and DTEK Zakhidenergo each. Six employees were injured (three employees sustained serious injuries, and the other three employees sustained minor injuries).

In 2015, the Company's coal facilities managed to reduce the fatality rate by 43% year on year (from 14 to 8 incidents), and the rate of serious and potentially fatal injuries reduced by 33% (from 33 to 22 incidents).

### Injury Frequency Rate



### Number of employees who suffered workplace injuries, persons



### Number of employees who suffered injuries at the workplace as a result of military operations, persons

Indicator	2014	2015
Number of employees who suffered injuries at workplace as a result of military operations	46	14
Including fatalities	8	5

## Contractors Safety Approach

The Regulations on Contracted Servis Safety in effect to ensure the safe performance of work by contractors at every enterprise of DTEK Group. These Regulations include occupational, industrial, fire and general safety requirements at a contractor's company. They also contain a course of action and distribution of responsibility to ensure safe performance of work by contractors, a checklist of contractor's compliance with the safety requirements, a list of documents for ensuring the safe performance of work by contractors, and requirements for actions related to ensuring the safety of a contractor's works. Contractors have to meet strict requirements, and if they are not met, the respective measures are applied, up to prohibition of work and contract termination.

# Environmental Protection 05

**Prevention and minimization of the negative impact on the environment is one of the Company's top priorities as declared in the Company's Environmental Management Policy. Implementation of this Policy enhances environmental safety of the Company's production enterprises. DTEK uses a preventive approach by upgrading its process operations at all stages of the production chain.**

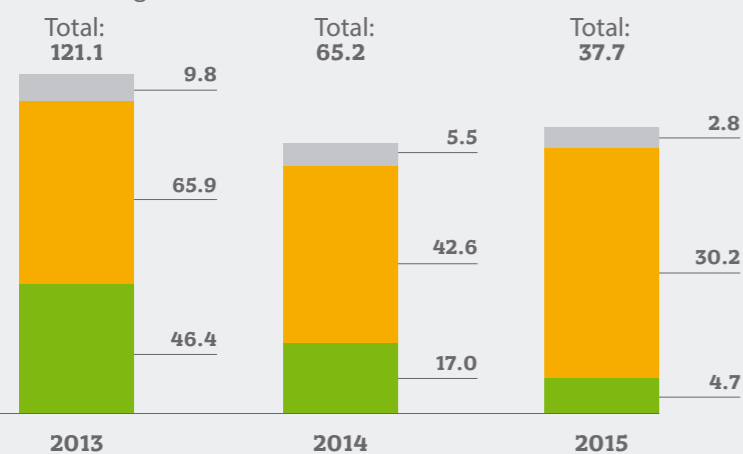
**Environmental protection is an integral part of sustainability of a responsible business. The Company takes due care about the environment and instills environmental culture in its employees.**

**Despite the difficult situation in the country and in the industry, the Company's top priority remains to carry on the implementation of its environment-related efforts, such as the following:**

- modernization and retrofit of equipment to ensure security of energy supply and compliance with European environmental standards;
- implementation/improvement of the environmental management system in compliance with ISO 14001 requirements;
- continuing efforts aimed at preserving biodiversity;
- promotion of initiatives in the area of environmental education, training, etc.

The core focus areas of DTEK's environmental efforts are as follows: protection of the atmospheric air (reconstruction of electrostatic precipitators at TPPs), protection and sustainable use of water resources, protection of land, and waste treatment (building up ash dumps, improving the recycling of ashes and slag waste, recultivation of rock dumps, etc.), more efficient use of hazardous substances and materials, and protection of biodiversity. These efforts are fully in line with Ukraine's desire to follow European trends in environmental protection.

**Expenses and investments in connection with environmental protection, USD million**  
(excluding environmental tax)



The Company has carried out identification and analysis of environmental risks and issues to assess and analyze the impact that DTEK enterprises have on the environments, and also to develop and implement a system of measures to manage environmental risks and issues. Material environmental risks and issues were recorded in special registers, and efforts aimed at mitigation of such risks and issues were planned. Monitoring and assessment of the impact that the Company's enterprises have on the environment remain an important element of the effective governance system. DTEK's enterprises monitor their impact on the environment in compliance with applicable environmental laws and regulations.

The Company is actively engaged in external environmental initiatives, including the development and improvement of Ukrainian environmental law. In 2015, in partnership with other companies doing business in the thermal generation segment, the Company proposed changes to order No. 541 of the Ministry of Environmental Protection of Ukraine of 22 October 2008 on technological limits on emissions from thermal power plants with rated capacity of over 50 MW. On 17 October 2015, the Ministry of Ecology and Natural Resources of Ukraine issued order no. 337 to amend the effective technological limits on emissions from thermal power plants with rated capacity of over 50 MW.

In 2015, the Company was also engaged in working meetings to discuss matters of the development and implementation of green economy projects for large businesses in Dnipropetrovsk Region. The meetings held within the framework of Green Economy Modernization Programme launched by the German company GIZ were attended by members of the Dnipropetrovsk Region council, officers of Dnipropetrovsk Region state administration, and stakeholders, including organizations and companies. The meetings provided an opportunity to discuss the organization of a green solution and mechanism for promoting the implementation of green projects, and to analyze the possibility of implementing the waste exchange creation project.

## Environmental education and training

Ecologists of the DTEK Energy corporate center, within the framework of the company's cooperation with Ukrainian universities, gave lectures attended

by teachers, post-graduate students, and undergraduate students of the Dnipropetrovsk National Mining University, on systematic approaches to disposal of ash and slag wastes, and gave a tour of reclamation areas at DTEK Pavlogradugol. Volunteers of the DTEK Power Grid continued giving lessons in environmental protection to schoolchildren as part of the program aimed at preventing electrical injuries to children. Colorful posters and rules demonstrating the importance of a careful attitude to nature and a need for waste collection and consequences of inaction were prepared for the children. In total, the volunteers gave 70 lessons to 1,750 schoolchildren.

## Instilling environmental culture in employees

The Company continued its efforts to motivate its employees to engage in environmental protection activities. The core objective of these efforts is to increase environmental awareness, and popularize nature reserves. In 2015, the best units of DTEK Donetskoblenenergo and DTEK Dniprooblenergo received a challenge badge as the best in protecting the environment. Seven employees received bonuses. Another 155 employees of DTEK Dniprooblenergo were awarded a week trip that included a visit to the Khortytsya Island National Nature Reserve and Sofiivka National Dendrologic Park (Uman, Cherkasy region).

## Environmental management

In 2015, the Company continued its efforts aimed at implementation and improvement of environmental management systems in accordance with ISO 14001 standard at all its enterprises. For the first time, DTEK Donetskoblenenergo passed a certification audit for its compliance with ISO 14001:2004 standard requirements. A recertification audit was successfully completed at DTEK Dniproenergo, while DTEK Skhidenergo, DTEK Zakhidenergo, DTEK Dniprooblenergo, DTEK Power Grid, and DTEK Energougol ENE successfully underwent a surveillance audit and confirmed compliance of its environmental management system with ISO 14001:2004 requirements.

In September 2015, a new version of the ISO 14001:2015 standard was issued. A three-year period was allowed for implementation of this standard. The Company started implementing new requirements.

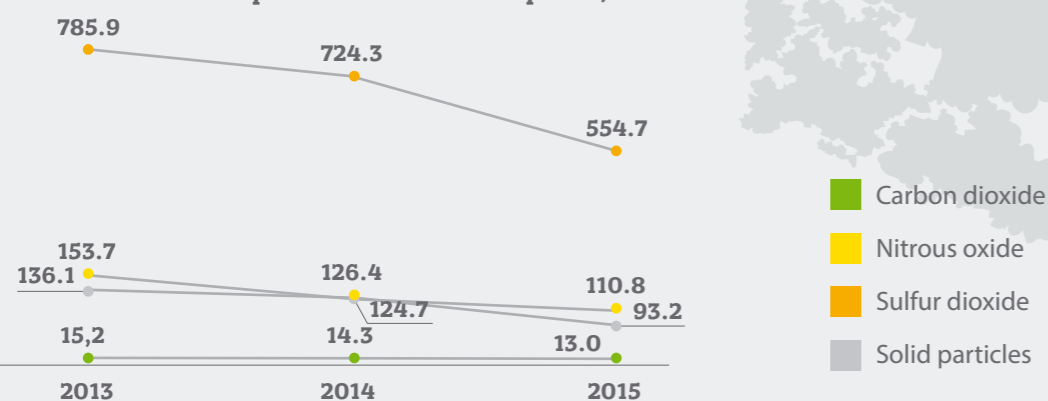
## Air Emissions

In 2015, the Company completed the reconstruction of electric precipitators at power unit No. 9 of DTEK Kurakhovska TPP, which reduced the concentration of particulate matter emissions by 40 times (from 2,000 mg/nm<sup>3</sup> to 50 mg/nm<sup>3</sup>). Also in 2015, the Company continued construction of electric precipitators at power unit No. 1 of DTEK Kryvorizka TPP and power unit No. 3 at DTEK Zuivska TPP. Following the reconstruction, all the power units will ensure residual dust content of no more than 50 mg/nm<sup>3</sup> and will be equipped with flue gas monitoring systems for continuous air emission control.

DTEK worked on the coordination team on pollution abatement and implementation of Directives

2001/80/EC and 2010/75/EC in Ukraine in fulfilment of obligations assumed by Ukraine under the Treaty Establishing the Energy Community (including implementation of the National Plan on Limitation of Emissions of Certain Pollutants from Large Combustion Plants). On 16 October 2015, the Ministerial Council of the Energy Community issued resolution No. D/2015/07/MC-EnC granting special approval of the time limits and conditions of Ukraine's compliance with the requirements of European Directives 2001/80/EC and 2010/75/EU. In December 2015, the National Plan was officially submitted to the Energy Community Secretariat for review.

Gross emission of pollutants into atmosphere, thousand tonnes



## Climate Change and Greenhouse Gases

In 2015, the Company was actively engaged in the working groups at ministries and agencies, whose activities were aimed at creating a regulatory framework for counteracting climate change and implementation of environmental policy instruments for further reduction of greenhouse gas emissions. DTEK Energy's specialists also provide their expertise to the Ministry of Ecology and Natural Resources of Ukraine during discussions of projects to counteract climate change and implement an internal system of greenhouse emissions trading.

In October 2015, DTEK Academy organized a seminar for ecologists with all Ukrainian thermal generation businesses on matters of implementation of an internal system of greenhouse emissions trading in compliance with Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading, and, in particular, on the matters of monitoring, verification, and reporting. Experts with European projects that are being implemented in Ukraine were invited to the seminar as speakers.

In 2015, operations of the Botievo Wind Farm resulted in a reduction of CO<sub>2</sub> emissions of 674 thousand tonnes.



## Water Resources

The Company's water resources management policy is based on the principles of their careful and sustainable use. To ensure optimal water consumption for production needs, power generation plants use circulation cooling systems of primary and supporting equipment, circulation hydraulic ash removal systems (HAR), and water recycling systems. The rational use of water by the Company's mining enterprises is ensured by recycling mine water and using it in production processes and by using recirculating cooling water systems at coal preparation plants. Distribution enterprises of DTEK Energy use water mainly for drinking and sanitary purposes. Water is supplied from the networks of local utilities. To ensure prudent consumption of water resources, the Company's employees receives the relevant trainings, and isolation valves are regularly inspected and repaired.

In 2015, DTEK Energy continued to implement programs to mitigate the impact on water resources at all its generating companies. These programs have been developed for the 2013-2030 period, and the objective is to prevent and mitigate the a negative impact on water resources and to ensure compliance with environmental laws governing protection of water basins. The priority projects included in the programs for each TPP are the reconstruction of industrial surface water sewerage systems and water treatment facilities, as well as fish protection structures.

### Key efforts in the area of sustainable use of water and protection of water resources implemented in 2015:

- isolation valves and sections of fire fighting and drinking water and service water pipelines at DTEK Zuivska TPP, DTEK Kryvorizka TPP, and DTEK Zaporizka TPP were replaced;
- a project of a buffer zone at the Zabuzke deposit of underground drinking water was developed, and a deposit development plan was prepared to comply with the requirements of a special permit to use mineral resources by DTEK Dobrotvirska TPP;
- pumpwells at pumping stations No. 1, 2, and 3 of the circulation cooling system at DTEK Burshtynska were cleaned.

All generating companies of DTEK Energy constantly monitor the quality of sewerage and underground water at ash dump sites in accordance with the pre-approved schedules.

During 2014-2015, water consumption at DTEK Energy thermal power plants for sanitary and drinking needs was reduced by 11% (from 5,589.9 thousand cubic meters in 2014 to 5,051.4 thousand cubic meters in 2015); for production needs, by 17% (from 270,508.5 thousand cubic meters in 2014 to 231,301.0 thousand cubic metres in 2015). The changes in quantitative water consumption indicators were due to the reduction in electricity generation by DTEK Energy TPPs compared to the same period of the preceding year.

### Sources of water intake for industrial, drinking and household water supply of DTEK Energy TPPs

Thermal Power Plant	Sources of water intake for industrial, drinking and household water supply
DTEK Burshtyns'ka TPP	Hnyla Lypa River (left tributary of the Dnister) with cooling water reservoir
DTEK Dobrotvirs'ka TPP	Zakhidnyi Buh River
DTEK Ladyzhyns'ka TPP	Pivdennyi Buh River
DTEK Prydniprovskaa TPP	Dnipro River
DTEK Kryvorizka TPP	Dnipro-Kryvyi Rih Canal

### Sources of water intake for industrial, drinking and household water supply of DTEK Energy TPPs (continued)

Thermal Power Plant	Sources of water intake for industrial, drinking and household water supply
DTEK Zaporizka TPP	Kakhovka Reservoir
DTEK Kurakhivs'ka TPP	Siverskyi Donets-Donbass Canal and Kurakhovo Reservoir (Vovcha River)
DTEK Zuyivs'ka TPP	Siverskyi Donets-Donbass Canal and Kurakhovo Reservoir (Krynka River)
DTEK Lugans'ka TPP	Siverskyi Donets River
DTEK Myronivska TPP	Myronivsky Reservoir

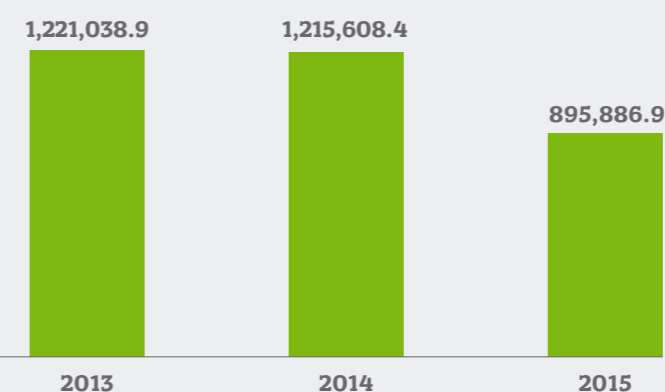
## Wastewater Discharge

All thermal power plants of DTEK Energy constantly monitor the state of underground water and the quality of wastewater to reduce the negative impact of waste water on surface and underground water resources. Key efforts aimed at prevention and minimization of wastewater discharge implemented in 2015:

- a project for the installation of water metering devices at wastewater outlets No. 1 and 2 at DTEK Prydniprovskaa TPP was developed;
- oil coolers of turbines and submersible pumps were replaced during the reconstruction of power unit No. 9 of DTEK Kurakhovska TPP;
- repairs and maintenance of oil-fueled equipment of power units No.1, 2, and 4 at DTEK Zaporizka TPP was performed.

The coal mining process always involves the extraction of mine water and subsequent discharge into water reservoirs. In 2015, an automated system of environmental monitoring of mine water was installed at Kosminna valley to ensure continuous monitoring of mine water discharged to the Samara River. In 2015, to reduce a negative impact of wastewater on natural resources, DTEK Pavlogradugol decided to use phosphate-free detergents to wash work clothes, which reduced the phosphate content in utility wastewater threefold.

### Total volume of industrial effluent water discharge, thousand m<sup>3</sup>



## Waste Management and Remediation of Disturbed Soils

Heavy waste, which includes rock, ash and slag, accounts for the majority of the waste produced by DTEK Energy enterprises. In 2015, as a result of reduction in mining operations, the volume of waste produced by coal mining companies decreased by 29.7%, or 2.8 million tonnes less than in 2014. In 2015, as a result of decreased electricity generation, the volume of waste produced by generating facilities decreased by 10%, or 506 million tonnes less than in 2014.

The majority (99.9%) of the waste generated by DTEK Energy companies is not hazardous. However, free land plots must be available to organize dump sites, which restrict the possibility recycling this waste. Therefore, one of the priorities of the Company's environmental policy is to increase the use of ash and slag materials.

To increase the use of ash and slag materials by all thermal power plants, programs aimed at increasing ash and slag usage were developed for 2012-2020 and are being implemented. In 2015, as part of the implementation of these programs, dry ash handling systems were installed at power units No. 5 and 7 of DTEK Burshtynska, which increased the volumes of ash and slag recycling. The access road used to ship dry ash from DTEK Dobrotvirska TPP was reconstructed. TPPs implement projects to build up ash dams using ash and slag materials to avoid the need to allocate new land plots for dump sites.

In total, in 2015, generation facilities used 147.3 tonnes of ash and slag for their own needs (to build up ash dams and for other needs) and sold 356.9 tonnes of ash and slag to external consumers, which accounts for 9.9% of the total volume of ash and slag generated by them.

Road construction is a promising area for the use of ash and slag generated by thermal power plants. In 2015, to increase the usage of ash and slag materials, the electricity generation management launched

a joint project implemented in cooperation with the CSR Ukraine Community for the use of ash and slag in road construction within the framework of a cross-border project for the development of entrepreneurship by improving access to investment sites in Lubaczów and Gmina Lubaczów, as well as the recovery of degraded lands of Yavoriv Region and the city of Novyi Rozdil. In 2015, the M. Shulgin State Road Construction Research Institute developed Guidelines on the use of ash and slag generated by DTEK Dobrotvirska TPP and DTEK Burshtynska in road construction. Design estimates were prepared for the construction of roads in Novyi Rozdil using ash and slag materials. There are plans to build 18 km of the road using ash and slag.

One of the issues that arise in the area of recycling ash and slag materials is the recycling of ash generated after anthracite coal is burned. Considering low reactive capacity of anthracite and lean coals, this group's bottom ashes contain a large amount of unburned carbon, that considerably restricts their use in construction. A high content of unburnt carbon is observed in ash and slag generated by DTEK Luganska TPP, DTEK Prydniprovka TPP, and DTEK Kryvorizka TPP (20-30%). To use dry ash in the construction industry, the content of unburned carbon should not exceed 5-10%. To find a solution to this problem, research is being conducted to find methods for extracting unburned carbon from dry ash and to determine optimal regimes and quantities for burning unburned carbon. In 2015, works were performed to separate unburned carbon from ash at DTEK Prydniprovka TPP and DTEK Kryvorizka TPP.

As part of a separate waste collection process, an additional 220 containers were placed at the distribution companies. This was the first time that DTEK Dniprooblenergo had delivered 18.7 tonnes of broken porcelain insulators to a company manufacturing fire-resistant materials.

In 2015, biological remediation of soil was performed on 15.9 ha of remediation sites of DTEK Pavlogradugol. Naftogazvydobuvannya performed technical

and biological remediation of 10.7 ha of land at the sites of newly drilled wells No. 11, 17, 23, and 70 at the Semerenkivske field.

Total Volume of Waste Generation by Hazard Category, tonnes			
Indicator	2013	2014	2015
Category 1	39.0	55.6	18.4
Category 2	324.6	378.3	176.1
Category 3	1,910.5	1,031.3	680.9
Category 4	21,475,203.4	19,300,952.4	16,203,337.5
Total	21,477,477.5	19,302,417.5	16,204,212.9

## Preservation and Restoration of Biodiversity

In 2015, compensatory tree planting was performed on a 13-ha field of Geroiv Kosmosu, Pavlogradske and Ternivske Mine Offices of DTEK Pavlogradugol instead of underworked forest.

Ornithological monitoring of birds and bats was performed at the Botievo Wind Farm. According to the results, the wind turbines do not have a negative impact on natural ornithological reserves and migrating birds. Positive trends towards the natural restoration of tree belts and riversides were noted within the site.

In 2015, DTEK distribution companies continued their work on bird protection programs. A comprehensive approach to this issue will not only help to protect birds but will also help to enhance reliability

of electricity supply to consumers. Cooperation with ornithologists working at Dniprovsko-Orilskyi Natural Park continued. They helped to set up three platforms for nests of white storks at DTEK Dniprooblenergo and DTEK Donetskoblenergo. 66 platforms have been set up in the past three years.

Biology teachers and pupils help to monitor settlement of white stork in the nests. In 2015, DTEK Dniprooblenergo in cooperation with the Regional Environmental Center for Children and Youth developed and implemented the Leleka educational program in Dnipropetrovsk Region as part of international project to protect the white stork. Fourteen children who submitted the best works received valuable gifts that will help them to study nature.

# Sustainable Energy Industry 06

## Reliability of Power Supply

There are zones within the licensed territories of three distribution companies of DTEK Energy where military operations have either ended or still continue. The ATO has a direct impact on the work of DTEK Donetskoblenenergo, DTEK Energougol-ENE, and DTEK Power Grid, and adversely affects the quality of services provided by these companies.

Since May 2014, the Company has been working on a daily basis to restore power supply. Almost all emergency repairs in the ATO zone are performed by the distribution companies' employees. The employees responsible for securing power supply put their life at risk every day.

In aggregate, DTEK power engineers have restored power supply to 400,000 people in 260 settlements, several times in some locations.

## Power Saving and Energy Efficiency

Reliability of the power supply is closely intertwined with energy efficiency. Despite the complicated situation in the industry, the Company continues to implement an energy management system.

Corporate programmes on the basics of energy management and energy audits were developed for buildings and structures as well as industrial enterprises (mines, preparation plants and thermal power plants). A specific feature of these programs is their practical vector: during the course, students receive theoretical knowledge which they immediately apply under supervision of a trainer – energy auditor. More than 30 Kyivenergo, Dniprooblenergo, and Donetskoblenenergo employees attended a course at the DTEK Academy, after which they developed energy saving programs for their employers.

A technical electricity record-keeping system was implemented at the Pioner mine of DTEK Bilozerske Mine Office. USD 92 thousand was invested in the project, and now the mine can save more than USD 9 thousand per month due to analysis of electricity consumption at each process site and timely management of the equipment.

The project for implementation of the technical electricity record-keeping system at DTEK Burshtynska was approved, and its budget amounts to about USD 137 thousand. Implementation of a the program for energy audits of the Company's facilities continues. An audit of the administrative building of Dobropilska CPP, the main building of Pavlogradska CPP, and the central office in Kyiv was performed in 2015. Findings made by the energy auditors were used as a basis for project documentation during repairs and reconstruction of industrial facilities. A series of energy saving management measures were also taken at the Company's office.

## Legal framework for the large-scale energy modernization in Ukraine

DTEK's expertise and experience in the municipal energy segment, finances, and risk management were instrumental in the formation of the legal framework for large-scale energy modernization in Ukraine. In 2015, a package of laws on energy service companies was passed in Ukraine, and a standard energy service agreement developed by the working group at the State Agency for Energy Efficiency and Energy Saving was approved. DTEK specialists included in the working group were actively involved in the development of these documents. A unique energy service contract used by the Company's enterprises served as a basis for the standard energy service agreement.

DTEK ESCO was established on the platform of the DTEK energy efficiency project team. This company will perform energy service functions for both SCM Group and consumers located throughout Ukraine.

## Energy Saving Services for Customers

It is very important for the Company whether or not the end consumer receives the service in with the volume and quality this consumer requires, and how reliable the provision of such services is.

Kyivenergo started selling energy audit services. This offer from an energy supplier is unique among Ukrainian distribution companies. This service is aimed at customers who need professional help in determining the sources of energy losses and finding effective solutions. Kyivenergo energy auditors develop business plans of energy efficient measures and determine the most cost-effective ways for their implementation (borrowings, own funds and energy service).

Kyivenergo in cooperation with Oshchadbank, Ukgazbank, and the International Financial Corporation organized an information campaign targeted at associations of co-owners of blocks of flats and housing associations in the capital. The purpose of the campaign was to popularize energy efficiency among residential users. More than 50 co-owners associations and housing associations received the up-to-date information about energy consumption at their buildings, and were informed about state support for energy saving projects.

An energy audit was performed at six facilities in 2015. Following the audit, one customer modernized a boiler plant at the administrative building; and the project will pay for itself in two heating seasons; another customer (an association of co-owners of a block of flats) received a grant from the Kyiv City State Administration to modernize an individual boiler plant, and the payback period is less than a year. Another building will be modernized by the customer in 2016, and the investment in the energy saving project will exceed USD 115 thousand, which is expected to be paid back as early as 2018. Kyivenergo hopes that demand for this service will grow in 2016, and expects that the company's customers will be able to substantially reduce consumption of electricity, make some savings and improve their living standards.

In 2016, DTEK Dniprooblenergo plans to offer energy audit service to its customers. Thus, DTEK on its own initiative fulfils the state's obligations towards the European Energy Community relating to the implementation of the provisions of Directive 2012/27/EU (EED).

## Innovation

The launch of the Novator continuous improvement system became the vital factor in improving the quality of products and services supplied by the Company. This system is based on unwavering dedication to eliminate all types of losses and improve production processes, and this objective is achieved through active involvement of the creative potential of employees. The Novator has to change the culture and behavioral model of the employees and bring together the best traditions upheld by enterprises and innovations.

DTEK Energy implements tools and methods of lean production such as teams of continuous improvement (Kaizen), Just-in-Time Strategy (JIT), Value Stream Mapping (VSM), 5S workplace organisation method, PDCA (plan-do-check-adjust) method, Total Productive Maintenance (TPM) system, and SOP. A strategy for the consistent introduction of KPI for management positions has also been implemented.

A corporate system for training in continuous improvement was developed and covers all levels of the Company's organizational structure. A system for submitting proposals was implemented to encourage employees to be more involved. At the enterprises where the Novator system was launched more than a year ago, about 9% of the employees have at least once submitted their ideas, participated in teams of continuous improvement, developed SOP or acted as "navigators", i.e. actively expressed their interest and desire to improve the Company's efficiency.

Since May 2013, 43 enterprises have implemented the Novator system. In 2016, it is expected that all enterprises of DTEK Energy will launch this program; up to 20% of personnel will be involved in submitting their ideas and proposals, and methods and instruments provided by the Novator system will be incorporated in day-to-day operations of the enterprise. These efforts will boost the level of efficiency of operating activities to European standards.

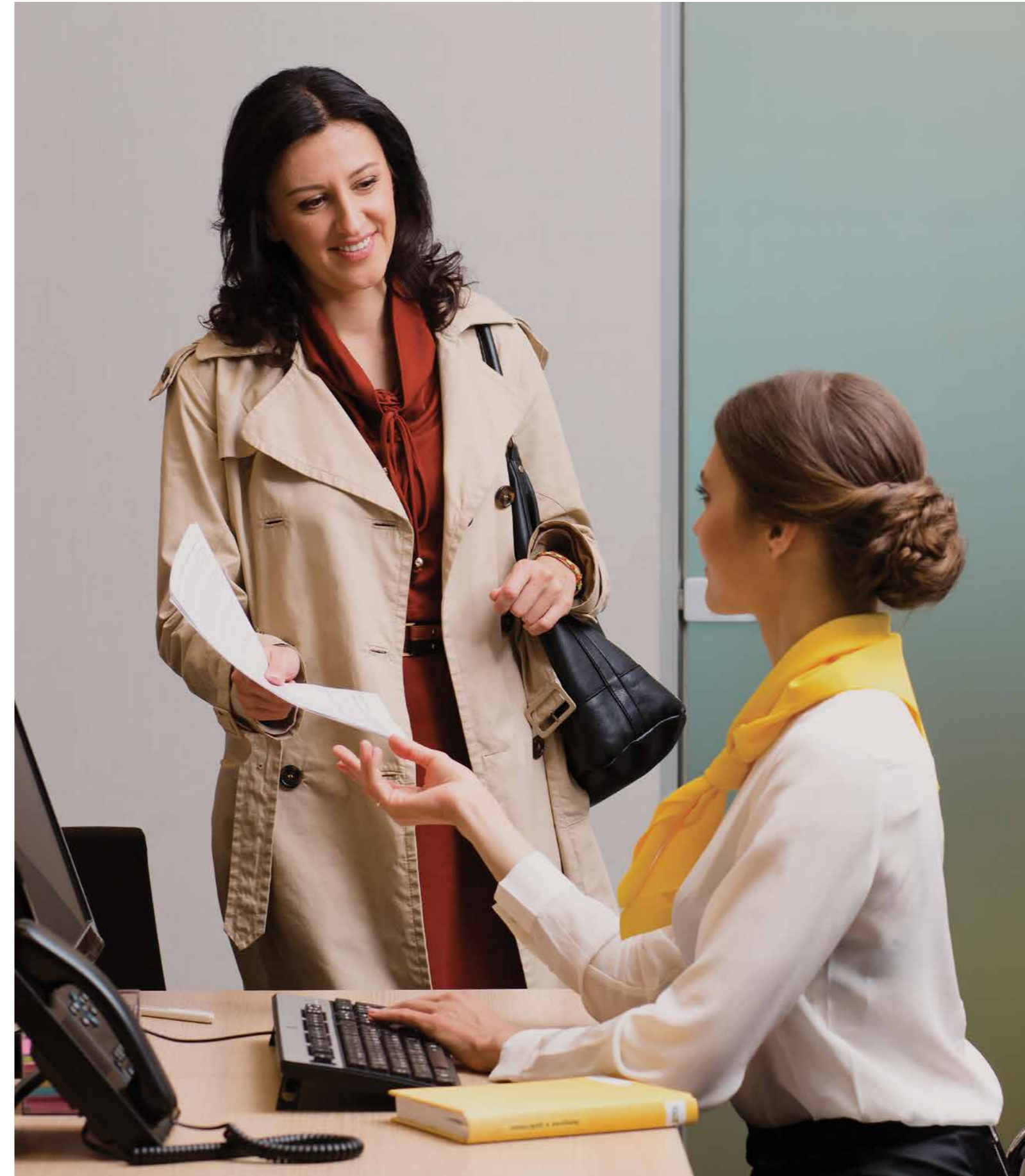


## Customer Orientation

The Company fully provides socially vulnerable groups including residents of apartment houses without gas and central heating with statutory benefits to pay for electricity.

### Main principles of DTEK in respect of the quality of goods and services:

- performance of scheduled maintenance checks in a full and in a timely manner;
  - investments in maintaining reliable and uninterrupted electricity supply and improving the quality of electricity taking into account the technical condition of electricity networks and equipment, accident rate, prospects for development, etc.;
  - carrying out actions aimed at decreasing emergencies and recovery time (trainings on emergency recovery, cleaning overhead power lines, forming emergency reserves, organization of maintenance standby, etc.);
  - increasing customer satisfaction (e.g., by ensuring the availability of services of new connections and reducing the time required to connect new consumers, voltage stability, continuity of and absence of gaps in the electricity supply, quickness in restoration of electricity supply after emergency shutdowns, compliance with the stated time-limits of the restoration of electricity supply after scheduled shutdowns).
- In 2015, the following core initiatives were implemented to improve the quality of customer services:**
- an improvement program aimed at increasing customer satisfaction with the quality of services was developed and implemented. The program envisaged such activities as:
    - informing consumers about services offered by the Company, electricity tariffs, tariffication methods, emergency and scheduled shutdowns;
    - publishing information on the Company's websites, in customer service centers (CSC) and contact centers;
    - creating advertising and promotional materials and POS materials;
    - improving the quality of services provided by CSC and contact centers by reducing waiting time;
    - reducing the average time of service at CSC and providing an opportunity to deal with all issues during one contact (a call or a visit);
  - a corporate contact center was established on the basis of a pilot site in Nikopol (DTEK Dniiproblenergo), which fully covers Dnipropetrovsk Region;
  - customer service standards were introduced, and personnel received trainings on these standards;
  - a program for transforming regional divisions of power supply into CSC was implemented: a model organizational structure and job descriptions for CSC personnel were developed; departments/teams were created in the structure of CSC front and back offices;
  - contracts were concluded with all key Internet platforms and cash-in ATM networks within the program to extend channels for receiving payments from household consumers.
- Customers receive all the information they require either during a visit to a CSC, where they are provided with an information pack, or on official websites of the Company's distribution enterprises and through My Account web-service.



## About the Report and Non-Financial Reporting Process

This report, including a Sustainability Section (hereinafter referred to as the Report), includes material facts on sustainability activities of DTEK Group in the 2015 calendar year (from January 1 to December 31). It also sets out certain facts about 2016 that are directly related to the Company's activities in 2015 or important in the context of understanding the sustainability objectives.

This document is the Company's third integrated report, and the sixth report disclosing the Company's activities in the area of sustainability. The previous report was published in 2015 and contained information on DTEK's activities in 2014.

This Report was prepared in accordance with GRI G4 Sustainability Reporting Guidelines. The report is 'in accordance' with the Guidelines – Comprehensive option.

The Report has also been prepared with the use of recommendations for reporting on the progress achieved by the UN Global Compact (Advanced Level).

## Reporting Limits and Scope

The Report covers the range of DTEK's activities, approaches to management and relations with stakeholders, as well as performance indicators in such areas as the economy, environment, human resources, public relations and customer focus.

The structure of the Company is set out in About DTEK Group (p. 8). The non-financial reporting includes quantitative and qualitative (descriptive) elements in the areas of DTEK's business and its subsidiaries having the most significant impact on the economy, environment and social aspects of the Company's activities in the regions of Ukraine.

## Organizational Limits of Non-Financial Reporting

### 1. Electricity generation

DTEK Skhidenergo LLC, including

- DTEK Kurakhov'ska TPP
- DTEK Lugans'ka TPP
- DTEK Zuyivs'ka TPP

DTEK Dniproenergo PJSC, including

- DTEK Kryvorizka TPP
- DTEK Zaporizka TPP
- DTEK Prydniprovskaya TPP

DTEK Zakhidenergo PJSC, including

- DTEK Burshtynska TPP
- DTEK Dobrotvirska TPP
- DTEK Ladyzhynska TPP

DTEK Donetskoblenergo PJSC:

- DTEK Myronivska TPP

### 2. Electricity distribution and sale

DTEK Power Grid

DTEK Donetskoblenergo

DTEK PES Energougol

DTEK Dniprooblenergo

Kyivenergo PJSC

## 3. Coal production and preparation

DTEK Pavlogradugol PJSC, including

- Ternivske Mine Office
- Pavlogradske Mine Office
- Geroiv Kosmosu Mine Office
- Dniprovskaya Mine Office
- Pershotravenske Mine Office

DTEK Dobropolyeugol LLC, including

- Dobropilske Mine Office
- Bilozerske Mine Office

DTEK Sverdlovanthracite LLC, including

- Chervonyi Partyzan Mine Office
- Sverdlovske Mine Office
- Sverdlovske CPP

DTEK Rovenkyanthracite LLC, including

- Rovenkivske Mine Office
- Yasenivske Mine Office
- Komendantska Central Processing Plant

DTEK Mine Komsomolets Donbassa PJSC

DTEK Dobropilska CPP PJSC

Pavlogradske CPP LLC

Kurakhovska CPP LLC

DTEK Oktyabrs'ka CPP PJSC

Mospino CPP LLC

## 4. Renewable energy

Wind Power LLC

## 5. Oil and Gas

Naftogazvydobuvannya PJSC

## Grounds for exempting of organizations from reporting limits

Tekhrempostavka LLC, Pershotravensky Repair and Engineering Plant LLC, Interenergoservice LLC, Ekoenergoresurs LLC, DTEK Service LLC, DTEK Trading LLC, Power Trade LLC, DTEK Naftogaz LLC are outside the reporting limits (the impact of these companies is insignificant or the data are not consolidated according to GRI indicators). Companies operating outside Ukraine were not included within geographical reporting limits: DTEK B.V., DTEK Oil & Gas B.V., DTEK Renewables B.V., DTEK Energy B.V., DTEK Finance B.V., NGD B.V., Primorskaya WEP B.V., DTEK Holdings Limited, DTEK Trading Limited, DTEK Trading S.A., DTEK Finance PLC, DTEK Investments Limited, DTEK Hungary Power Trade LLC, Obukhovskaya Mine Office JSC, Donskoy Anthracite JSC, Sulinanthracite LLC.

## Material Subjects

When evaluating the materiality of subjects for the purposes of non-financial reports, DTEK relies on the principles of reasonableness and relevance in the Ukrainian context. Following the audit of news materials in mass media, study of the social climate in DTEK's companies, analysis of non-financial reports of the leading energy companies, and dialogues with the stakeholders, the following material subjects of the Report have been identified:

Context	Low Materiality	Medium Materiality	High Materiality
International	<ul style="list-style-type: none"> <li>benefits of various tariffs for consumers</li> <li>safety of network infrastructure for the population</li> <li>scientific research and development</li> <li>cooperation with contractors</li> </ul>	<ul style="list-style-type: none"> <li>new philosophy: socially and customer-oriented energy industry</li> <li>promotion of responsible energy consumption</li> <li>combined use of fuel types and development of renewable energy sources</li> <li>investments in new technologies</li> </ul>	<ul style="list-style-type: none"> <li>modernization of energy systems and recovery of capital assets (Eastern Europe)</li> <li>energy efficiency and reduction of greenhouse gas emissions</li> <li>customer relations</li> <li>management of environmental exposures</li> </ul>
Ukraine	<ul style="list-style-type: none"> <li>preservation of biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>improvement of environmental monitoring system</li> <li>need for national strategy for sustainable development</li> <li>partnership with non-profit organizations</li> <li>management of wastes up to full recycling</li> <li>development of social entrepreneurship</li> </ul>	<ul style="list-style-type: none"> <li>DTEK's strategy and investments areas</li> <li>enhancement of living standards of population in cities with DTEK's presence</li> <li>safety of miners' labour</li> <li>remuneration systems at DTEK's companies</li> <li>quality of education and health care services</li> <li>reform of the coal industry and the energy sector in general</li> </ul>

## Calculation of Indicators

The data is sourced from official reporting forms annually submitted to the state statistics authorities. Some indicators are gathered and calculated in accordance with the internal reporting forms verified by the responsible representatives of the companies as part of the internal audit procedures.

Greenhouse gas emission data includes only direct emission data. SCM Group currently does not calculate the volume of indirect greenhouse gas emission as it is very low compared to direct emission.

The average recorded number of regular employees is used for calculating the turnover rate of personnel. The total average recorded number of personnel across all assets is used to calculate the average monthly payroll at DTEK's enterprises. Average monthly salaries are correlated every year at the Company's enterprises based on this indicator.

The calculation methodology was described in detail in the Report on DTEK Group's Sustainability Activities, 2008-2009.

# Annex 2

## DTEK's Quantity Performance Indicators

### Economic Indicators

DTEK's economic performance indicators are set out in the Review of Macroeconomic Indicators and Industries and the Performance Results of this Report.

### Environmental Indicators

Specific emission of pollutants into the atmosphere, tonnes per unit of manufactured goods									
	Specific emission into atmosphere, tonnes per tonne of extracted coal			Specific emission into atmosphere, tonnes per MW of supplied electricity			Specific emission into atmosphere, tonnes per 1,000 Gcal of supplied thermal power		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
<b>Generation</b> (per MW of generated electricity)	-	-	-	0.0220248	0.02023944	0.01969442	0.4012346	0.40971455	0.42583624
<b>Coal production and preparation</b> (per tonne of extracted coal)	0.0035943	0.00469888	0.00637079	-	-	-	-	-	-

Gross emission of greenhouse gas, thousand tonnes					
Year	Methane	Carbon dioxide (CO <sub>2</sub> )	Nitrous oxide (N <sub>2</sub> O)	Total	In CO <sub>2</sub> equivalent, tonnes
<b>2013</b>	209.6	57,887.2	0.827	58,097.6	62,545,708.56
<b>2014</b>	194.9	52,012.8	0.752	52,208.5	56,339,068.61
<b>2015</b>	215.6	42,824.3	0.728	43,040.6	47,606,643.97

Specific emission of pollutants into atmosphere, tonnes per unit of manufactured goods									
	Methane			Carbon dioxide (CO <sub>2</sub> )			Nitrous oxide (N <sub>2</sub> O)		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
<b>Generation</b> (per MW of generated electricity)	0.00033	0.00032	0.00040	1.09730	1.09730	1.10376	0.00469	0.00424	0.00471
<b>Coal production and preparation</b> (per tonne of extracted coal)	0.06647	0.06179	0.12176	0.06981	0.00698	0.00981	0.00165	0.00010	0.00120

## Content of pollutants in waste water, tonnes

Year	BOD*	Petroleum products	Suspended substances	Dry residues	Chlorides	Sulfated	Ammonia nitrogen	Total ferrum	Nitrates
2013	514.2	36.1	2,874.11	377,475.4	141,381.4	71,667.7	35.0	33.90	307.70
2014	525.6	26.3	3,085.01	316,778.3	103,474.4	63,785.6	38.1	620.14	332.34
2015	544.3	14.7	2,579.95	237,370.4	55,285.5	62,082.1	30.0	17.34	323.32

\*Biochemical oxygen demand

Total volume of reused and recycled water, thousand m<sup>3</sup>

Year	Indicator
2013	10,097,991.12
2014	7,347,570.83
2015	4,883,221.16

Total volume of water consumed for own needs broken down by sources, thousand m<sup>3</sup>

Year	Total	Water surface	Subsoil water	Water supplied to municipal and other entities	Other sources*
2013	2,058,742.1	2,027,718.4	4,505.8	11,335.9	15,182.7
2014	1,985,954.6	1,952,530.2	2,908.1	17,739.9	12,776.4
2015	1,700,101.5	1,620,121.9	1,718.2	67,043.0	11,218.4

## Wastes treatment, tonnes

Indicator	2013	2014	2015
Volume of disposal	17,060,455.9	14,704,043.7	12,552,654.6
Transferred by third party organisations	2,377,419.5	1,846,444.9	2,225,661.2
Volume of disposed or recycled wastes	2,634,109.3	2,281,649.0	1,656,912.1
<b>Total</b>	<b>22,071,984.7</b>	<b>18,832,137.6</b>	<b>16,435,228.0</b>

## Total volume of industrial wastes, tonnes

Year	Volume of wastes at the beginning of the year				Volume of wastes at the end of the year			
	Barren rock	Sludge	Debris	Other wastes	Barren rock	Sludge	Debris	Other wastes
2013	416,599,285.5	34,166,643.2	0	3,707,024.6	407,684,193.7	46,044,808.3	0	469,626.1
2014	407,684,193.7	46,044,808.3	0	469,626.1	422,775,499.5	42,161,786.6	0	5,980,280.4
2015	422,775,499.5	42,160,986.6	0	5,980,280.4	430,207,946.6	42,703,457.5	0	6,241,993.0

## Remediation of lands, ha

Year	Area of lands subject to remediation at the beginning of the year	Area of lands subject to remediation at the end of the year	Area of lands remediated in the reporting year
2013	434.19	423.27	10.92
2014	444.03	452.68	18.18
2015	453.25	423.67	26.56

## Occupational health

## Accident indicators

Indicator	2013	2014	2014*	2015	2015*
<b>Lost Time Accident Frequency Rate (LTAFR)</b>	0.67	0.62	0.67	0.44	0.45
<b>Fatal Accident Frequency Rate (FAFR)</b>	0.024	0.022	0.030	0.012	0.019

2012: excluding DTEK Krymenergo PJSC.  
 2013: including DTEK LLC and DTEK Krymenergo PJSC; excluding Wind Power LLC, Sotsis LLC and Naftogazvydobuvannya PJSC.  
 2014 and 2015: excluding military hostilities.  
 2014\* and 2015\*: including military hostilities.

## Occupational illness

Indicator	2013	2014	2014*	2015	2015*
<b>Occupational disease rate</b>	1.08	0.88	0.88	0.60	0.60
<b>Lost day rate</b>	17.86	22.44	23.68	17.34	17.37

2012: excluding DTEK Krymenergo PJSC.  
 2013: including DTEK LLC and DTEK Krymenergo PJSC; excluding Wind Power LLC, Sotsis LLC and Naftogazvydobuvannya PJSC.  
 2014 and 2015: excluding military hostilities.  
 2014\* and 2015\*: including military hostilities.

## Personnel

### Personnel turnover rate

2013	2014	2015
6.12	7.61	6.54

Indicator is set out in reporting limits. Personnel turnover rate is calculated in accordance with the internal management report as it allows us to include reasons for workers quitting their jobs in more detail and obtain more better turnover data (e.g. include transfer of personnel at DTEK Group's enterprises).

### Recorded number of employees as of 31 December of each year, persons

2013	2014	2015
111,182	104,067	95,119

Data is shown for the main enterprises included in the reporting limits, excluding branches.

### Average employment term at electric power plants of personnel who left the organization within the reporting year, persons

Year	Total number of employees who left the company	Women	Men	Aged under 30	Aged from 30 to 50	Aged over 50	Worked in the company for less than a year	Worked from 1 to 5 years	Worked for more than 5 years
2013	9,285	3,537	5,748	1,830	4,053	3,402	875	2,360	6,050
2014	4,816	1,678	3,138	833	2,025	1,958	325	1,121	3,370
2015	5,293	1,709	3,584	905	1,971	2,417	731	1,717	2,845

Data submitted by reference to generation and distribution companies within the limits of reporting.

### Personnel structure by categories, persons

Year	Personnel categories			Age, years			Sex	
	MSE	workers		under 30	30-50	over 50	male	female
2013	32,267	94,548		30,556	69,184	27,175	92,318	34,597
2014	28,957	84,180		25,292	60,831	27,014	80,089	33,048
2015	28,941	80,897		22,897	64,376	22,060	79,564	29,769

By reference to management reporting.

### Governing bodies structure\* broken down by age and sex, persons

Year	Number of governing bodies personnel	Age, years			Sex	
		under 30	30-50	over 50	male	female
2013	162	5	88	69	146	16
2014	134	1	80	53	115	19
2015	139	0	88	51	116	23

\*Governing bodies include general directors, directors, members of the board (including committees). Data is set out in reporting limits. Data for 2014-2015 excludes DTEK Krymenergo PJSC.

### Number of education and professional development instances

Year	Total instances of education	Including			
		internal		external	
		MPSE (engineers and technicians)	workers	MPSE (engineers and technicians)	workers
2013	79,576	21,458	40,341	14,120	3,657
2014	58,544	14,957	32,915	7,577	3,095
2015	51,639	16,267	29,223	4,667	1,482

Data for 2013 includes DTEK LLC and DTEK Krymenergo PJSC; data for 2015 includes DTEK LLC and DTEK Energy LLC.

## Energy

### Direct use of energy with indication of primary sources

Year	Natural gas, gigajoule	Fuel oil, gigajoule	Coal, gigajoule	Coke, gigajoule	Petrol, gigajoule	Diesel fuel, gigajoule	Total gigajoule	Total standard fuel
2013	94,372,356	1,394,760	555,742,117	1,926	564,105	1,123,786	653,199,051	22,287,702
2014	77,817,635	1,227,276	519,777,968	2,727	499,817	1,097,155	600,422,578	20,486,924
2015	67,723,963	6,106,012	414,636,059	1,661	1,714,619	5,335,080	495,516,974	16,907,457

### Energy saved as a result of energy efficient efforts

Year	Electricity	Thermal power		Fuel resources	
	thousand kWh	Gcal	gigajoules	standard fuel	gigajoules
2013	106,392.07	27,833.75	116,623.40	71,402.38	2,092,632.41
2014	188,656.27	23,151.53	97,004.91	162,201.85	4,753,746.94
2015	108,765.95	172,692.49	723,581.53	150,119.11	4,399,630.74

#### Notes to all tables

Data for 2013-2015 is given with respect to enterprises included in the reporting limits for the relevant period. For details, please see Annex 1 – On the Report and Non-Financial Reporting Process. DTEK Krymenergo PJSC is an exception: quantitative data with respect to this company is included in 2013 and 2014 reporting.

**Table of report's compliance with Global Reporting Initiative Guidelines (GRI G4) and recommendations on reporting of UN Global Compact**

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
<b>Strategy and analysis</b>			
G4-1	Representation of the most senior decision maker of the organization	5-7	See Introduction
G4-2	A description of key impacts, risks, and opportunities	140	Sustainability section
<b>Organization Profile</b>			
G4-3	Name of the organization	12	About DTEK Group section
G4-4	Brands, products and services	14, 16	About DTEK Group section <a href="http://www.dtek.com/ru/our-operations">http://www.dtek.com/ru/our-operations</a>
G4-5	The location of the organization's headquarters		<a href="http://www.dtek.com/ru/contacty">http://www.dtek.com/ru/contacty</a>
G4-6	The number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	16, 21	About DTEK Group section
G4-7	The nature of ownership and legal form	12-17	About DTEK Group section <a href="http://www.dtek.com/ru/about-us/corporate-governance">http://www.dtek.com/ru/about-us/corporate-governance</a>
G4-8	The markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	20-21	About DTEK Group section
G4-9	The scale of the organization, including: <ul style="list-style-type: none"> <li>total number of employees;</li> <li>total number of operations;</li> <li>net sales (for private sector organizations) or net earnings (for public sector organizations);</li> <li>total capital broken down in terms of debt and equity (for private sector organisations);</li> <li>quantity of products or services provided</li> </ul>	16-19, 22-23, 124-125, 188-189, 194-195	About DTEK Group, Performance Results, Annexes 1 and 2
G4-10	a. The total number of employees broken down by employment contract and gender. b. The total number of permanent employees broken down by employment type and gender. f. Any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries).	162-163, 194-195	Employees section, Annex 2 Significant seasonal variations in employment – not relevant
G4-11	The percentage of total employees covered by collective agreements		Collective agreements cover 99% of employees within the reporting limits

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
G4-12	The organization's supply chain		<a href="http://www.dtek.com/ru/about-us">http://www.dtek.com/ru/about-us</a> DTEK Procurement Departments strive to find optimum solutions to maintain uninterrupted production process at DTEK Group companies. The Company is interested in reliable contractors and suppliers of materials and equipment. DTEK uses its electronic trading platform to ensure equal conditions for all contractors and suppliers who can participate in bidding procedures.
G4-13	Any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain, including: <ul style="list-style-type: none"> <li>Changes related to subdivisions or their locations, including openings, closings, and expansions;</li> <li>Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations);</li> <li>Changes in the location of suppliers and the structure</li> </ul>	16-19, 24-25	Areas of business of DTEK Group Companies, Key achievements and events for the reporting period
<b>Commitments to External Initiatives</b>			
G4-14	Precautionary approach	176	Environmental Protection section
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	142	Sustainability section
G4-16	Memberships of associations (such as industry associations) and national or international advocacy organizations	142	Sustainability section, <a href="http://www.dtek.com/ru/about-us/membership-of-associations">http://www.dtek.com/ru/about-us/membership-of-associations</a>
<b>Identified Material Aspects and Boundaries</b>			
G4-17	All entities included in the organization's consolidated financial statements. a. All entities included in the organization's consolidated financial statements or equivalent documents. b. report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	188	Annex 1
G4-18	The process for defining the report content and the aspect boundaries.	188	Annex 1

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
G4-19	All material aspects	188	Annex 1
G4-20	Aspects within the organization	188	Annex 1
G4-21	Aspect outside the organization	188	Annex 1
G4-22	The effect of any restatements of information provided in previous reports, and the reasons for such restatements.		No restatements were made
G4-23	Significant changes from previous reporting periods in the scope and aspect boundaries	188	Annexes 1 and 2, notes to the indicators
<b>Stakeholder Engagement</b>			
G4-24	A list of stakeholder groups engaged by the organization.	138	Sustainability section <a href="http://www.dtek.com/ru/corporate-social-responsibility/stakeholders_and_social_partnership">http://www.dtek.com/ru/corporate-social-responsibility/stakeholders_and_social_partnership</a> <a href="http://www.dtek.com/ru/corporate-social-responsibility/partners">http://www.dtek.com/ru/corporate-social-responsibility/partners</a>
G4-25	The basis for identification and selection of stakeholders with whom to engage		Corporate Ethics Code. No material changes were made into the "stakeholders card" within the reporting period. Each section of the report sets out the information on stakeholders groups with which the organization cooperated within the reporting period as well as the cooperation matters.
G4-26	The organization's approach to stakeholder engagement		<a href="http://www.dtek.com/ru/corporate-social-responsibility/stakeholders_and_social_partnership">http://www.dtek.com/ru/corporate-social-responsibility/stakeholders_and_social_partnership</a>
G4-27	Key topics and concerns that have been raised through stakeholder engagement	144-145, 148	Sustainability and Society sections
<b>Report Profile</b>			
G4-28	Reporting period	188	Annex 1
G4-29	Date of most recent previous sustainability report	188	Annex 1
G4-30	Reporting cycle (such as annual, biennial).	188	Annex 1
G4-31	The contact point for questions regarding the report or its contents.		Victoria Grib, Sustainability Department Director csr@dtek.com
G4-32	GRI Content Index	196	Annex 3
G4-33	The organization's policy and current practice with regard to seeking external assurance for the report.		This integrated Report was prepared in accordance with GRI G4 Sustainability Reporting Guidelines. The report is 'in accordance' with the Guidelines – Comprehensive option. GRI's Application Level: Self-Declaration. Non-financial reports of DTEK before 2012 were subject to an independent audit

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
<b>Corporate governance</b>			
G4-34	Corporate governance structure	128-129	Corporate governance structure
G4-35	The process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	141	Sustainability section
G4-36	An executive-level position or positions with responsibility for economic, environmental and social topics	38, 141	DTEK Group top management
G4-38	The composition of the highest governance body and its committees	128, 130-133	Corporate governance structure
G4-39	Whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement)		No
G4-40	The nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members		Guidelines for top management recruitment are set out in DTEK Group (from Human Resources Policy)
G4-41	Processes for the highest governance body to ensure conflicts of interest are avoided and managed		Set out in the compliance policy
G4-42	Roles of the highest governance body and senior executives in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts		The development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts is made with the engagement of the Supervisory Board.
G4-44	The processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics		The general director, executive director, regional development director have performance indexes established in respect of economic, environmental and social aspects. The performance is evaluated by the Supervisory Board.
G4-48	The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material aspects are covered		General Director

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
G4-51	The remuneration policies for the highest governance body and senior executives		The remuneration policies are established through evaluation of the approved strategic objectives and KPI
<b>Ethics and Integrity</b>			
G4-56	The organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	28, 141	About DTEK Group, Compliance and Corporate Ethics, Corporate Ethics Code <a href="http://www.dtek.com/ru/about-us/mission-vision-and-values">http://www.dtek.com/ru/about-us/mission-vision-and-values</a>
G4-57	The internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity	141	Compliance and Corporate Ethics section <a href="http://www.dtek.com/ru/about-us/code-of-ethics">http://www.dtek.com/ru/about-us/code-of-ethics</a>
G4-58	The internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity	141	Compliance and Corporate Ethics section <a href="http://www.dtek.com/ru/about-us/code-of-ethics">http://www.dtek.com/ru/about-us/code-of-ethics</a>

## Material Aspects

### Specific Standard Disclosures

#### ECONOMIC

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
DMA		30-37	
<b>Economic Performance</b>			
G4-EC1	Direct economic value generated and distributed	88, 122	Operations, Analysis of financial results
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	122	Performance Results section
G4-EC3	Coverage of the organization's defined benefit plan obligations	162, 164	Consolidated Financial Reporting section
G4-EC4	Financial assistance received from government		The Company has not received any financial assistance from the government.
<b>Market Presence</b>			
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation		The proportion of senior management hired from the local community at significant locations of operation is 95 %

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
<b>Indirect Economic Impacts</b>			
G4-EC7	Development and impact of infrastructure investments and services supported	106, 149	Investment Projects and Society sections
G4-EC8	Significant indirect economic impacts, including the extent of impacts	139	Sustainability section
<b>ENVIRONMENTAL</b>			
GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
DMA			Environmental Management Policy and Environmental Protection section
<b>Energy</b>			
G4-EN3	Energy consumption within the organization	195	Annex 2
G4-EN6	Reduction of energy consumption	184-195	Sustainable Energy Industry section, Annex 2
<b>Water</b>			
G4-EN8	Total water withdrawal by source	192	Annex 2
G4-EN9	Water sources significantly affected by withdrawal of water by the organization	180-181	Environmental Protection section
G4-EN10	Percentage and total volume of water recycled and reused	192	Annex 2
<b>Biodiversity</b>			
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		The Company does not have the required data
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	183	Environmental Protection section
<b>Emissions</b>			
G4-EN15	Direct greenhouse gas (GHG) emissions	191	Annex 2
G4-EN16	Energy indirect greenhouse gas (GHG) emissions	191	Annex 2



GRI and UN GA reporting elements	Page	References to additional sources of information/comment/direct answer
G4-EN17 Other indirect greenhouse gas (GHG) emissions		The Company does not have the required data
G4-EN19 Reduction of greenhouse gas (GHG) emissions	178	Environmental Protection section
G4-EN20 Emissions of ozone-depleting substances (ODS)		There are no emissions of ozone-depleting substances
G4-EN21 NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions	191	Annex 2
<b>Effluents and Waste</b>		
G4-EN22 Total water discharge by quality and destination	192	Annex 2
G4-EN23 Total weight of waste by type and disposal method	193	Annex 2
G4-EN24 Total number and volume of significant spills		No analysis was made
G4-EN25 Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention, Annex I, II, III, and VIII, and percentage of transported waste shipped internationally		Irrelevant
G4-EN26 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	183	Environmental Protection section
<b>Products and Services</b>		
G4-EN27 Extent of impact mitigation of environmental impacts of products and services		Sustainable Power Engineering and Environmental Protection sections
G4-EN28 Percentage of products sold and their packaging materials that are reclaimed by category		Irrelevant
<b>Compliance</b>		
G4-EN29 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations		102 non-monetary sanctions and USD 64 thousand of fines in the environmental sphere
<b>Overall</b>		
G4-EN31 Total environmental protection expenditures and investments by type	176	Environmental Protection section

<b>SOCIAL</b>			
GRI and UN GA reporting elements	Page	References to additional sources of information/comment/direct answer	
DMA		Employees, Occupational Health and Industrial Safety, and Society sections	
<b>Labor Practices and Decent Work</b>			
<b>Employment</b>			
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	194	Annex 2
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	162-164	Employees section
<b>Labor/Management Relations</b>			
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements		2 months' statutory notice period; specified in collective agreements
<b>Occupational Health and Safety</b>			
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs		The health and safety committee at company is comprised of 8-10 people
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	193	Annex 2. Data on contractor organizations is unavailable Breakdown by activity regions is insignificant. Absenteeism ratio is not calculated.
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	172	Occupational Health and Safety section
G4-LA8	Health and safety topics covered in formal agreements with trade unions		These topics are an integral part of collective agreements entered into at every production enterprises

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
<b>Training and Education</b>			
G4-LA9	Average number of hours of training per year per employee by gender, and by employee category		Hours are not counted by every plant. Instead, the number of instances of training is counted. Data is presented in Annex 2.
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	165	Employees section
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category		Data is being processed
<b>Diversity and equal opportunity</b>			
G4-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	195	Annex 2
<b>Equal Remuneration for Women and Men</b>			
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation		No
<b>Supplier Assessment for Labor Practices</b>			
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria		Not relevant, no assessment was made
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken		Not relevant, no assessment was made
<b>Human rights</b>			
<b>Investment</b>			
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening		No assessment was made
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained		No assessment was made

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
<b>Non-discrimination</b>			
G4-HR3	Total number of incidents of discrimination and corrective actions taken		No data on such situations was received within the reporting period
<b>Freedom of Association and Collective Bargaining</b>			
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights		Right to freedom of associations is specified in collective agreements. Employees have the right to strike. Negotiation is the main dispute resolution method
<b>Child Labor</b>			
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 labor is prohibited under Ukrainian law. Company does not perform its activities in the countries exposed to risks of such violations of human rights
<b>Forced or Compulsory Labor</b>			
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 labor is prohibited under Ukrainian law. Company does not perform its activities in the countries exposed to risks of such violations of human rights
<b>Security Practices</b>			
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations		No assessment was made
<b>Indigenous Rights</b>			
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken		The Company does not carry out its activities within the territories of indigenous peoples
<b>Assessment</b>			
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments		No assessment was made
<b>Supplier Human Rights Assessment</b>			
G4-HR10	Percentage of new suppliers that were screened using human rights criteria		No assessment was made

GRI and UN GA reporting elements	Page	References to additional sources of information/comment/direct answer
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	No assessment was made
<b>Society</b>		
<b>Local Communities</b>		
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	149-159 Society section
<b>Anti-corruption</b>		
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and significant risks identified	140 Compliance and Corporate Ethics section
G4-SO4	Communication and training in anti-corruption policies and procedures	140 Compliance and corporate ethics <a href="http://www.dtek.com/ru/about-us/code-of-ethics">http://www.dtek.com/ru/about-us/code-of-ethics</a>
G4-SO5	Confirmed incidents of corruption and actions taken	No such incidents were registered
<b>Public Policy</b>		
G4-SO6	Total value of political contributions by country and recipient/beneficiary	The Company does not provide aid to political parties
<b>Anti-competitive Behavior</b>		
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	No such incidents were registered
<b>Compliance</b>		
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	102 non-monetary sanctions and USD 64 thousand of fines in the environmental sphere
<b>Supplier Assessment for Impacts on Society</b>		
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	No assessment was made
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	No assessment was made

<b>PRODUCT RESPONSIBILITY</b>		
GRI and UN GA reporting elements	Page	References to additional sources of information/comment/direct answer
DMA	182	Sustainable Energy Industry section
<b>Customer Health and Safety</b>		
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	182 Sustainable Energy Industry section
<b>Product and Service Labeling</b>		
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant products and service categories subject to such information requirements	Irrelevant Notification of customers on risks related to electricity consumption – please see Sustainable Energy Industry section. Pursuant to the sanitary standards, electrical equipment under 220 kV does not provide for actions aimed at protection of consumer health in connection with the effects of electromagnetic fields
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	No such incidents were registered
G4-PR5	Results of surveys measuring customer satisfaction	Sustainable Energy Industry section
<b>Marketing Communications</b>		
G4-PR6	Sale of banned or disputed products	Irrelevant
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	No such incidents were registered
<b>Customer Privacy</b>		
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	No such incidents were registered
<b>Compliance</b>		
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	A fine of USD 3.2 thousand was imposed on DTEK Dniproblenergo by Resolution no. 952 of the NEURC of 27 March 2015 for violating licensed conditions of electricity transmission and supply.

## INDUSTRY ASPECTS

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
MM1	Area of land disturbed or rehabilitated/recultivated by the company in the reporting period	192	Annex 2
MM2	The number and percentage of total sites identified as requiring biodiversity management plans		290.43 ha
MM3	Total amounts of barren rock, debris and sludge at the beginning and end of the reporting period	193	Annex 2
MM4	Number of strikes and lock outs lasting longer than one week		No such incidents were registered. The right to freedom of association is specified in collective agreements. Employees have the right to strike. Negotiation is the main dispute resolution method.
MM5	Total number of operations taking place in or adjacent to indigenous peoples' territories, and number and percentage of operations or sites where there are formal agreements with indigenous peoples' communities		The Company does not carry out its activities within the territories of indigenous peoples
MM6	Any disputes or situations where land use issues had to be discussed with the local communities (population, authorities)		The company is constantly engaged in a dialogue with people residing in the regions of its operations and local authorities. No disputes were registered during the reporting period.
MM9	Any resettlements within the reporting period in connection with mining operations		No resettlements took place in connection with the allocation of facilities
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	92	Operations section

GRI and UN GA reporting elements		Page	References to additional sources of information/comment/direct answer
EU11	Average generation efficiency of thermal plants by energy source and regulatory regime	93	Operations section
EU12	Transmission and distribution losses as a percentage of total energy	93, 98	Operations section
EU13	How biodiversity of offset habitats compares with biodiversity of the affected areas		No analysis was made
EU15	Percentage of employees eligible to retire in the next 5-10 years, broken down by job category and regions		It is impossible to calculate such data
EU17	Days worked by contractor and subcontractor employees involved in construction, operation and maintenance of energy objects		The Company does not have the required data
EU18	Percentage of contractor and subcontractor employees who have undergone relevant health and safety training		The Company does not have the required data
EU25	Number of injuries and fatalities, diseases among the public caused by company assets		13 persons sustained injuries, seven of which were fatal
EU26	Percentage of population unserved in licensed distribution or service areas		Distribution companies serve 100 % of the population in the relevant areas
EU27	Number of residential disconnections for non-payment		There were 37,678 temporary residential disconnections for non-payment
EU28	Power outage frequency		The System Average Interruption Frequency Index (SAIFI) is 9.53 interruptions per customer
EU29	Average power outage duration		The System Average Interruption Duration Index (SAIDI) is 1,248.39 minutes