Global Developments of Renewables

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Policy Framework for RE – Experiences for the Design of FIT Systems

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• Analyses market and policy trends for electricity, heat and transport

• Investigates the strategic drivers for RE deployment

• Benchmarks the impact and cost-effectiveness of economic support policies

• Provides best practice policy principles

• Covers 56 countries and all world regions

• Book and 3 supporting information papers
Strong Growth in RE Electricity ... and shift to Asia

<table>
<thead>
<tr>
<th>Generation 2010 [TWh]</th>
<th>Wind</th>
<th>Bioenergy</th>
<th>Solar PV</th>
<th>Hydro</th>
<th>other</th>
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</thead>
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<td>31</td>
<td>3503</td>
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| CAGR 2005-2010 [%]     | 26.5%| 8.8%      | 50.8%    | 3.1%  | 4.6%  |
Costs are Reducing

- Hydro and some biomass and geothermal already cost-competitive
- Additional technologies getting competitive in a broader set of circumstances
- Opens up new deployment opportunities

Data from Breyer and Gerlach, 2010
Low-carbon power technologies come of age

Renewables & nuclear power account for more than half of all the new capacity added worldwide through to 2035
Are Policies Successfully Encouraging Deployment? *Example: Onshore Wind*
2. Are payments for Generators in a Reasonable Range? *Ex: Onshore Wind 2009*
3. Impact vs Cost-Effectiveness

*Example: Onshore Wind*
Emerging Policy Challenges - PV

- Concentrated booming PV growth raises policy cost concerns in several EU countries
- Policies are not adapting quickly enough
- However, pressure will reduce as new markets emerge
Adjust Tariffs – On time & Often

**Key point:** Gap between incentives and costs and large, one-off tariff decreases can trigger “sales rush”
Policy Priorities: Changing Over Time

**Inception**
- Clear RE strategy and targets
- Attractive support
- Set up regulatory framework

**Take-off**
- Predictable and rapidly adaptive incentives
- Focus on non-economic barriers
- Manage total support costs

**Consolidation**
- System integration and transformation
- Market design and expose RE to competition
- Public acceptance
Conclusions

• Policies have started delivering in terms of RE deployment and cost reduction

• RE getting competitive in a broader set of circumstances

• However major economic and non-economic barriers persist and sustained policy effort is still needed

• *Deploying Renewables* identifies best-practice policy principles
  
  • Cost-effective, dynamic, integrated approach
  • Aims to help sharing best practice internationally so that countries can learn from each other