## **Production activity**

In 2018, DTEK Group produced 27.2 mln tonnes of coal (-1.9% YoY, compared to 2017) and 1,648.5 mln cubic meters of natural gas (-0.4% YoY), generated 34.8 bln kWh of electricity (-6.3% YoY) and distributed 43.7 bln kWh of electricity by grids (+1.2% YoY).

Key Performance Indicators of the DTEK Group

Indicators	unit	2017	2018	Change, (+/-)	Change, (%)
Coal production	ths tonnes	27,706.0	27,185.9	-520.1	-1.9
including:					
→ G, DG-grade (Ukraine)	ths tonnes	22,914.8	24,131.6	+1,216.8	+5.3
→ A, T-grade (Ukraine)*	ths tonnes	1,879.2	0.0	-1,879.2	-100
→ A-grade (Obukhovskaya Mine Office)**	ths tonnes	2,912.0	3,054.3	+142.3	+4.9
Concentrate release	ths tonnes	13,609.3	12,355.5	-1,253.8	-9.2
including:					
→ independent CCMs (Ukraine)	ths tonnes	1,424.9	1,361.8	-63.1	-4.4
→ Obukhovskaya Mine Office **	ths tonnes	1,774.9	1,936.8	+161.9	+9.1
Electricity generation (output)*	mln kWh	37,103.7	34,753.6	-2,350.1	-6.3
including:					
→ renewables	mln kWh	637.8	677.0	+39.2	+6.1
Electricity distribution*	mln kWh	43,155.1	43,684.8	+529.7	+1.2
Electricity exports	mln kWh	4,999.5	5,825.6	+826.1	+16.5
Coal exports***	ths tonnes	748.2	486.3	-261.9	-35.0
Coal imports	ths tonnes	2,571.7	2,662.6	+90.9	+3.5
Natural gas trading	mcm	1,952.0	1,931.5	-20.5	-1.1
Natural gas production	mcm	1,655.3	1,648.5	-6.8	-0.4
Gas condensate production	ths tonnes	54.8	51.5	-3.3	-6.0

<sup>\*</sup> Since March 2017, indicators for assets located in the temporarily occupied territories of Donets'k and Luhans'k regions have not been consolidated into the reporting of DTEK Energy and DTEK Group due to loss of control.

## **DTEK Energy**

### Coal mining and processing

Total coal production by the company's mines in Ukraine amounted to 24.1 mln tonnes, which is 2.7%, or 662.4 ths tonnes, lower than in 2017.

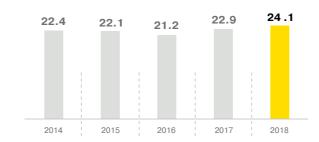
#### The main factors affecting the performance indicators:

- cessation of anthracite production. Since March 2017, Ukraine has completely stopped coal mining and electricity generation in the temporarily occupied territories:
- the company's enterprises are increasing G-grade coal production to minimize the use of anthracite for thermal generation. The performance of DTEK Pavlohradcoal has increased to 114.9 tonnes per person per month. This has ensured production of G-grade coal at a level of 24,131.5 ths tonnes, which is 5.3%, or 1,216.8 ths tonnes, higher than in 2017 and is the highest annual figure in the company's history. At the same time, the mining and geological conditions are becoming more complex, the accident rate of tunneling equipment and mining transport is growing due to the increased load.

Throughput performance of run-of-mine coal processing reached 17,201.5 ths tonnes (-9.7%, or 1 853.5 ths tonnes YoY), of which independent CCMs provided 2,423.9 ths tonnes (-5.8%, or 149.6 ths tonnes YoY). Concentrate output by DTEK Energy concentration plants amounted to 9,056.8 ths tonnes, on independent CCMs - 1,361.8 ths tonnes.

#### DTEK Energy is increasing production of G-grade coal to ensure thermal generation conversion to domestic coal

Mining of G, DG-grade coal, mln tonnes



#### Electricity generation

34.1 bln kWh — annual output provided to the United Energy System of Ukraine in 2018 — which is 6.6%, or 2,389.3 bln kWh, lower than in 2017.

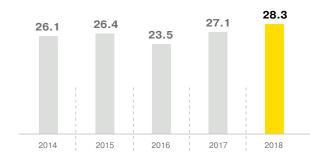
#### The main factors affecting the performance indicators:

- decrease in electricity generation by DTEK Skhidenergo and Kyivenergo by 20.5%, or 2,422.1 mln kWh, due to the termination of control over Zuyivs'ka TPP in March 2017 and the expiration of the management contract of Kyiv's CHPP-5 and CHPP-6 from July 31, 2018;
- decrease in electricity generation by DTEK Westenergy by 2.3%, or 339.5 mln kWh. DTEK Westenergy plants are designed to burn G-grade coal. In 2017, they carried increased load in order to compensate for decline in production by anthracite-powered units, production of which was discontinued in Ukraine. In 2018, the load was normalized due to re-engineering of power units from using anthracite to run on G-grade coal;
- increase in electricity generation by DTEK Dniproenergo and DTEK Myronivs'ka CHPP by 3.8%, or 373.4 mln kWh. Three power units of DTEK Prydniprovs'ka TPP and one boiler of DTEK Myronivs'ka CHPP were converted from anthracite to G-grade coal, which enabled load increase.

DTEK Energy is implementing a program to increase the use of G-grade coal in the energy sector to minimize the consumption of imported anthracite. In 2018, production of electricity on G-grade coal increased to 28.3 bln kWh, which is 4.4%, or 1,185 mln kWh, higher than last year's result. This allowed reducing the share of electricity generation of anthracite to 12% in the total production volume of the company.

# Switching of power units from A-grade coal to G-grade coal contributes to an increase in electricity production

► Electricity output to the UES from G-grade coal, bln kWh

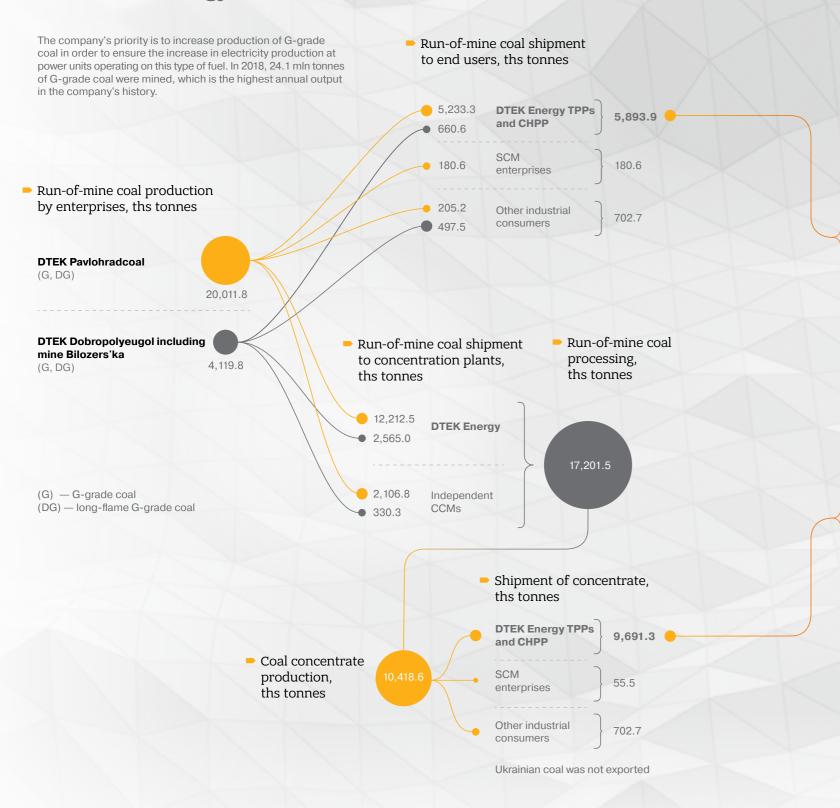


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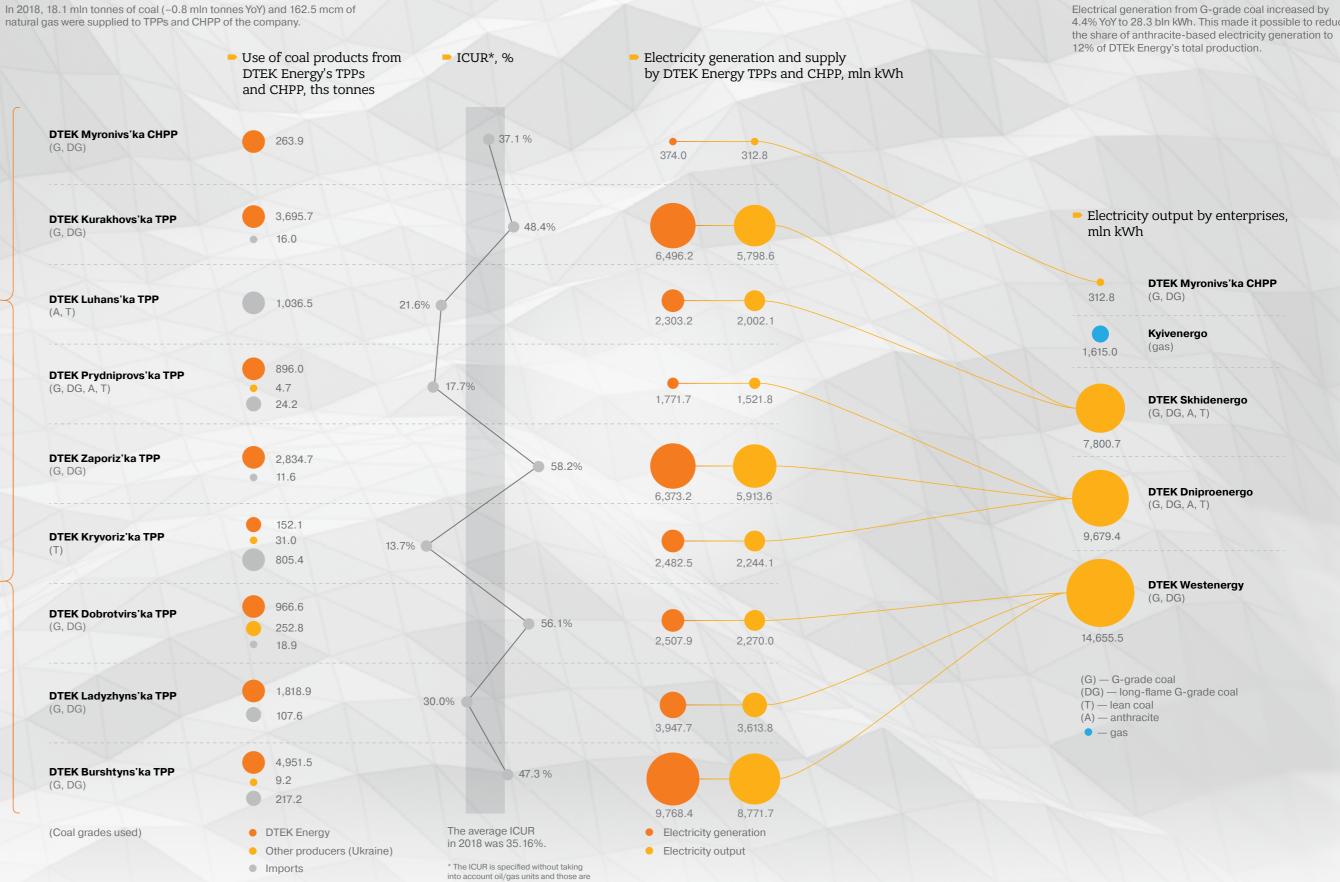
<sup>\*\*</sup> Since September 1, 2016, the operating performance of Obukhovskaya Mine Office has not been consolidated into the reporting of DTEK Energy due to the transfer of the company to the direct management of DTEK B.V. Strategic Holding. The transaction was carried out within the framework of the restructuring of the credit portfolio of DTEK Energy and is aimed at balancing the options for developing enterprises and servicing the loans.

<sup>\*\*\*</sup> Including trading operations outside of Ukraine.

# **Manufacturing statement** of DTEK Energy for 2018



natural gas were supplied to TPPs and CHPP of the company.



4.4% YoY to 28.3 bln kWh. This made it possible to reduce the share of anthracite-based electricity generation to

### Production capacity of DTEK Energy TPPs and CHPP as of January 1, 2019

Power No		nstalled capacity, MW	Date of in-service/ last overhaul repair or reconstruction	Running time, hours	Overhaul repair/reconstruction			
DTEK Kurakhovs'ka TPP								
3	3	200	1972/2018	299,259	plans are in consideration			
4	ŀ	210	1973/2018	272,538	plans are in consideration			
5	)	222	1973/2015	252,951	reconstruction was completed in 2009; increase in installed capacity by 12 MW major repair is planned for 2020			
6	6	225	1973/2013	253,007	reconstruction was completed in 2013; increase in installed capacity by 15 MW major repair is planned for 2019			
7	7	225	1974/2016	263,830	reconstruction was completed in 2010; increase in installed capacity by 15 MW			
8	3	225	1974/2017	262,128	reconstruction was completed in 2012; increase in installed capacity by 15 MW			
9	)	225	1975/2015	258,997	reconstruction was completed in 2015; increase in installed capacity by 15 MW major repair is planned for 2021			
Tot	tal	1,532						
	DTEK Luhans'ka TPP							
9	)	200	1962/2017	332,977	plans are in consideration			
10	0	210	1962/2018	323,536	reconstruction was completed in 2012; increase in installed capacity by 35 MW			
1	1	200	1963/2004	318,289	plans are in consideration			
13	3	210	1967/2014	305,065	reconstruction was completed in 2014; increase in installed capacity by 35 MW major repair is planned for 2020			
14	4	200	1968/2018	291,814	plans are in consideration			
15	5	200	1969/2018	305,313	plans are in consideration			
Tot	tal	1,220						
DTEK Zaporiz'ka TPP								
1		325	1972/2012	295,788	reconstruction was completed in 2012; increase in installed capacity by 25 MW major repair is planned for 2019			
2	2	300	1972/2018	286,676	reconstruction is planned for 2024—2025;			
3	}	325	1972/2014	291,489	reconstruction was completed in 2014; increase in installed capacity by 25 MW major repair is planned for 2021			
4		300	1973/2016	271,541	major repair is planned for 2019; reconstruction is planned for 2022—2023;			
5	)	800	1975/1995	148,998	unit fired by fuel oil and gas. Plans are in consideration			
7	,	800	1977/1992	133,190	unit fired by fuel oil and gas. Plans are in consideration			
Tot	tal	2,850						

Power unit No.	Installed capacity, MW	Date of in-service/ last overhaul repair or reconstruction	Running time, hours	Overhaul repair/reconstruction				
	DTEK Kryvoriz'ka TPP							
1	315	1963/2017	300,839	reconstruction was completed in 2017; increase in installed capacity by 33 MW. In 2019, it is planned to change the specified fuel — to switch from anthracite to combustion of G-grade coal				
2	300	1964/1998	313,593	plans are in consideration				
3	300	1965/2013	275,160	reconstruction was completed in 2013; increase in installed capacity by 18 MW In 2020, it is planned to change the specified fuel — to switch from anthracite to combustion of G-grade coal				
4	300	1966/2005	253,224	In 2021, it is planned to change the specified fuel — to switch from anthracite to combustion of G-grade coal				
5	282	1967/1994	303,698	plans are in consideration				
8	282	1969/1996	266,333	plans are in consideration				
10	300	1972/2017	209,304	plans are in consideration				
Total <b>2,079</b>								
			DTEK Prydni	provs'ka TPP				
7	150	1958/2013	343,098	In 2017, the specified fuel was changed — switched from anthracite to combustion of G-grade coal				
8	150	1958/2014	368,189	In 2017, the specified fuel was changed — switched from anthracite to combustion of G-grade coal				
9	150	1959/2012	333,930	reconstruction was completed in 2012 without increasing installed capacity.  In 2018, the specified fuel was changed — switched from anthracite to combustion of G-grade coal				
10	150	1960/2006	331,458	In 2019, the specified fuel will be changed — switched from anthracite to combustion of G-grade coal				
11	310	1962/2016	266,443	In 2020, it is planned to change the specified fuel — to switch from anthracite to combustion of G-grade coal				
Total	910							
			DTEK Dobro	tvirs'ka TPP				
5	100	1960/2018	351,299	plans are in consideration				
6	100	1961/2015	346,143	plans are in consideration				
7	150	1963/2011	359,998	major repair is planned for 2019				
8	160	1964/2014	333,235	reconstruction was completed in 2014; increase in installed capacity by 10 MW major repair is planned for 2020				

Total

01 | Production activity

#### Production capacity of DTEK Energy TPPs and CHPP as of January 1, 2019

Power unit No.	Installed capacity, MW	Date of in-service/ last overhaul repair or reconstruction	Running time, hours	Overhaul repair/reconstruction				
DTEK Burshtyns'ka TPP								
1	195	1968/2017	307,061	plans are in consideration				
2	185	1965/2014	293,698	plans are in consideration				
3	185	1966/2013	306,203	major repair is planned for 2019				
4	195	1966/2018	327,996	plans are in consideration				
5	215	1967/2013	318,732	reconstruction of I stage was completed in 2013, II stage — in 2016; increase in installed capacity by 20 MW				
6	195	1967/2015	322,125	major repair was completed in 2015; increase in installed power by 10 MW				
7	206	1968/2012	304,557	reconstruction was completed in 2012; increase in installed capacity by 21 MW major repair is planned for 2021				
8	195	1968/2009	317,354	plans are in consideration				
9	195	1968/2016	300,751	plans are in consideration				
10	210	1969/2018	311,064	reconstruction was completed in 2018; increase in installed capacity by 15 MW				
11	195	1969/2011	283,009	plans are in consideration				
12	195	1969/2018	272,465	plans are in consideration				
Total	2,366							
	DTEK Ladyzhyns'ka TPP							
1	300	1970/2018	259,957	plans are in consideration				
2	300	1971/2009	258,425	major repair is planned for 2020				
3	300	1971/2011	248,183	major repair is planned for 2021				
4	300	1971/2001	245,332	plans are in consideration				
5	300	1971/2003	223,785	mothballed				
6	300	1971/2004	230,276	plans are in consideration				
Total	1,800							
	DTEK Myronivs'ka CHPP							
TG No.2	100	1953/2004	285,814	under repair				
TG No.3	60	1954/1998	335,195	mothballed				
TG No.5	115	2004/2013	80,574	in 2017, the specified fuel of boiler No.10 was changed — switched from anthracite to combustion of G-grade coal; in 2018, the specified fuel of boiler No.9 was changed — switched from anthracite to combustion of G-grade coal major repair is planned for 2019				
Total	275							

#### Commercial activities

# Coal shipments in foreign and domestic markets

The company exports coal only from the Obukhovskaya Mine Office. In 2018, 486.3 ths tonnes of coal products made shipments to foreign markets — by 35.0%, or 261.9 ths tonnes, which is lower than the previous year. According to the contracts, the products were supplied to markets in Europe, South Africa, Canada and India. The decrease is due to a significant increase in send to the Ukrainian market due to the cessation of anthracite mining. In general, shipments reached 1,514.7 ths tonnes, which is 26.2%, or 314.0 ths tonnes, more than in 2017.

In addition, the company imported coal products from the United States and South Africa — total imports amounted to 2,662.6 ths tonnes. At the same time, the volume of purchases for the needs of DTEK Energy TPPs decreased by 2.7% compared to the previous year, to 2,221.4 ths tonnes of coal.

With regard to trading operations, 2,085.0 ths tonnes of coal was supplied to industrial consumers in Ukraine, which is practically equal to the level of 2017.

# Imports and supplies of natural gas to the domestic market

The volume of sales of natural gas in the domestic market of Ukraine amounted to 1 931.5 mln cubic meters. Preservation of the volume of trading operations at the level of the previous year was due to the increase in sales of natural gas to enterprises in the metallurgical sector, which offset the decline in demand from enterprises in the energy sector.

#### Electricity supply to foreign markets

The company supplied 5,825.6 bln kWh under the foreign economic contracts, which is 16.5% more than in 2017. Electricity was exported to Hungary, Poland and Moldova.

#### DTEK Energy is focused on European electricity markets

Electricity supplies for exports, mln kWh



#### **DTEK Grids**

# Electricity distribution and grid operation

43.7 bln kWh — the volume of electricity distribution in 2018, which is 1.2%, or 529.7 mln kWh, higher than the previous year.

#### The main factors affecting the performance indicators:

 increase in the volume of electricity distribution by DTEK Kyiv Grids and DTEK Dnipro Grids by 3.4%, or 1,081.1 mln kWh, due to greater demand from the population and small businesses;  decrease in distribution of electricity by DTEK Donetsk Grids, DTEK Power Grid and DTEK Energougol ENE by 4.7%, or 551.4 mln kWh, due to lower demand from industrial enterprises and suppliers under non-regulated tariff. Since March 2017, the networks located in the non-controlled territories of the Donets'k region have not been managed.

In 2018, the company's enterprises reduced the amount of actual electricity losses to 5.46% (the figure for 2017 is 5.44%). The breakdown looks as follows: DTEK Energougol ENE was 0.61% (in 2017 — 0.58%), DTEK Power Grid was 0.84% (in 2017 — 0.74%), DTEK Dnipro Grids was 4.67% (in 2017 — 4.63%), DTEK Kyiv Grids was 6.75% (in 2017 — 7.01%), DTEK Donetsk Grids was 17.23% (in 2017 — 16.49%). The average for Ukraine was 11.82%.

#### Electricity distribution in 2018, mln kWh

Enterprise	industry	households	utilities	other non-industrial consumers	transport and construction	agriculture	Total
DTEK Dnipro Grids	16,774.7	3,377.5	1,425.1	1,101.0	184.8	245.7	23,108.7
DTEK Kyiv Grids	1,272.8	3,491.9	2,364.6	1,608.5	677.5	9.2	9,424.6
DTEK Donetsk Grids	544.6	1,471.6	255.8	681.1	_	114.5	3,067.5
DTEK Energougol ENE	136.2	14.4	427.9	6.1	_	_	584.6
DTEK Power Grid	7,477.0	1.5	_	8.9	11.2	0.8	7,499.4

According to the Electricity Market Law, companies must conduct unbundling — separation of a distribution system operator from production and supply of electricity. These changes occur within the framework of the first stage of the energy market reform and are the basis for the liberalization of the retail electricity market.

The DTEK Group carried out systemic changes in its activities. DTEK Power Grid and DTEK Energougol ENE will focus solely on electricity distribution and network operation. Kyivenergo, DTEK Dniprooblenergo and DTEK Donetskoblenergo, according to the requirements of

the Law, unbundled their activities. From January 1, 2019, electricity is distributed by DTEK Kyiv Grids, DTEK Dnipro Grids and DTEK Donetsk Grids. Electricity supply services to consumers are provided by Kyiv Energy Services, Dnipro Energy Services and Donetsk Energy Services.

Unbundling of activities ensures equal access to the networks of distribution system operators for all electricity suppliers. In the new market model, distribution system operators are also responsible for provision of reliable power supply, development of infrastructure and operation of electricity networks.

#### **DTEK Renewables**

#### Renewable power generation

677.0 mln kWh of green electricity was produced by the company in 2018. This is 6.1%, or 39.2 mln kWh, higher than in 2017.

#### The main factors affecting the performance indicators:

- Botievo Wind Farm increased electricity supply by 4.8%, or 30.2 mln kWh. This was facilitated by favorable weather conditions and properly organized operation of the equipment. In 2018, the availability factors of wind power plants and infrastructure of the plant increased to 98.64% and 99.34% (in 2017 — 98.33% and 99.23%, respectively). This is in line with the best world performance of wind farms;
- 12.7 mln kWh were produced by Tryfonivs'ka SPP.
   The equipment availability factor of the solar plant was 99.89%.

### **DTEK Oil&Gas**

#### Gas production

In 2018, natural gas production amounted to 1,648.5 mln cubic meters, which exceeded targets by 50 mln cubic meters. Gas condensate production amounted to 51.5 ths tonnes. Compared to last year, gas production decreased by 0.4%, condensate — by 6%.

#### The main factors affecting the performance indicators:

- completion of drilling at well No.25 at the Semyrenkivs'ke field, with a depth of 5,652 meters, with a distance of 700 meters from the vertical, and well No.61, with a depth of 5,605 meters, and 380 meters from the vertical;
- overhaul of high condensate wells No.8, No.23, No.68 and No.70 at the Semyrenkivs'ke field;
- carrying out of measures to intensify flow rates at the existing well stock.

In 2018 natural gas production amounted to

1,648.5

mln cubic meters

