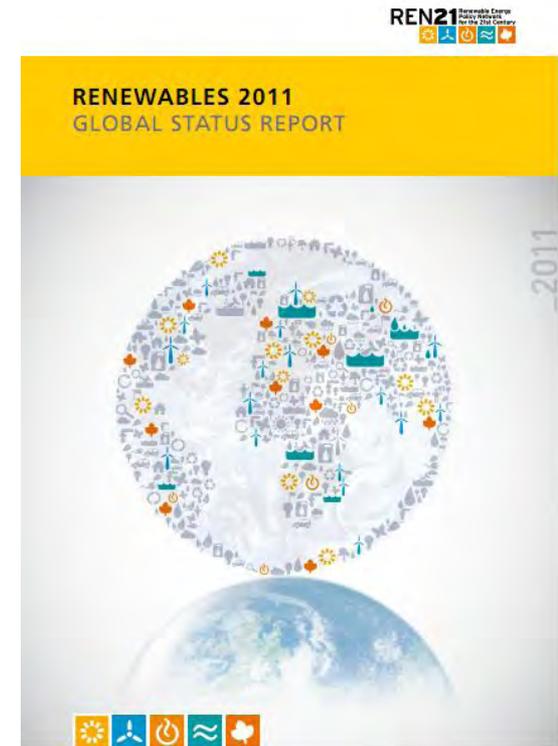


Key Facts and Figures from the REN21 Renewables 2011 Global Status Report



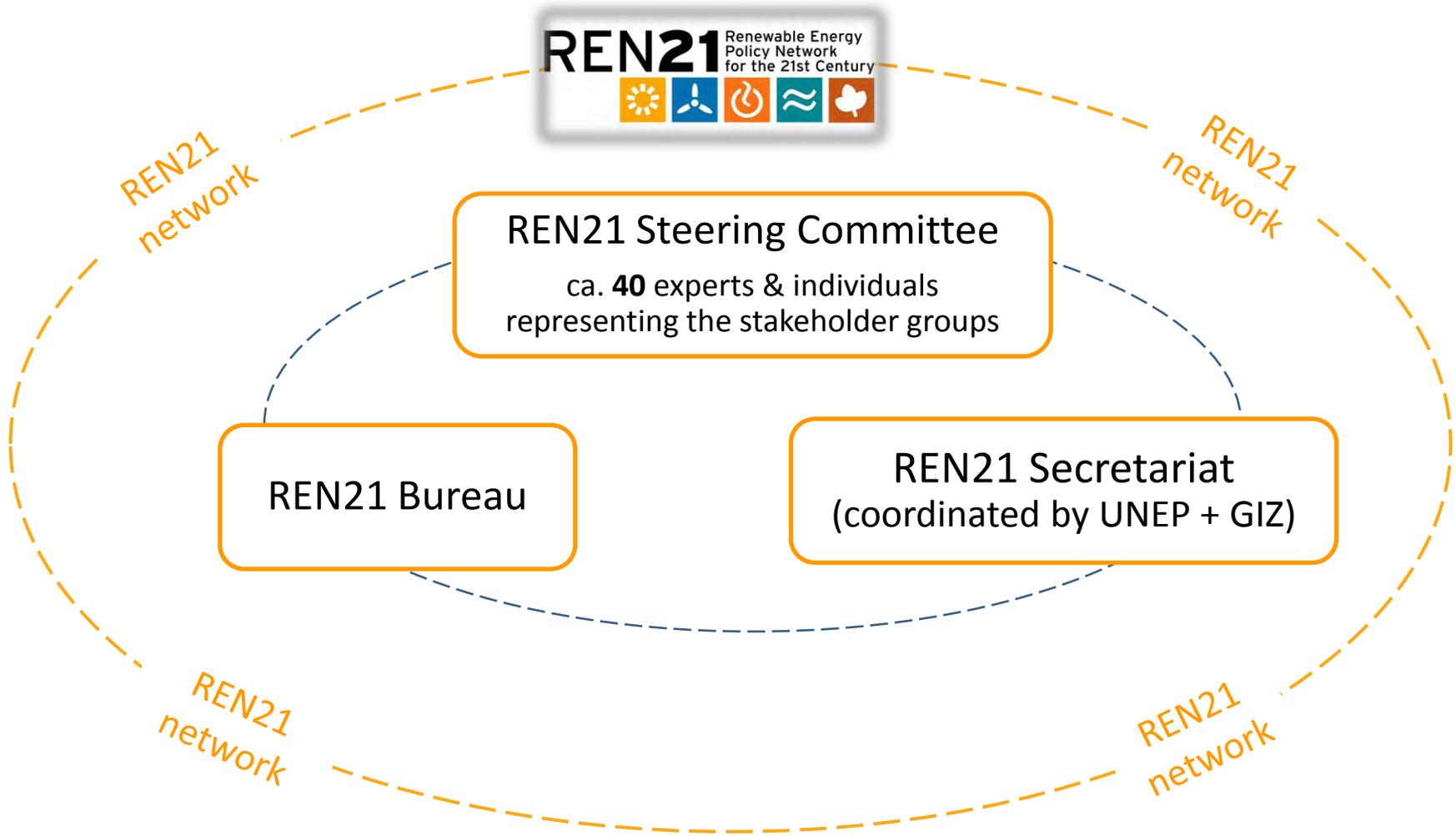
GSR Launch – ECREEE Regional Workshop
Accra, 24 October 2011

Rana Adib, REN21 Secretariat

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

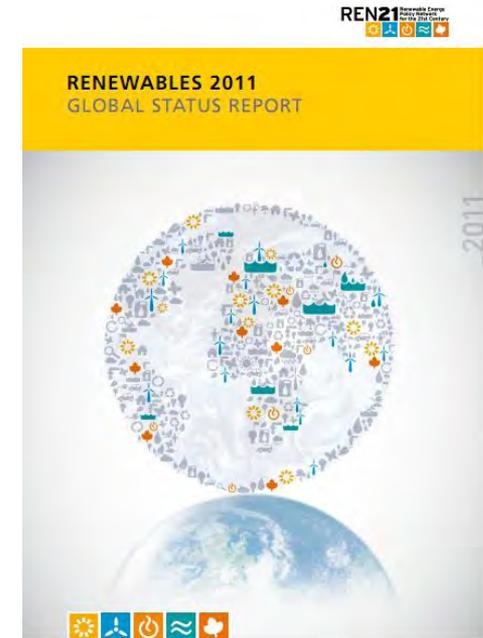
Organisation of REN21



REN21 Renewables Global Status Report

www.ren21.net/gsr

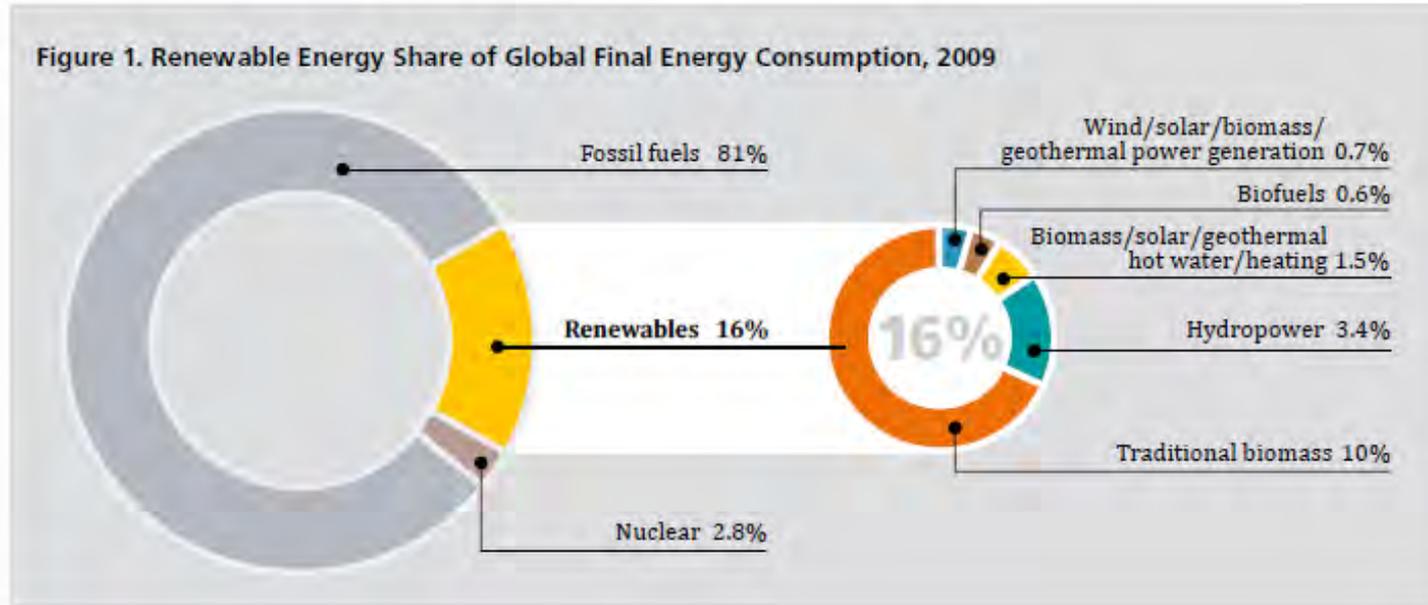
- Annual publication since **2005**
- Comprehensive overview of global renewable energy **situation & key trends**
Global Market Overview, Investment Flows, Industry Trends, Policy Landscape, Rural Renewable Energy
- All renewable energy technologies
- Sectors: power, heating/cooling, transport
- **NO** 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

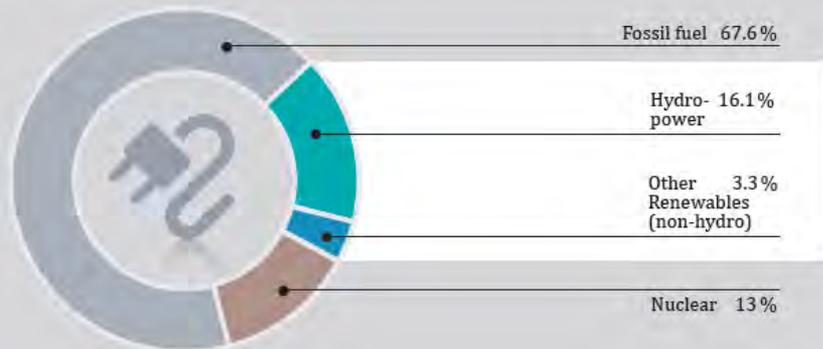
Renewables 2011 Global Status Report



- 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

Figure 3. Renewable Energy Share of Global Electricity Production, 2010



Source: See Endnote 6 for this section

- 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**

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

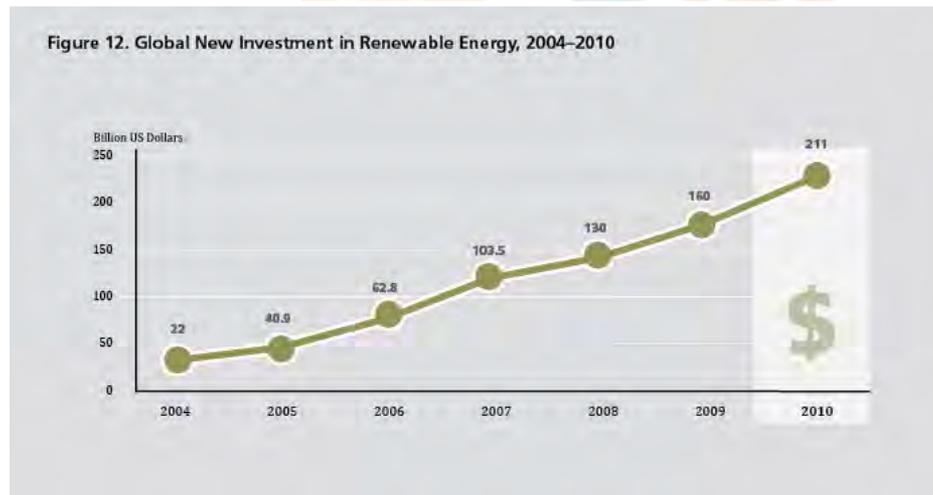
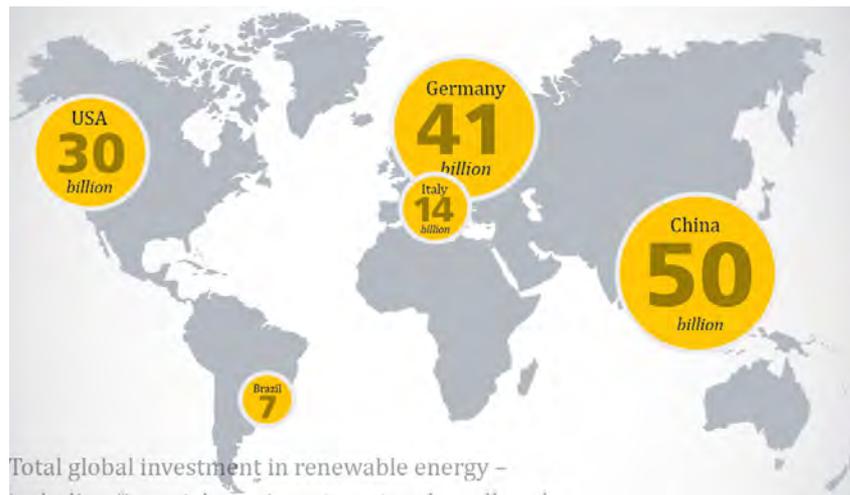
- Renewable energy used in form of electricity, hydrogen, biogas, liquid biofuels.
- Limited but growing quantities of biogas and electricity in some countries.
- Biofuels accounted for 2.7% of global road transport fuels in 2010.

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 (wood, 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

RENEWABLES INTERACTIVE MAP

REN21 Renewable Energy Policy Network for the 21st Century

WORLD REGIONS

SEARCH BY TECHNOLOGIES SEARCH BY SECTORS

YOUR SEARCH : New search

OTHERMAL HYDROPOWER
OTHERMAL RENEWABLES
EVENTS INTERACTIVE
RENEWABLES IN MAP
OTHERMAL
OTHERMAL IN GENERAL WIND POWER

- 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

The screenshot shows the 'RENEWABLES INTERACTIVE MAP' website. At the top, there is a navigation bar with links for 'HOME', 'CONTACT', 'ABOUT US', 'CONTRIBUTE', and 'FAQ/HELP'. The main header includes the 'REN21 Renewable Energy Policy Network for the 21st Century' logo. Below the header is a world map with an inset showing a zoomed-in view of a region. The interface is divided into several sections: 'SEARCH BY TECHNOLOGIES' and 'SEARCH BY SECTORS' are visible as tabs. Below these, there are two main steps: 'STEP 1 / CHOOSE TECHNOLOGY:' and 'STEP 2 / CHOOSE TOPIC:'. Under 'STEP 1', there are checkboxes for 'Non-technology specific', 'Bioenergy' (with sub-options for Solid Biomass, Biogas, and Biofuels), 'Geothermal', 'Hydropower', 'Ocean', 'Solar' (with sub-options for Solar PV, Solar heating/cooling, and CSP), 'Wind', and 'All'. Under 'STEP 2', there are checkboxes for 'POLICIES', 'TARGETS', 'SHARES', 'INSTALLED CAPACITIES', 'PRODUCTION', 'POTENTIAL', and 'RE ECONOMY'. To the right of these steps is a 'COUNTRY RESULTS' section showing '18 countries displayed'. At the bottom, there is a 'YOUR SEARCH:' field and a 'New search' button. The footer of the website includes a small globe icon and the text 'RENEWABLES INTERACTIVE MAP'.

- 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

Rana Adib

REN21 Secretariat

c/o UNEP

United Nations Environment Programme

15, Rue de Milan

F-75441 Paris CEDEX 09

France

rana.adib@ren21.net

www.ren21.net

www.ren21.net/gsr

www.map.ren21.net

