Key Facts and Figures from the REN21 Renewables 2011 Global Status Report

GSR Launch – ECREEE Regional Workshop
Accra, 24 October 2011

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About REN21

- Initiated by the Political Declaration of the **International Conference for Renewable Energies**, in Bonn, Germany, June 2004.

- **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

- **Multi-stakeholder** Policy Network grouping:
  - national to local governments, industry, academia, INGOs, NGOs, civil society
Organisation of REN21

REN21 Steering Committee
ca. 40 experts & individuals representing the stakeholder groups

REN21 Bureau

REN21 Secretariat (coordinated by UNEP + GIZ)
REN21 Renewables Global Status Report

- Annual publication since 2005
- Comprehensive overview of global renewable energy situation & key trends
  
  *Global Market Overview, Investment Flows, Industry Trends, Policy Landscape, Rural Renewable Energy*

- 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
Renewable Energy in 2010

Renewables 2011 Global Status Report

- 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 (since end of 2005: **15%** to nearly **50%** annually)
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 / Transport

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

- Renewable energy 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.
Industry Trends

Key General Trends

- RE industry saw **continued growth** in manufacturing, sales and installation
- **Cost reductions** (especially in PV) contributed to growth
- Changing policy landscape in many countries → industry uncertainties and negative outlook

Trends:

- **Internationalisation**
- **Industry consolidation** (notably in the biomass and biofuel sector) as traditional energy companies moved into RE
- Development of **vertically integrated supply chains**
- Manufacturers expanding into project development

- **Worldwide jobs** in renewable energy industries exceeded **3.5 million** in 2010.
Investment Flows

- **Total global investment** in RE jumped in 2010 to a **record of $211 billion**
- Top countries for total investment in 2010: China, Germany, US, Italy, Brazil
- For the first time, financial new investment in RE in **developing countries surpassed** that in developed economies.
- **Asset finance of new utility-scale RE projects** (wind farms, solar parks, biofuel and solar thermal plants), reached **$128 billion** in 2010, almost **60%** of the total
- More public money through **development banks** than **government stimulus** packages.
Policy Landscape

Policy Targets

- RE policies increased in number: The number of countries with RE targets or policies more than doubled between 2005 and 2011, from 55 to 118.
- 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.
Policy Landscape
Policy Developments

- **Renewable power generation** policies exist in at least 96 countries, more than half of which are developing or emerging economies.

- Of all policies employed by governments, **feed-in tariffs** (premium payments, advanced renewable tariffs, minimum price standards) most common.

- **Fuel blending mandates** now exist in 31 countries at the national level and in 29 states/provinces around the world.

- In policies for RE **heating and cooling**, trend toward regulatory approaches that mandate energy shares or equipment installation.

- **Green power purchasing** and **utility green pricing programs** are increasing thanks to support policies, private initiatives, utility programs, gov. purchasing

- **Local governments** are playing an increasing role in RE development, setting targets and enacting local mandates and support policies.
Rural Renewable Energy

- **Challenge**: no systematic collection of data on renewable energy in rural areas AND many individual initiatives
  - worldwide achievements difficult to estimate
- Solar energy, mini-hydro, biomass cogeneration
- In 2007, more than **500,000 SHS** were in use in Africa, half of these in South Africa and Kenya
- In western Africa, several rural electrification programmes launched since the early 2000s involving **large concessions** (Mali, Senegal, Mauritania)
- Significant improvements in the promotion of **improved cookstoves**: in 2010, launch of the Global Alliance for Clean Cookstoves
- For cooking, 3 billion people rely on solid fuels (wook, straw, dung and coal)
- **~166 million households** (~830 million people) are using improved cookstoves, most of them in China (116 million); 7 million in sub-saharan Africa
The Renewables Interactive Map
Home Page

- Tracks **worldwide** RE development
- **Gathers** and **shares** information on RE policy and development
- **Interactive** browsing by **country** or **world region**

www.map.ren21.net
The Renewables Interactive Map
Searching by Technology and Sector

- Search by technologies or sectors
- Technology specific, or non technology specific
- Refine searches according to:
  - Policies
  - Targets
  - Shares
  - Installed capacity
  - Production
  - Potential
  - RE economy
- Automatic, customized and easy to use reports
Further information

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