Low Carbon Scenarios for Germany - Social and Stakeholder Acceptance

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Engaging Civil Society in the EU Roadmap Process
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http://www.lowcarbon-societies.eu/
Outline

1. Philosophy of the Project
2. Project Structure
3. Way to the scenarios
4. Scenarios results
Philosophy

• Including stakeholders from Environmental NGOs, Churches, Trade Unions, Economy and consumer organisations to create scenarios with a high social acceptance.
Phase 1

- Wish-List
- Development of REMIND-D
- Different project meetings
Social Acceptance in Quantitative Low Carbon Scenarios

Phase 2: “What is technologically possible in the future?"

- Expert Workshops
- Translation rules from “model” to “real-world” and vice versa

Schmid et al. 2011
Phase 3: “What is socially desired in the future?

- 2 stakeholder workshops per sector
- Give instructions on political framework conditions
- Evaluate integrated scenarios with regard to social acceptance
Stakeholder Dialogs

• Electricity (main topics)
  – Acceptance of RE and new grids
  – Energy efficiency
  – Bridge technologies

• Transport (main topics)
  – Freight transport
  – Passenger transport
  – Alternative Fuels
The t-km mileage of freight transport will increase.

Economic growth will be decoupled from growth in freight transport.
Regional economic cycles will be strengthened.

Emission reduction will have higher priority in regional and urban planning.
Electricity I

Existing coal power plants shut down before the end of their technical lifetime to reduce emissions.

Demand-side management measures will be fully exploited.
The rebound-effect will compensate efficiency improvements in the electricity sector.

The CCS technology will be available in large scale in Germany.
Scenario bricks electricity sector

<table>
<thead>
<tr>
<th>Scenario brick</th>
<th>Option “Continuation”</th>
<th>Option “Change”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing coal power plants</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
<tr>
<td>Renewable energy potential &amp; energy efficiency</td>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
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<tr>
<td>CCS</td>
<td><img src="image5" alt="Diagram" /></td>
<td><strong>CCS</strong></td>
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<tr>
<td>Freight Transport</td>
<td><img src="image1.png" alt="Truck" /></td>
<td><img src="image2.png" alt="Train" /> <img src="image3.png" alt="Recycle" /></td>
</tr>
<tr>
<td>modal split passenger transport</td>
<td><img src="image4.png" alt="Car" /> <img src="image5.png" alt="Van" /> <img src="image6.png" alt="Electric Car" /> <img src="image2.png" alt="Train" /> <img src="image7.png" alt="Bus" /> <img src="image8.png" alt="Bicycle" /></td>
<td></td>
</tr>
<tr>
<td>Fuels used by the transport sector</td>
<td><img src="image9.png" alt="Oil" /> <img src="image10.png" alt="Pumping Station" /> <img src="image11.png" alt="Fuels" /> <img src="image12.png" alt="H2" /></td>
<td></td>
</tr>
</tbody>
</table>
Thank You for your Attention!
## Scenario-Matrix

<table>
<thead>
<tr>
<th>Electricity</th>
<th>Transport</th>
<th>&quot;Smart policy as usual&quot;</th>
<th>&quot;Green world&quot;</th>
<th>&quot;All technology options&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Electricity Icon]</td>
<td>![Transport Icon]</td>
<td>![CCS Icon]</td>
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