Energy in Ukraine: current issues

European Association for Coal and Lignite European Economic and Social Committee
Structure of Ukrainian power sector

Domestic coal remains crucial for Ukraine’s energy independence

Power generation structure

- Nuclear: 44%
- TPPs: 40%
- Heat: 7%
- Alternative: 8%
- Hydro: 1%

Ukraine, 2013

DTEK’s share in generation, 30%
Ukraine’s installed capacity

Top #5
Installed TPP capacity in Europe

Installed capacity structure

Ukraine, 2013
- Nuclear
- TPPs
- Heat
- Hydro
- Alternative

DTEK’s share of TPP capacity
- Share in total capacity: 66%
- Share in Anthracite coal TPPs: 49%
- Share in Steam coal TPPs: 89%
Ukraine’s electricity and coal exports

One of the largest exporters

DTEK’s share of
Electricity exports
100%

DTEK’s share of coal exports
46%
What happened

Coal industry was negatively affected by events in Donbass

DTEK’s share of coal production, Aug-Oct 2014

76%
What happened

Coal industry was negatively affected by events in Donbass

**Shipments of domestic anthracite coal to TPPs have dropped by 99%, ths**

**Stocks of low volatile coal at TPPs have dropped by 92%, ths**
What happened

Power capacity gap

Available capacity power for December peaks

-9 GW*

2011 31.8 2012 29.1 2013 29.1 Aver. level 20.1

9 GW=

50%
The share of electricity consumption by industrial consumers

8-12
Consumption of agro-industrial regions of Ukraine

5-10 p.m.
Black Out Period for all residential consumers

* Without import of anthracite
What happened

Financial Gap

Wholesale Market Debts to TPPs

- 2013: 1.0 bn UAH
- 2014 estimated: 4.6 bn UAH

Total: 3.6 bn UAH
### Road map “Way Out of the Crisis”

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<th>Secure Peace</th>
<th>Stabilize coal shipments</th>
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<td>Russia</td>
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<td>CIF (Australia, Republic of South Africa, etc.)</td>
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<th>Secure Coal</th>
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<td>Shift to steam coal</td>
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<td>Secure coal supply to low volatile TPPs</td>
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<th>Secure Money</th>
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<td>TPPs tariff increase</td>
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Association Agreement between the EU and Ukraine: cooperation in energy sector

From 1st November 2014
provisional application of parts of the Association Agreement

- Early Warning Mechanism to prevent interruptions of supplies of natural gas, oil or electricity
- Competitive, transparent and non-discriminatory energy markets
- Progressive integration of the Ukrainian electricity network into the European electricity network

From 1st January 2016
provisional application

- Market based electricity prices for energy for industrial consumers (avoiding cross-subsidies)
- Strengthening the legal base to implement Ukraine’s obligations under the Energy Community Treaty

Full application

- Comprehensive reform of coal sector including safety, environmental, social and regional considerations

No cross-subsides
Gas and electricity markets liberalization
**DTEK - Leading energy company in Ukraine**

**Coal production**
- Coal mining volume: 20.7* Mt
- Coal reserves: 1,743 Mt**
- 31 coal mines
- 13 coal enrichment plants

**Power generation**
- Power generation (thermal and wind): 24.6 TWh
- Installed capacity: 18.2 GW
- 10 TPG, 2 CHP plants,
- 66 power units
- 1 windfarm, 65 wind turbines

**Electricity distribution**
- Electricity transmission: 27.9 TWh
- Grid length: 156,600 km
- 6 distribution companies
- 5.2 mln households and
- 134k corporate and other

**Oil & Gas**
- Gas extraction: 345.6 mln m³
- Gas condensate extraction:
  - 12.8 ths. t.
- Gas & gas condensate reserves:
  - 20 mln m³ and 2 mln t.
- Number of wells: 11

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* Share in mining volume of raw coal
GHG emissions in Ukraine

The GHG emissions in Ukraine in the year 2012 reached 378.8 MtCO2e, which is 57.1% less than emissions in 1990.

Energy sector covering installations for electricity and heat production contributed to ca. 29% or 111.0 MtCO2e of the total GHG emissions in 2012 with a decrease of 55.3% compared to the level in 1990 – 248.5 MtCO2e.

The major developments in the energy sector relating to GHG emissions regulation over the recent decade are:

• implementation of the national energy strategy that foresaw a switch from natural gas to coal, which consequently resulted in an emission increase;
• launch of the Kyoto Protocol mechanisms (JI projects implemented on DTEK’s facilities generated app. 20 MtCO2e of GHG reductions over the 8-12 period);
• introduction of the carbon tax;
• a commitment to implement emission trading scheme by 1 January 2017 as a part of Association Agreement between the EU and
Thank you!