**ELECTRICITY MARKET OVERVIEW**

**Ministry of Economy and Sustainable Development of Georgia**
- Sets policies and is responsible for development and implementation of national policy in the energy sector, including the establishment of the required legislative and regulatory framework;
- Is also responsible (among others) for the development of sector strategies, the attraction of investment in the sector, and the development of the competition.

**Independent regulator – GNERC**
- Is nominated as the sector regulator;
- The commission issue licenses in the Georgian electricity, natural gas and water sectors and control/monitor activities of licensees;
- Resolve disputes between licensees and customers
- Is responsible for market monitoring;

**Technical operator / Transmission Services - HV lines, HV substations and dispatching**
- GSE and ET (100% state owned)
- SakRusEnergo (50% state owned and 50% owned by Inter RAO)

**Electricity System Commercial operator – ESCO**
- Balances market, emergency import/export
- Reserves capacity trader

**Generation**
- 76 Hydropower plants
- 5 Thermal plants
- 1 Wind Power Plant

**Distribution Companies**
- All 2 Distribution Co.s under the private ownership: Telasi, Energo-pro Georgia
Hydro Power:
76 Operating HPPs
Installed Capacity – 3156 MW

Wind Power:
1 Operating WPP
Installed Capacity – 20.7 MW

Thermal Power:
5 Operating TPPs
Installed Capacity – 926 MW

INSTALLED CAPACITY OF THE SYSTEM

4102.7 MW

Hydro Power: 76 Operating HPPs, Installed Capacity – 3156 MW
Wind Power: 1 Operating WPP, Installed Capacity – 20.7 MW
Thermal Power: 5 Operating TPPs, Installed Capacity – 926 MW
EXISTING ENERGY INFRASTRUCTURE

Transmission Network (GSE and Energotrans):

- 500/400/330/220/110/35 kV transmission lines with overall length of 4380 km;
  - 500 kV transmission lines with total length - 815 km;
  - 400 kV transmission lines with total length - 32.6 km;
  - 330 kV transmission lines with total length - 21.1 km;
  - 220 kV transmission lines with total length - 1769.4 km.
- 94 substations, with total installed capacity - 12114 MWA,
  - 6 substations of strategic importance - 500 kV;
  - 24 substations - 220 kV.

**Interconnectors**

<table>
<thead>
<tr>
<th>Country</th>
<th>Transmission line</th>
<th>Nominal voltage (kV)</th>
<th>Exchange</th>
<th>TTC Summer (MW)</th>
<th>TTC Winter (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>„Kavkasioni” AC-3x300</td>
<td>500</td>
<td>export</td>
<td>570</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>import</td>
<td>570</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td>„Salkhino” AC-400</td>
<td>220</td>
<td>export</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>import</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Azerbaycan</td>
<td>„Mukhranis Veli” AC-3x300</td>
<td>500</td>
<td>export</td>
<td>630</td>
<td>710</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>import</td>
<td>630</td>
<td>710</td>
</tr>
<tr>
<td></td>
<td>„Gardabani” AC-480</td>
<td>330</td>
<td>export</td>
<td>210</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>import</td>
<td>210</td>
<td>240</td>
</tr>
<tr>
<td>Armenia</td>
<td>„Alaverdi” AC-300</td>
<td>220</td>
<td>export</td>
<td>150 / 100</td>
<td>150 / 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>import</td>
<td>150 / 100</td>
<td>150 / 100</td>
</tr>
<tr>
<td>Turkey</td>
<td>„Meskheti” AC-3x500</td>
<td>400</td>
<td>export</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>„Adjara” AC-400</td>
<td>220</td>
<td>export</td>
<td>150 / 150</td>
<td>150 / 150</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>import</td>
<td>150 / 150</td>
<td>150 / 150</td>
</tr>
</tbody>
</table>
## Supply and Consumption 2017-2018

### Supply 2017

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPP</td>
<td>331.38</td>
<td>333.75</td>
<td>214.83</td>
<td>35.43</td>
<td>75.89</td>
<td>-</td>
<td>-</td>
<td>96.00</td>
<td>133.97</td>
<td>168.24</td>
<td>328.37</td>
<td>458.34</td>
</tr>
<tr>
<td>WPP</td>
<td>7.13</td>
<td>6.22</td>
<td>7.05</td>
<td>9.37</td>
<td>5.14</td>
<td>8.80</td>
<td>7.34</td>
<td>8.43</td>
<td>7.00</td>
<td>7.10</td>
<td>6.40</td>
<td>6.30</td>
</tr>
<tr>
<td>HPP</td>
<td>675.70</td>
<td>594.16</td>
<td>774.71</td>
<td>1,019.00</td>
<td>1,078.62</td>
<td>1,242.01</td>
<td>1,291.12</td>
<td>952.94</td>
<td>754.80</td>
<td>719.57</td>
<td>682.41</td>
<td>743.42</td>
</tr>
<tr>
<td>Import</td>
<td>202.14</td>
<td>167.89</td>
<td>160.76</td>
<td>11.22</td>
<td>47.94</td>
<td>10.80</td>
<td>-</td>
<td>80.13</td>
<td>110.88</td>
<td>198.47</td>
<td>179.85</td>
<td>211.22</td>
</tr>
</tbody>
</table>

### Supply 2018

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPP</td>
<td>385.29</td>
<td>441.66</td>
<td>187.86</td>
<td>85.66</td>
<td>0.28</td>
<td>1.09</td>
<td>5.40</td>
<td>82.58</td>
<td>107.18</td>
<td>238.85</td>
<td>304.15</td>
<td>393.03</td>
</tr>
<tr>
<td>WPP</td>
<td>6.51</td>
<td>5.82</td>
<td>8.94</td>
<td>9.41</td>
<td>7.91</td>
<td>8.76</td>
<td>7.33</td>
<td>8.43</td>
<td>6.86</td>
<td>6.89</td>
<td>5.10</td>
<td>5.80</td>
</tr>
<tr>
<td>HPP</td>
<td>563.70</td>
<td>361.70</td>
<td>543.94</td>
<td>722.16</td>
<td>1,084.66</td>
<td>1,127.84</td>
<td>1,234.18</td>
<td>943.50</td>
<td>706.24</td>
<td>582.64</td>
<td>658.29</td>
<td>681.52</td>
</tr>
<tr>
<td>Import</td>
<td>179.04</td>
<td>249.67</td>
<td>311.43</td>
<td>146.54</td>
<td>1.61</td>
<td>0.00</td>
<td>1.14</td>
<td>72.90</td>
<td>132.85</td>
<td>157.09</td>
<td>110.23</td>
<td>134.67</td>
</tr>
</tbody>
</table>
**IMPORT AND EXPORT 2017-2018**

### Import by Countries 2017
- Russia: 38%
- Armenia: 9%
- Azerbaijan: 61%
- Turkey: 0%

### Export by Countries 2017
- Russia: 20%
- Armenia: 38%
- Azerbaijan: 42%
- Turkey: 0%

### Import-Export 2017-2018

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Import 2017</strong></td>
<td>179.04</td>
<td>249.67</td>
<td>311.43</td>
<td>146.54</td>
<td>1.61</td>
<td>0.00</td>
<td>1.14</td>
<td>72.90</td>
<td>132.85</td>
<td>157.09</td>
<td>110.23</td>
<td>134.67</td>
</tr>
<tr>
<td><strong>Import 2018</strong></td>
<td>202.14</td>
<td>167.89</td>
<td>160.76</td>
<td>11.22</td>
<td>43.96</td>
<td>10.80</td>
<td>-</td>
<td>80.13</td>
<td>110.88</td>
<td>198.47</td>
<td>179.85</td>
<td>211.22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Export 2017</strong></td>
<td>1.00</td>
<td>0.02</td>
<td>0.02</td>
<td>0.11</td>
<td>200.11</td>
<td>230.09</td>
<td>221.78</td>
<td>31.55</td>
<td>0.06</td>
<td>0.11</td>
<td>0.85</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Export 2018</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>61.72</td>
<td>199.97</td>
<td>272.00</td>
<td>190.00</td>
<td>19.21</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
LOSSES 2017-2018

- **Total losses for transmission and distribution network**
  - 2001 – 18.53%
  - 2006 – 13.20%
  - 2016 – 7.21%
  - 2017 – 7.05%
    - Transmission network – 1.97%
    - Distribution - 5.09%

- **Losses determined for 2018-2020**
  - for Transmission Licensees - 2.06%
    - was – 4.41%
  - for Distribution Licensees –
    - JSCo Telasi – 5.88%
    - JSCo Energo-Pro Georgia – 9.8%
SOLUTIONS

➢ Development of Renewable Resources
  ✓ Hydropower – 126 projects
  ✓ Wind - 18
  ✓ Solar - 16
  ✓ Biomasses

➢ Development of Transmission Network
  ✓ Development of internal transmission network
  ✓ Development and strengthening of interconnection network

➢ Construction of New TPP
  ✓ 230MW TPP will be put into operation in 2019

➢ Gas Storage
  ✓ Feasibility study completed
  ✓ Technical data: volume 23-250 mln m3
  ✓ Project completion is planned in 2020
  ✓ This project is the most crucial for the energy security of Georgia
Thank you!

Margalita Arabidze

Ministry of Economy and Sustainable Development of Georgia