“Interconnectivity: The new AM-GE Electricity Interconnection and additional regional trading opportunities”

Republic of Armenia

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BUILDING PARTNERSHIPS FOR ENERGY SECURITY

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Agenda

1. Existing and planned electricity 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
1. Existing and planned electricity interconnections

Existing interconnection AM-GE

SS Ninotsminda → SS Gardabani → SS Sadakhlo
- SS Ninotsminda: 220 kV, 125 MVA
- SS Gardabani: 220 kV, 125 MVA
- SS Sadakhlo: 110 kV, 63 MVA

Existing interconnection AM-IR

SS Shinuhayr → SS Agarak → to Iran
- SS Shinuhayr: 220 kV, 125 MVA
- SS Agarak: 220 kV, 63 MVA
- Iran border: AM-IR border
1. Existing and planned electricity interconnections

![Diagram of electricity interconnections with labels for SS Alaverdi-2, SS Gardabani, SS Ddmashen, SS Marneuli, SS Noravan, SS Agarak, SS Shinuhayr, and HVDC B2B Ajrum between AM-GE and AM-IR borders.](image)
1. Existing and planned electricity interconnections

Geographical location of HVDC BtB SS Ajrum

500 kV OHL from Marneuli to Ayrum - 46 km
2. Project identification & appraisal

- **KfW**
  - Fichtner
  - Feasibility study

- **Armenia**
  - EPSO
  - Decision maker

- **Georgia**
  - GSE
  - Decision maker

**Joint Meeting**
3. Financing & regulatory treatment of new interconnections

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Budget contribution (Phase I)</th>
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</thead>
<tbody>
<tr>
<td>KfW</td>
<td>85 million €</td>
</tr>
<tr>
<td>EIB</td>
<td>10 million €</td>
</tr>
<tr>
<td>NIF</td>
<td>10 million €</td>
</tr>
<tr>
<td>HVEN</td>
<td>22.4 million €</td>
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<tr>
<td>GSE</td>
<td>6.6 million €</td>
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<table>
<thead>
<tr>
<th>Loan (million €)</th>
<th>Interest (%)</th>
<th>Period (year)</th>
<th>Grace period</th>
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<tbody>
<tr>
<td>75</td>
<td>1.7</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>0.75</td>
<td>40</td>
<td>10</td>
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</table>
4. Main issues / hurdles faced in relation to the investment

Negotiation with Bank
5. Stakeholders involvement and cost sharing

Main stakeholders
Armenia and Georgia

Potential stakeholders
Russia, Turkey and Iran
## 5. Stakeholders involvement and cost sharing

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>million €</th>
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</thead>
<tbody>
<tr>
<td>Overall expediters - Armenia</td>
<td>235.4</td>
</tr>
<tr>
<td>Overall expediters - Georgia</td>
<td>6.3</td>
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<tr>
<td>Overall expediters stage 1</td>
<td>241.7</td>
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<table>
<thead>
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<th>Stage 2</th>
<th>million €</th>
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<tr>
<td>Overall expediters - Armenia</td>
<td>92.402</td>
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<tr>
<td>Overall expediters stage 2</td>
<td>92.402</td>
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</table>

Overall Cost

<table>
<thead>
<tr>
<th>AM</th>
<th>327.8 million €</th>
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<tbody>
<tr>
<td>GE</td>
<td>6.3 million €</td>
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Спасибо!
Thank you!

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