Interconnection of Crete to the mainland’s electricity System

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Return to Growth
Private Investments – Sustainable New Jobs
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Crete’s electricity System faces significant problems linked to the inability to cover increasing demand, as well as to the high cost of energy due to the fuel used by power units on the island (diesel).

- Crete’s power production is based on 3 oil-fired units of a total capacity of 756MW.
- Current units are old, with low efficiency rates and significant environmental issues.
- Electricity bills of Greek consumers are burdened with an annual cost of €400 million euro due to the lack of Crete’s interconnection with the mainland’s System.
- Return on investment can be achieved in just 3 years, given project’s estimated cost VS current annual power cost of Crete for consumers.
## Indicative list of similar projects in Europe

<table>
<thead>
<tr>
<th>Region</th>
<th>Year</th>
<th>Capacity (MW)</th>
<th>Distance (km)</th>
<th>Technology</th>
<th>Voltage (kV)</th>
<th>Cost (€ mil)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway-Netherlands</td>
<td>2008</td>
<td>700</td>
<td>580</td>
<td>HVDC*</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Borwin A** - Germany</td>
<td>2011</td>
<td>400</td>
<td>125</td>
<td>HVDC*</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Finland-Estonia</td>
<td>2006</td>
<td>350</td>
<td>74</td>
<td>HVDC*</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Sweden-Lithuania</td>
<td>end 2015</td>
<td>700</td>
<td>400</td>
<td>HVDC*</td>
<td>300</td>
<td>580</td>
</tr>
<tr>
<td>Sardinia-Italy</td>
<td>2011</td>
<td>1000</td>
<td>420</td>
<td>HVDC*</td>
<td>500</td>
<td>730</td>
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<tr>
<td>Norway-Denmark</td>
<td>1993</td>
<td>500</td>
<td>127</td>
<td>HVDC*</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Norway-Denmark</td>
<td>2014</td>
<td>700</td>
<td>140</td>
<td>HVDC*</td>
<td>500</td>
<td></td>
</tr>
</tbody>
</table>

*High Voltage Direct Current

**Offshore wind park
Interconnection of Crete to the mainland’s electricity System

Suggested alternatives for the interconnection based upon project’s feasibility study conducted by the National TSO (ADMIE) in 2011 and updated in 2014

2 cables
€787 mil

2 x 500MW High Voltage Direct Current subsea cables of 380km, connecting directly Attica to Crete

4 DC/AC converter stations (2 in Crete and 2 in Attica)

1 cable
€780 mil

1 x 1000MW High Voltage Direct Current subsea cable of 380km, connecting directly Attica to Crete

2 DC/AC converter stations (1 in Crete and 1 in Attica)
Interconnection of Crete to the mainland’s electricity System

Proposed implementation framework & financing

25% Equity

15% Juncker package loan

60% EIB loan

Greek TSO (35%)

Private Investors (65%)

J.V. “Crete Interconnection S.A.”

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Indicative Action Plan

1. Decision on route - Start and landing points in Crete and Attica
2. Update of seabed studies
3. Specific electric System studies
4. Conclusion of environmental studies
5. International tender for the interconnection construction
6. Construction and commissioning
Interconnection of Crete to the mainland’s electricity System

Direct & indirect benefits from the project

- No more black-outs on the island
- Significant reduction of electricity production cost
- Less dependency on imported oil

- Jobs during construction and operation
- Significant reduction of CO2 emissions
- Utilizing the full potential of island’s RES

- GDP increase through lower energy cost, investments and job creation
- Foreign and local investments in infrastructure projects
- Upgrade of Crete’s tourism product

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