EU 2020 targets: Managing integration of wind in the Romanian grid

dr. Dan Preotescu – Network Planning Manager

Wind Energy the Facts – Integrating wind power in Romania
Bucharest, May 2nd, 2009
Long term targets for Romanian PS

According to the Law 220 / 2008 the generation on renewable sources (subject of green certificates support scheme) should cover the following quantities per year:

- 2009 – 6,28 % – ~3,20 TWh;
- 2013 – 9,00 % – ~4,95 TWh;
- 2017 – 13,20 % – ~8,05 TWh;
- 2020 – 16,80 % – ~10,92 TWh.

Values are not including the generation of the “big” HPP.
Installed capacity structure – 2008

- HPP: 5859 MW, 37%
- CPP: 5524 MW, 34%
- NPP: 3470 MW, 21%
- CgPP: 1300 MW, 8%
New investments in generation
Forecast – 2008 ÷ 2018

2008 - 2013: TOTAL 6162 MW
- Reabilitari gr. hidrocarburi 210 MW
- Reabilitari gr. huila 695 MW
- Reabilitari gr. lignit 1650 MW
- Grupuri noi hidro 337 MW
- Grupuri noi eoliene 943 MW
- Grupuri noi pe huila 800 MW
- Grupuri noi pe hidrocarburi 1527 MW

2014 - 2018: TOTAL 5129 MW
- Grupuri noi hidro 10 MW
- Reabilitari gr. pe huila 420 MW
- CHEAP 1000 MW
- Grupuri noi eoliene 550 MW
- Grupuri noi pe huila 420 MW
- Grupuri noi hidrocarburi 416 MW
- Grupuri noi nucleare 1413 MW
- Reabilitari gr. pe lignit 1320 MW

TOTAL 2008 ÷ 2018: 11291 MW
# Present status

Access to the grid contracts (AGC)

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<tbody>
<tr>
<td>Installed power [MW]</td>
<td>0,03</td>
<td>600</td>
<td>286</td>
</tr>
<tr>
<td>Currently In operation [MW]</td>
<td>0,03</td>
<td>0</td>
<td>0</td>
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Technical permit for access to the grid (TPAG)

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<tr>
<td>Installed power [MW]</td>
<td>13,01</td>
<td>2125</td>
<td>968</td>
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<tr>
<td>Without AGC signed [MW]</td>
<td>3,00</td>
<td>1525</td>
<td>682</td>
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Possibilities to increase the amount of wind generation – (I) Administrative measures

- New rules and prices for ancillary services;
- New rules for congestions;
- New types of contracts;
- New types of electricity markets (intra-day);
Possibilities to increase the amount of wind generation – (II) Investments for PS

- Construction of one or even more (if suitable) PSHPP;
- Promoting flexible, modern (usually combine cycle and gas fired) generation units;
- Promoting the modernization (if possible) of the old generation units in order to make them capable to follow the charge variation;
- Promoting new technologies for storage.
Possibilities to increase the amount of wind generation – (III) Investments for PN

• Construction of several new OHL to increase the transmission capacity from the generation areas toward the consumption areas;

• Construction of several OHL to ensure the redundancy during scheduled maintenance actions;

• Promoting the “smart grid” concept.
Thank you for your attention!