



## Ukrainian coal projects considered by Energy Community

Energy Community has opened a call for the proposals to be considered for EC support. There are some 49 projects in electricity sector submitted for consideration.

Ukraine has proposed 2 projects of new coal powered units at Burshtyn and Dobrotvir thermal power plants (TPPs) and 2 new cross-border transmission lines to enhance connection of those TPPs with European electricity grid (ENTSO-E). All four projects have the same promoter - DTEK - the largest energy company in Ukraine and with the potential to become a monopoly in the sector of thermal power generation by privatization of all TPPs and combined heat and power plants.

### Exports of electricity to the EU

Part of Ukrainian power grid, which includes Burshtyn TPP is disconnected from national grid and synchronized with EU power grid. This part is called "Burshtyn energy island". Currently DTEK exports energy to Hungary, Slovakia and Romania from this "energy island". Export is limited by the export lines capacities. Two new lines for electricity export to Poland and Hungary are proposed to become the European Community priority projects.

The first project consists of two sub-projects which together create transmitting capacity which will enable export from Ukrainian "Burshtyn energy island" to Hungary. This project presumes refitting of Albertirsa (HU) – Border (UA) 750 kV line on 400 kV line and construction of cross-border HVDC Interconnector between Hungary and Ukraine. With hardly any other major energy source on the Ukrainian side and an energy deficit on Hungarian side, it is clearly a one way export line. Burshtyn coal-powered thermal power plant (TPP) is the main energy source of the "Burshtyn energy island", that is going to be utilized with the construction of the proposed line. The 2000MW power plant is one of the biggest air polluters in Ukraine (Burshtyn was ranked as 3<sup>rd</sup> most polluted city in Ukraine in 2009).

The second project is a cross-border HVDC Interconnector between Poland and Ukraine. A company behind this project - DTEK Zakhidenergo plans to complete the High Voltage DC transmission line from Ukraine to Poland. The description of this project clearly states that it will allow 'all capacities of Dobrotvir Thermal Power Plant (TPP) to be exported'. Dobrotvir TPP is a coal-powered 600MW power plant. Completion of the transmission line is related to the new units at Dobrotvir TPP.

Construction of the lines and new coal-powered units is a part of the overall DTEK strategy to 'export coal with electric wires' publicly proclaimed by DTEK Director General Maksim Timchenko.

### New unit at Burshtyn TPP

The third project is to replace 4 out of 12 old units (185 MW each) at Burshtyn TPP with one new 800 MW unit. Existing units were built in the 1960s and now are completely worn out. Burshtyn was rated as the third most polluted city in Ukraine based on the emissions statistics of 2009.

After a recent blaze at another Ukrainian Vuglegirsk TPP<sup>1</sup> (29 march 2013), which destroyed 4 units with total capacity of 1,2 GW, the security of operation of old units is a subject of particular concern. Burshtyn TPP is even older than Vuglegirsk TPP making replacement of old units a priority for DTEK.

On 4 April 2013 the United States of America Agency for Trade and Development (USTDA) has announced the opening of the tender for a feasibility study to replace 4 power units Burshtyn TPP with one ultra-supercritical unit of 800 MW capacity. Earlier, in November 2012, USTDA announced allocation of a grant to DTEK for this feasibility study. The grant given to DTEK should be spent on study done by US company<sup>2</sup>.

## Three new units at Dobrotvir TPP

Part of equipment at Dobrotvir TPP commissioned in 1950-ies and the newest unit was built in 1969. Now all 5 units on Dobrotvir TPP are operating far beyond their project lifetime. Current installed capacity for this plant is 600 MW. Fourth proposed priority project involves the construction of 3 coal-fired units with capacity of 225MW each (675 MW total).

Construction of the unit five, first of the 3 units proposed to be built at Dobrotvir by DTEK, was started in 1991 and then abandoned few years later. With some of the equipment already in place, it is questionable if the best available technology can be utilized.

## DTEK company

DTEK is the largest energy company in Ukraine and it has the potential to become a private energy monopoly by privatization of all TPP and combined heat and power plants. The Company is the energy division of System Capital Management (SCM), a corporation privately owned by Ukrainian oligarch Rinat Akhmetov. DTEK is aiming to control the entire thermal energy sector, including coal mining and preparation, electricity generation, transmission and distribution.

In a latest version of Ukraine's Energy Strategy for 2030 (prepared by the "Effective Management Fund", well linked to the SKM business group) it is stated, that only nuclear power plants and large hydro should remain in state control, while the rest of energy sector is to be given to private hands. Although government is declaring a competitive access to privatization, in practice most of the enterprises end up in hands of Rinat Akhmetov.

## Compliance with Energy Community criteria for priority projects

Both projects at Burshtyn and Dobrotvir are in conflict with the criteria stated in "Energy Strategy of the Energy Community" document. Specifically:

### ***I. Contribution to the implementation of Regional Energy Strategy's objectives***

*Involves, and/or is developed with, the cooperation of at least two Contracting Parties, or between a Contracting Party and an EU Member State*

For now, DTEK has no partners in EU Member states, who declared their interest in participation in construction of new units at Dobrotvir and Burshtyn TPP.

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<sup>1</sup><http://donetsk.comments.ua/news/2013/03/30/083342.html>

<sup>2</sup>[https://www.ustda.gov/RFP/201261043A\\_UKR.pdf](https://www.ustda.gov/RFP/201261043A_UKR.pdf), section 2.11

## **II. Contribution to regional market integration, and enhanced competition.**

### Reduction of market concentration and facilitating access for new market entrants.

DTEK has shown itself as aggressive player on Ukrainian market buying out state owned energy generation companies. DTEK has already become a private monopoly in strategic field of electricity export from Ukraine as it bought 'Zakhidenergo'.

## **III. Security of supply**

### By using the lowest cost of available resources, while taking into account all externalities

These projects of new units at Burshtyn and Dobrotvir have significant externalities, which are not taken into account. These are air and water pollution, GHG emissions and adverse health effects for local population. Security of operation of Ukrainian TPPs also should be questioned after a blaze on Vuglegirsk TPP.

Ukrainian energy sector is also known for state subsidies for the energy sector. In 2010 Ukraine have spent 730 mln Euro (around 2% of state budget) on subsidies to coal sector.

## **IV. Contribution to sustainable energy development**

### Facilitation of the development of renewable energy sources

Construction of the new coal powered units means locking electricity production to coal for another 30-50 years. Renewables face unfair competition, minding significant subsidies currently going to coal mining.

### Facilitation of replacing old and low efficient technologies

Project for Dobrotvir TPP presumes utilization of the unfinished constructions from early 90-ies. It makes utilization of best available technologies highly unlikely.

### Facilitation of reaching national carbon targets and reducing GHG emissions

Current national carbon target assumes doubling of greenhouse gases (GHG) emissions to 2020 comparing to 2012. This target is a reflection of the national policy to increase use of coal in the energy sector. Ukrainian environmental groups are calling on government to stabilize GHG emissions on current level.

## **V. Maturity of the project**

### Progress in realization (feasibility study, EIA, FID, permits and licenses)

In April 2013 USTDA was conducting a tender for a feasibility study on 800 MW unit at Burshtyn TPP and published request for proposals (RFP) prepared by DTEK company<sup>3</sup>. According to RFP feasibility study the Final Report issuance is expected in 8 months since notice to proceed.

Project for Dobrotvir TPP has no feasibility study and its execution have not been announced yet.

### Length of project realization

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<sup>3</sup>[https://www.ustda.gov/RFP/201261043A\\_UKR.pdf](https://www.ustda.gov/RFP/201261043A_UKR.pdf),

Proposed dates of commissioning for both projects are set on 2019. This seems unlikely, considering that DTEK has yet to make the whole set of project implementation measures.

*Experience of project promoter*

DTEK is a young company (established in 2002) and it has little to no experience in commissioning of new units. There is hardly any positive experience<sup>4</sup> of constructing new power plant units in Ukraine since it got independence in 1991. It makes it impossible to find people and companies with relevant experience in the country.

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<sup>4</sup>In mid 2000-s there was a project of a new 200 MW unit at state owned Starobeshivska TPP financed by EBRD (113 mln. USD), but construction was poorly executed and soon after commissioning there was an accident at the unit (on 29 June 2005).