REN21 Renewables Global Status Report & UNEP's Global trends in renewable energy investment

Meeting of the INOGATE Country Coordinators and Working Group Members

Brussels, 13th December 2011
Christine Lins, Executive Secretary of REN21
About REN21

- **Multi-stakeholder** Policy Network grouping: national to local governments, industry, academia, INGOs, NGOs, civil society

- **Rationale**: enable a **rapid global transition to renewable energy**.

- **REN21’s Mission**: Promote policies for worldwide renewable energy expansion through
  - objective **policy guidance**
  - high quality **information**
  - exchange among relevant actors
REN21 Renewables Global Status Report

- Annual publication since 2005
- Comprehensive overview of global renewable energy situation & key trends


- All renewable energy technologies
- Sectors: power, heating/cooling, transport
- NO analysis, potentials, forecasting
- Team of over 150 researchers & reviewers worldwide
  - Lead author & chapter authors
  - Technology contributors & Regional contributors
  - REN21 Secretariat research support team

www.ren21.net/GSR
The Renewables Interactive Map
www.map.ren21.net

- Informs on renewable energy policy
- Tracks worldwide RE development
- Gathers and shares information on RE policy and development
- Provides automatic & easy to use reports

www.map.ren21.net
In 2009, RE supplied an estimated **16%** of *global final energy consumption*

Global energy consumption **rebounded** in 2010 (+5.4%) after downturn in 2009.

**Renewable energy**, which experienced no downturn in 2009, continued to **grow strongly** in all end-use sectors.
From the end of 2005 through 2010, global capacity of many renewable energy technologies grew at rates ranging 15% to nearly 50% annually.

- Solar PV increased the fastest, followed by biodiesel and wind.
- In several countries the growth rates for these RET far exceed global averages.
Global Market Overview – Power Markets

- Renewable electric power capacity worldwide reached **1,320 GW** (+8%) in 2010
- Renewable capacity comprises about **25%** of total global power-generating capacity
- Renewable energy delivered close to **20%** of global electricity production
- RE accounted for roughly **half** of the 194 GW of new power generating capacity
Global Market Overview – Heating/Cooling and Transport Markets

• Heating and Cooling
  • Modern biomass accounts for the largest share of renewable heating, followed by solar thermal and then direct geothermal heat.
  • Trends toward increasing use for industrial heat, and use of solar for cooling, ground-source heat pumps.

• Transport
  • RE used in form of electricity, hydrogen, biogas, liquid biofuels.
  • Limited but growing quantities of biogas and electricity in some countries.
  • Biofuels accounted for 2.7% of global road transport fuels in 2010.
Policy Landscape
Policy Targets

- Doubling of countries with RE targets or policies in five years: 55 in 2005 to 118 in early 2011.
- Targets in at least 96 countries; more than half are developing countries.
- Many targets and policies also exist at state, provincial and local levels.
- Targets represent commitments to:
  - Shares of electricity (typically 10–30%)
  - Total primary energy
  - Heat supply
  - Installed capacities of specific technologies,
  - Shares of biofuel in road transport fuels over 1-2 decades.
- Many countries met 2010 targets (some data not available), some exceeded.
Investment Flows

Total global investment in RE jumped in 2010 to a record of $211 billion and exceeded:

- $226 billion including estimated $15 billion invested in solar hot water
- ~$270 billion including the $40–45 billion invested in large hydropower (>50 MW).

Total 2010 investment in new RE capacity (not including large hydro) was $203 billion

Investment Flows

- **China** attracted nearly $50 billion, making it the leader for the second year in a row.

- For the first time, financial new investment in RE in **developing countries surpassed** that in developed economies.

- More public money to the RE sector through **development banks** than through **government stimulus** packages.

- BNEF data show that **13 development banks** worldwide provided **$13.5 billion of finance** for RE projects in 2010.

- **3 leading development banks** in RE project finance were European Investment Bank ($5.4 billion), Brazil’s BNDES ($3.1 billion), Germany’s KfW ($1.5 billion).

Further Information

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GLOBAL TRENDS IN RENEWABLE ENERGY INVESTMENT 2011

Analysis of Trends and Issues in the Financing of Renewable Energy
Global new investment in renewable energy 2004 - 2010 ($bn)

Note: SDC = small distributed capacity. New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals.
Financial new investment in renewable energy: developed v developing countries, 2004-2010 ($bn)

Source: Bloomberg New Energy Finance; UNEP

Note: New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals.
Financial new investment and SDC in renewable energy by technology, 2010, and growth on 2009 ($bn)

<table>
<thead>
<tr>
<th>Technology</th>
<th>Investment ($bn)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>95</td>
<td>30%</td>
</tr>
<tr>
<td>Solar</td>
<td>86</td>
<td>52%</td>
</tr>
<tr>
<td>*Small Distributed Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomass &amp; w-t-e</td>
<td>11</td>
<td>-5%</td>
</tr>
<tr>
<td>Biofuels</td>
<td>6</td>
<td>-20%</td>
</tr>
<tr>
<td>Small hydro</td>
<td>3</td>
<td>-22%</td>
</tr>
<tr>
<td>Geothermal</td>
<td>2</td>
<td>44%</td>
</tr>
<tr>
<td>Marine</td>
<td>0.1</td>
<td>-44%</td>
</tr>
</tbody>
</table>

Source: Bloomberg New Energy Finance; UNEP

Note: New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals.
Financial new investment in renewable energy by region, 2004-2010 ($bn)

Source: Bloomberg New Energy Finance; UNEP

Note: New investment volume adjusts for re-invested equity. Total values include estimates for undisclosed deals. This comparison does not include small-scale projects.
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