How to finance Renewables projects – Market reality and needs for support from a business perspective

11th Inter-Parliamentary Meeting on Renewable Energy and Energy Efficiency

September 30, 2011, Henrik Breum, Director, Government Relations, Vestas Wind Systems
**Funding essential for de-carbonization of energy supply**

**Capital access and costs determining for volume and cost of energy for RE**

### Wind energy and other RE specific issues for funding

Main characteristics and differences vs. conventional energy sources excl. nuclear and large hydro

- High initial investment in wind projects – App. 75% of total cash outflow in the construction phase
- Low operational cost and no fuel costs
- Long-term project finance is essential for RE projects
- Gearing of 70-90% for onshore wind projects (50-70% for offshore wind)

**Funding cost is more or less the fuel cost of wind energy**

### Key challenges for wind energy and other RE build-out

The financial crisis has had a significant impact on the funding environment for wind and other RE projects

- Financial crisis made funding more difficult for wind and other RE projects
- Less financial risk appetite = Higher risk premiums
- Long-term money more scares and more expensive
- Basel III will make long-term bank finance more difficult going forward (higher reserve requirements)
- Solvency II to increases return requirement on direct investment from institutional investors

### Cost of energy sensitivity for onshore wind

![Cost of energy sensitivity for onshore wind](Source: IEA)

### Funding cost - onshore wind projects in Europe

![Funding cost - onshore wind projects in Europe](Source: BNEF)

*Wind. It means the world to us.*
Investor confidence blowing in the wind?
Public policies can kick-start positive vortex

Wind project funding hard hit by the financial crisis
Credit spreads above 300 bp for onshore wind projects

Low initial exposure to fiscal crisis outside of US
Consumer funded support schemes dominates

New Political Framework?
Most be transparent, longevity and certain (TLC)

Low electricity prices and PPA’s
Makes wind energy less attractive in some markets (US, Spain, etc.)

Low government bond yields and stable long-term cash flow
Make wind energy more attractive for institutional investors but…
### Stable political and regulatory framework

Addressing investor/funding concerns

<table>
<thead>
<tr>
<th>Political Instruments</th>
<th>Support Schemes</th>
<th>Grid and Systems</th>
<th>Planning &amp; Permitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Stable long-term feed-in tariff/premium</td>
<td>• Secure stable cash flow</td>
<td>• Secure stable cash flow</td>
<td>• Secure stable cash flow</td>
</tr>
<tr>
<td>• No retroactive changes</td>
<td>• Solid basis for a long-term investment</td>
<td>• Solid basis for a long-term investment</td>
<td>• Solid basis for a long-term investment</td>
</tr>
<tr>
<td>• Credit worthy counter part/guaranty</td>
<td>• Low imbedded credit risk</td>
<td>• Low imbedded credit risk</td>
<td>• Low imbedded credit risk</td>
</tr>
<tr>
<td>• Secured grid access</td>
<td>• Essential for the income stream</td>
<td>• Essential for the income stream</td>
<td>• Essential for the income stream</td>
</tr>
<tr>
<td>• Priority for wind generated electricity</td>
<td>• Secure selling the full output</td>
<td>• Secure selling the full output</td>
<td>• Secure selling the full output</td>
</tr>
<tr>
<td>• Predictable system costs</td>
<td>• Predictable costs</td>
<td>• Predictable costs</td>
<td>• Predictable costs</td>
</tr>
<tr>
<td>• Effective planning procedures</td>
<td>• Short predictable development process</td>
<td>• Short predictable development process</td>
<td>• Short predictable development process</td>
</tr>
<tr>
<td>• One-stop-shop</td>
<td>• Lower development costs</td>
<td>• Lower development costs</td>
<td>• Lower development costs</td>
</tr>
<tr>
<td>• No or fair compensation schemes (neighbours)</td>
<td>• Lower or predictable project costs</td>
<td>• Lower or predictable project costs</td>
<td>• Lower or predictable project costs</td>
</tr>
</tbody>
</table>
Thank you for your attention