



“Interconnectivity: Update on the status and foreseeable development in regional electricity interconnections”

Republic of Moldova

Barkaru Lilian, Head of Unit, ANRE of Moldova

INOGATE Regional Seminar on Security of Supply and Interconnectivity
Brussels, Belgium, 10 December 2015

Agenda



1. Existing and planned electricity interconnections
 - 1.1 Existing electricity interconnections
 - 1.2 Planned interconnections
2. Project identification & appraisal
3. Financing & regulatory treatment of new interconnections
4. Main issues / hurdles faced in relation to the investment
5. Stakeholders involvement and cost sharing

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1.1 Existing electricity interconnections



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Moldova - Ukraine

- Seven 330 kV lines
- Eleven 110 kV lines

Moldova - Romania

- Three 110 kV lines
- One 400 kV line (Vulcanesti - Isaccea)

1.1 Existing electricity interconnections



Currently, operation of the power system of Moldova is determined by the following factors:

1. Domestic electricity generation covers up to 25% of the required volume;
2. Existing interconnections with Romania allow to provide electricity only to some settlements in the island mode;
3. So far the key supplies were coming from the electricity market of Ukraine and from Moldovan TPP located on the left bank of the River Dniester.
4. Given the current situation in Ukraine, import from this country has totally stopped. The only supplier covering 75% of power required by the country remains the Moldovan TPP.

1.1 Existing electricity interconnections



In 2013 the Government asked the World Bank to participate in conducting Feasibility Study of the electricity sector of Moldova in order to develop required measures and policy to increase security of electricity supplies.

In June 2015 a report “Study of the scenarios of electricity market development” was presented and 3 prospective scenarios to provide required electricity until 2033 were considered, including:

- 1) Self-sufficiency Scenario (development of domestic electricity generation);
- 2) Scenario of synchronous connection to the ENTSO-E system;
- 3) Scenario of asynchronous connection to the ENTSO-E system through converter DC stations .

1.1 Existing electricity interconnections



During the evaluation of different scenarios the following criteria were considered:

1. Present value of investments until 2033;
2. Weighted average tariff for final consumers until 2033;
3. Level of security of supplies;
4. Competition level to ensure a minimum price for electricity;
5. Possibility of electricity transit between West and East leading to a reduction of transmission tariffs;
6. Impact on the environment;
7. Operational challenges associated with the scenario.

According to the Study the most beneficial scenarios seem to be ***asynchronous connection to the ENTSO-E.***

1.2 Planned electricity interconnectors



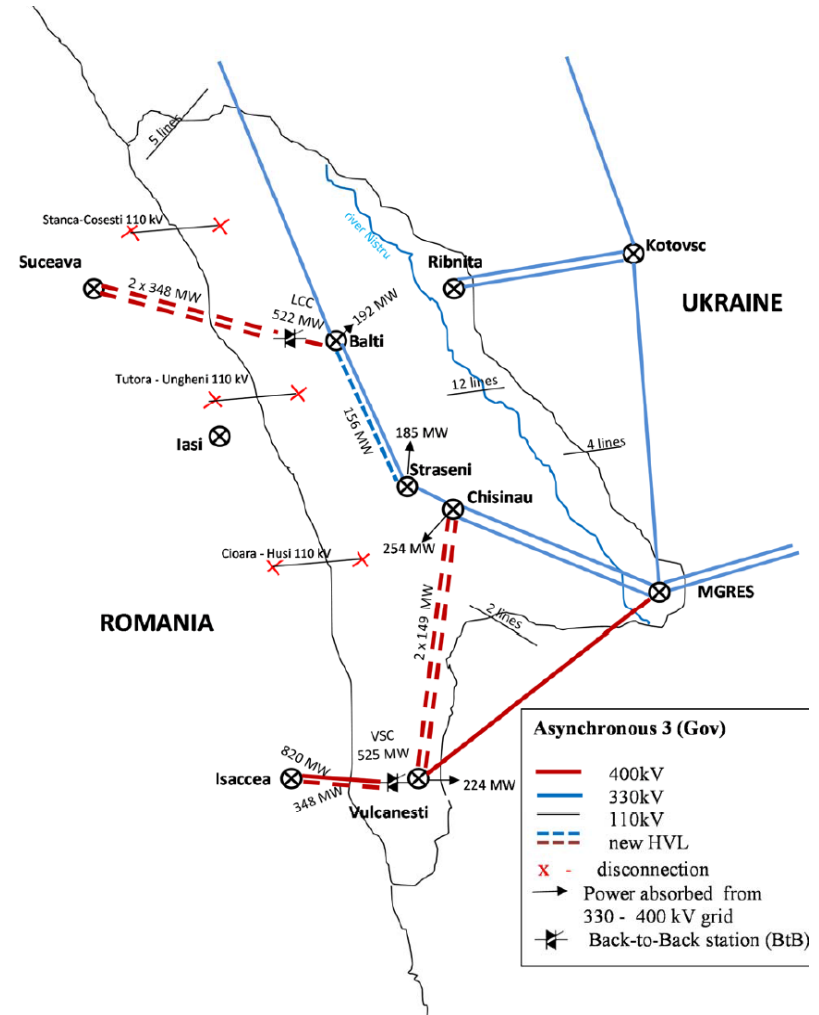
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1.2 Planned electricity interconnectors



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2. Project identification & appraisal



- To implement one of the possible scenarios of asynchronous connection of the Moldova and Romania's power networks, investments worth of \$420-440 mln. are needed.
- The scenario of asynchronous connection could be implemented by 2020.

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3. Financing & regulatory treatment of new interconnections



There are two prospective options for investment financing required to construct the interconnection network and B2B stations:

- Organisation of a tender to attract investors. A preliminary analysis was done with a rate of return of 9%. Investment repayment will start after commissioning the new units through a power transmission tariff;
- The Government may provide the required funds through loans and hold a tender for construction of transmission network's elements. Loan repayment could be financed through inclusion into the end user tariff.

4. Main issues / hurdles faced in relation to the investment



- The need to strengthen the existing transmission networks in the country to enable the use of the planned networks at full capacity;
- Completion of introduction of SCADA system (+ USD 9.2 mln. within next 4- 5 years);
- Preparation of the required legal and regulatory framework, incl. bringing the national energy legislation into conformity with the 3rd Energy Package requirements;

5. Stakeholders involvement and cost sharing



- Two out of the three options of asynchronous connections of the electricity system of Moldova to the ENTSO-E foresee the construction of OHL Suchava (RO) – Belts (MD).
- Design of the Suchava-Belts line was approved by the Energy Community as a PEI (Project of Energy Community Interest), thus Moldova may count on participation of Romania in financing this investment project.



Спасибо!
Thank you!

Barkaru Lilian,
Head of Unit,
National Agency on Energy Regulation (ANRE),
Republic of Moldova

lbarcaru@anre.md

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