ELECTRICITY MARKET COUPLING

VSEVOLOD KOVALCHUK
CEO
Transmission company
(state-owned, consist of 8 regional systems)

Substations – 137
8 – 750 kV
92 – (330 – 500) kV
37 – (110 – 220) kV

23 000 km of HV lines
750 kV - 4 200 km
(330 – 500) kV - 14 100 km
220 kV - 4 700 km
444 autotransformers (78553,1 MVA)

Total income (2015)
216,4 mln Euro

Employees – 13 486
UKRAINE’S INTEGRATED POWER SYSTEM (IPS)

- Installed capacity **54,83 GW**
  - TPPs - **27,80 GW**
  - CHPPs and other TPPs - **6,59 GW**
  - NPPs - **13,84 GW**
  - HPPs, HPSPPs – **5,81 GW**
  - WPPs – **0,43 GW**
  - Solar PPs - **0,36 GW**
- Electricity Generation in **2015** was **157,67 TW·h**
- Electricity consumption - **118 billion kW/h**

CAPACITY OF ELECTRICITY EXPORT/IMPORT FROM/TO THE IPS OF UKRAINE
THE "BURSHTYN TPP ISLAND"

Technical specifications:

- Installed capacity - 2,5 GW
- Production - 9,8 TWh
- Burshtyn TPP - 2300 MW
- Kaluska CHPP - 200 MW
- Tereblia-Rikska HPP - 27 MW
- Export possibilities - 650 MW
New Draft of Electricity Market Law:

- Full compliance with Third Energy Package
- 22.09.2016 - First Reading by Parliament
- Full opening of Internal Ukrainian Electricity Market – 24 months after adoption of new Electricity Market Law (01.01.2019)
MARKET COUPLING OF UKRAINE AND MOLDOVA
(PROPOSAL OF ENERGY COMMUNITY)

Potential Market Coupling Process (for existing connections):
Single Market Platform operates 2 optimization processes:
- integrated UA & MD Coupling algorithm
- 4M coupled market (CZ, SK, HU, RO) & Burshtyn island Coupling algorithm

Target design for the UA/MD day-ahead market (after connection of Ukraine and Moldova to ENTSO-E):
- using Euphemia optimization algorithm – link UAMD Market to 4M coupled market (CZ, SK, HU, RO)
MARKET COUPLING OF UKRAINE AND MOLDOVA (NEXT POSSIBLE STEPS)

Ukrainian Electronic Auction Platform (UNICORN) for cross-border trade:
- Burshtyn Island – CE ENTSO-E
  - Yearly / Monthly / Daily explicit unilateral auctions
  - Planned to start – in 2017
- Ukraine - Moldova
  - There is technical possibility to organize of Yearly / Monthly / Daily common explicit auctions

Could be launched in the nearest future after:
- Harmonization of secondary legislation UA/MD
- Harmonization of secondary legislation UA/4M MC

Forward markets
- Single trading platform & standard for explicit capacity products

Spot markets
- Yearly
- Monthly
- Day-Ahead
- Intraday
- Real Time

Balancing
- Increasingly shared responsibilities

Could be launched after:
- Adoption of Ukrainian Electricity Market Law
- Harmonization of secondary legislation for internal electricity markets
- Implementation of requirements of EC Regulation – FCA, CACM, EB*

*after adoption by European Commission
INTEGRATION OF UKRAINE TO ENTSO-E

Feasibility Study on Synchronous Interconnection of Ukrainian and Moldovan Power Systems to CE ENTSO-E – completed at the beginning 2016 (final report – 16.01.2016)

Preliminary conclusion – synchronization is possible, but there is some technical problems

Project Group Ukraine/Moldova (RG UA/MD)
- Created – 15 June 2016
- Members: Transelectrica (head), PSE, MAVIR, EMS, Swissgrid, SEPS, Ukrenergo, Moldelectrica
- 1st Meeting of RG UA/MD – 8 September 2016
- 2nd Meeting of RG UA/MD – 24 November 2016
- Tasks of RG UA/MD:
  - Catalogues of Measures of the future Connection Agreements with Ukrenergo and Moldelectrica (January 2017)
  - Determination of additional studies