



UKRENERGO

State enterprise | National power company

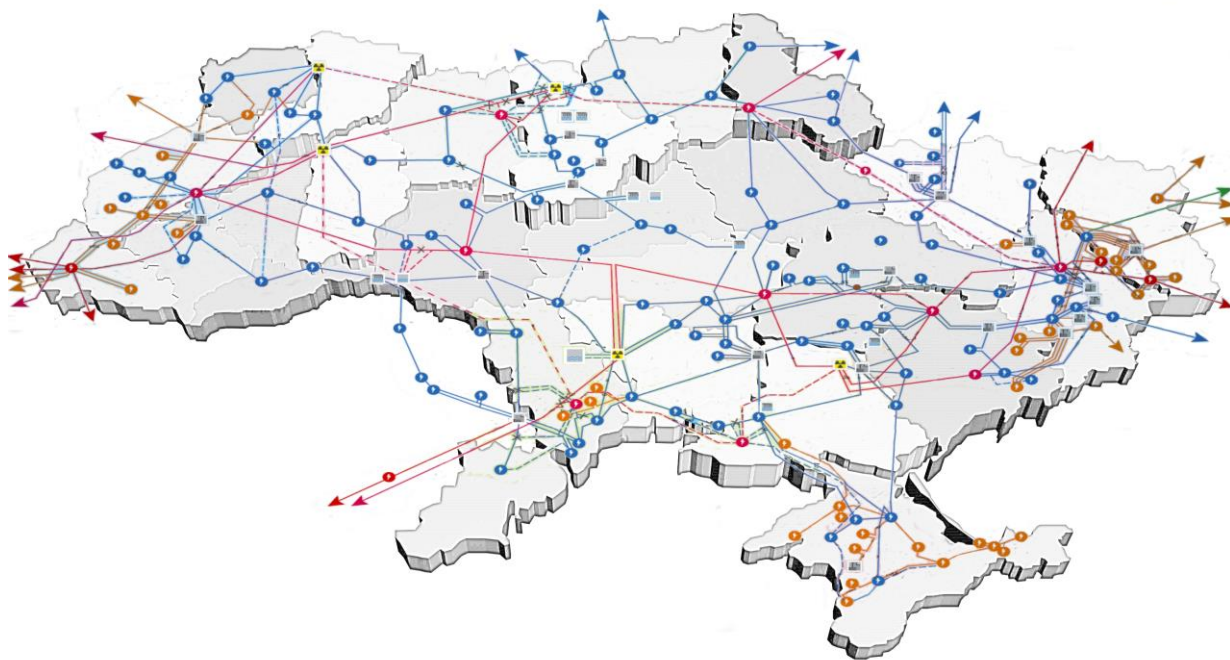
ELECTRICITY MARKET COUPLING

VSEVOLOD KOVALCHUK

CEO

SE NPC UKRENERGO

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

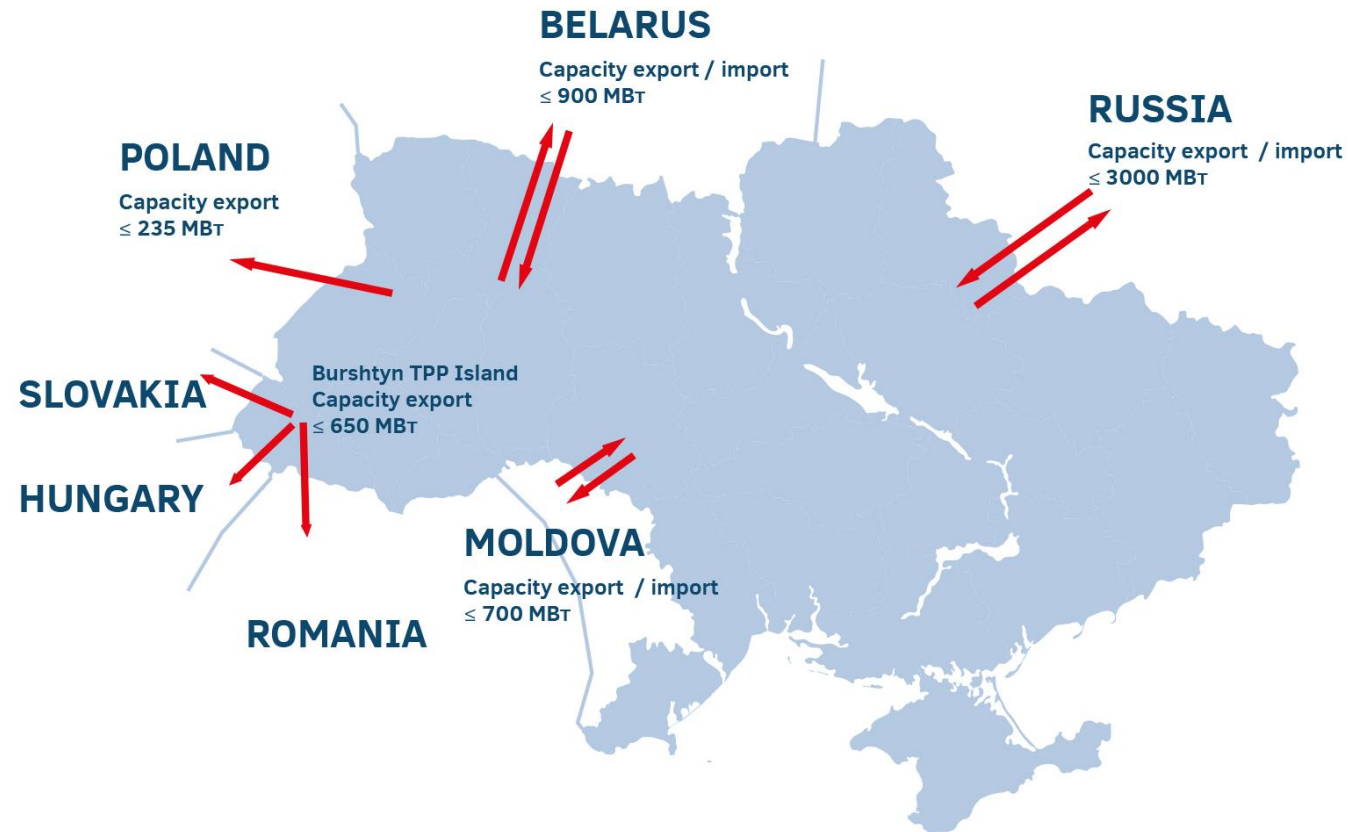


Employees – 13 486

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-Rikaska HPP - **27 MW**

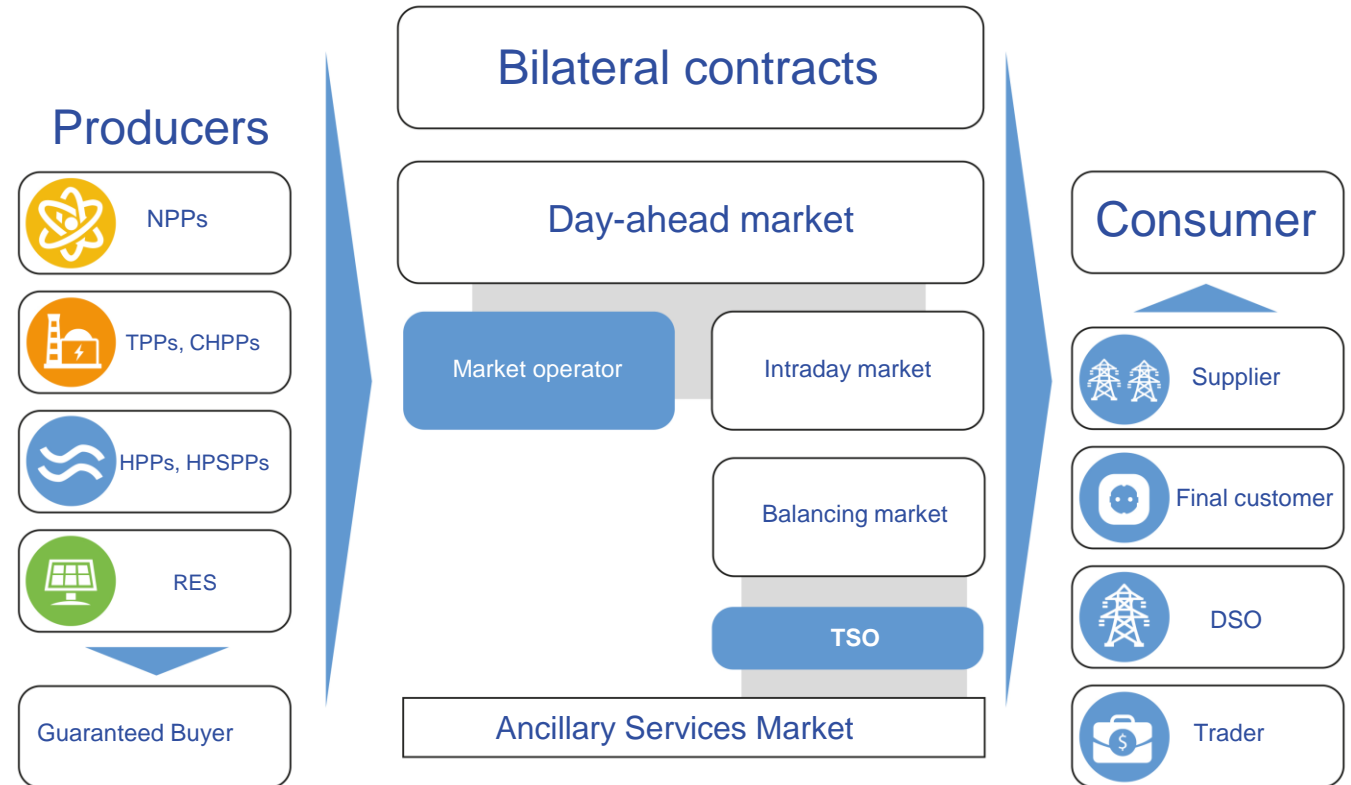
Export possibilities - **650 MW**



NEW ELECTRICITY MARKET

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)*



Ukraine (2015)



Electricity production (GWh) – **144.063**
Electricity consumption (GWh) – **136.262**
Electricity customers – **17.068.426**

Source: [Ukrenergo](#), [Energy Community](#)

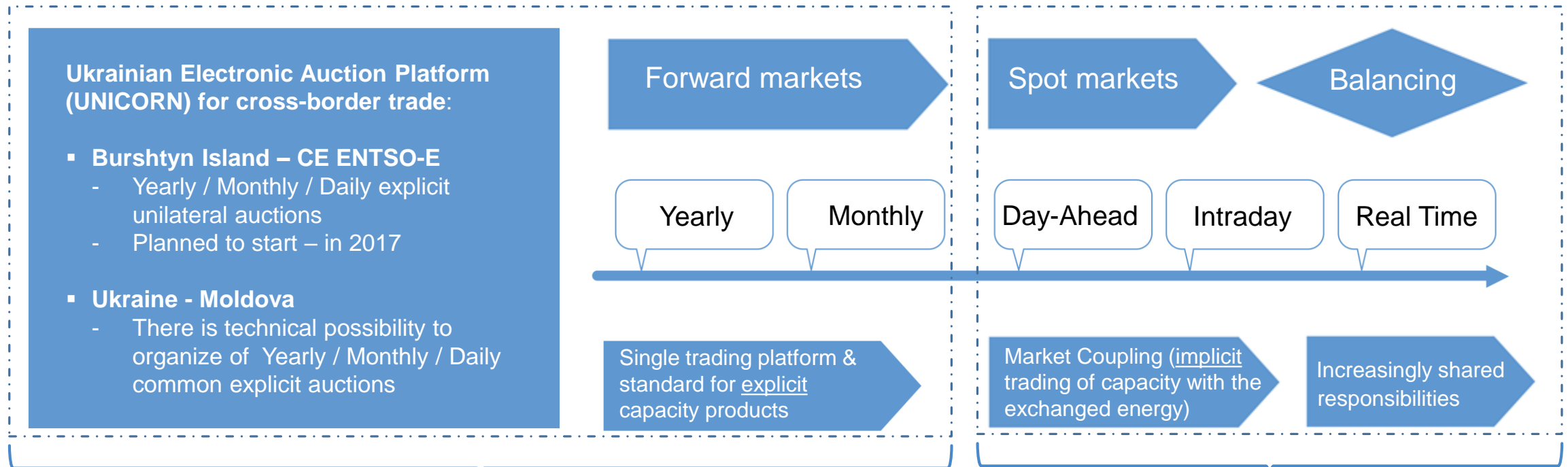
Moldova (2015)



Electricity production (GWh) – **4.141,2**
Including Import from Ukraine (GWh) - **17.6**
Electricity consumption (GWh) – **4.031,1**
Electricity customers – **1.342.704**

Source: [Moldelectrica](#), [Energy Community](#)

MARKET COUPLING OF UKRAINE AND MOLDOVA (NEXT POSSIBLE STEPS)



Could be launched in the nearest future after:

- Harmonization of secondary legislation UA/MD
- Harmonization of secondary legislation UA/4M MC

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

