12th IRENA Assembly virtual side event

Long-term energy scenarios for developing national energy transition plans in Africa

Med-TSO Experience in Long-term Scenario Building

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Thursday 13 January, 2022
Some words about Med-TSO

- 21 members from 19 Mediterranean countries
- About 500 million people served
- Around 400,000 km transmission lines
A set of scenarios, framework of the Mediterranean Master Plan

**Three scenarios** to address the Mediterranean Power System in 2030
- The opportunities for **Electricity Exchanges**
- To support the investment, the **CBA** of Interconnection Projects
- To address the **uncertainty** in a coordinated approach and process
Scenario building 2-year process, 15 countries

TC ESS, framework level and support

Collaborative activities:
- Methodology
- Scenario Definition and Storyline
- Common assumptions

Support:
- Tools
- Database
- Modelling
- Coordination with stakeholders (ENTSO-E)

Members, contribution and responsibility

- Expertise
- National Data collection
- Results Validation

Control
Contribution
Collaboration
Capacity building

- To develop skills for addressing the Energy Transition
- To give equal capability to contribute/control

Three pillars: skills, tools, data
(modelling, forecast, data visualization)
Webinars – Reports – dedicated Web site

https://med-tso.com/masterplan/
Webinars – Reports – dedicated Web site

PROJECT Nº2: SPAIN - MOROCCO (ES-MA):
This project consists of a new interconnection between Morocco and Spain. In addition to the two existing links, the project consists of a third link, based on HVAC technology, which will increase the NTC between both countries by 600 MW or 650 MW (Morocco – Spain and Spain – Morocco respectively). The total length of the interconnection line is estimated at around 60km, corresponding to a 30km subsea cable and a 30km overhead line. This project is promoted by ONES and REN.

The overall investment cost is expected to be 223M€, 33% of which represent investment for internal reinforcements in Morocco.

<table>
<thead>
<tr>
<th>Description</th>
<th>Substation (from)</th>
<th>Substation (to)</th>
<th>GTTC contribution (MW)</th>
<th>Total route length (km)</th>
<th>Present status</th>
<th>Expected commissioning date</th>
<th>Evolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>New interconnection between Spain and Morocco</td>
<td>Diná Marrano - Morocco</td>
<td>Puerto de la Cruz - Spain</td>
<td>700</td>
<td>60</td>
<td>Long term project</td>
<td>2026</td>
<td></td>
</tr>
</tbody>
</table>

CBA Indicators
Project 2 yields a positive impact in the expected values of all the analyzed quantitative CBA indicators, except for the expected Energy Not Served, on which the impact is mild since the expected ENS is already low in the base case. Specifically, the project shows consistent increases in the Social-Economic Welfare and RES Curtailment and a consistent decrease in the CO2 emissions across the 3 simulated scenarios.

*Average of the output for all Monte Carlo runs.
Thank you for your attention

nepad.org
afdb.org
au.int/commission
get-transform.eu
energy.go.ke
uneca.org
irena.org