

RENEWABLES WORKING TOGETHER

SB40 2014

REN Alliance side event

Bonn, Germany: UN Climate Change Conference (SB40)
18.30 – 20.00
11 June 2014
Room RAIL
German Ministry of Transport

Sustainable technology integration towards 100% renewable energy – Case studies

18:30:	Introduction: The way to a 100% renewable energy future Moderator: Dave Renné - President of the International Solar Energy Society
18:45:	Case studies – Renewable Technologies integrated
	Wind energy in combination with Hydro energy Stefan Gsänger: Secretary General of the World Wind Energy Association
	Geothermal energy combined with Hydro and Solar energy Marietta Sander: Executive Director of the International Geothermal Association
19:10:	Renewable Energy: The True Costs Michael Taylor: Analyst, Renewable Energy Cost Status and Outlook at IRENA
19:35:	Concluding remarks: Renewables working together Heinz Kopetz: President of the World Bioenergy Association
19:45:	General discussion and questions
20:00:	End of the side event

Side event schedule at the UN SB40 meeting:
https://seors.unfccc.int/seors/reports/events_list.html?session_id=SB40

Provisional agenda for SBI, SBSTA, ADP 2, SB 40, SB and others:
https://unfccc.int/meetings/bonn_jun_2014/meeting/8031.php

About Us:



The International Hydropower Association (IHA) is a non-profit organization, working with a network of members and partners to advance sustainable hydropower. IHA's mission is to build and share knowledge on; the role of hydropower in renewable energy systems; responsible freshwater management; and climate change solutions.

IHA champions continuous improvement in the hydropower sector through dialogue with all stakeholders.

<http://www.hydropower.org>



The International Solar Energy Society (ISES) works to achieve 100% renewable energy for all, used efficiently and wisely, by providing its members with a collective, knowledge-based voice for solar energy research, development, and deployment; energy education and training programs at all levels; up-to-date critical information on technology and marketing; and opportunities to network and collaborate on the energy transformation.

<http://www.ises.org>



The World Wind Energy Association (WWEA) is an international non-profit association embracing the wind sector worldwide, with members in more than 100 countries. WWEA works for the promotion and worldwide deployment of an energy system completely based on renewable energy, with wind energy as one cornerstone, and WWEA provides a platform for all wind energy actors worldwide.

<http://www.wwindea.org>



The International Geothermal Association (IGA) is a non-political, non-profit, non-governmental organization. The objectives of the IGA are to encourage research and the development and utilization of geothermal resources worldwide, through the publication of scientific and technical information among the geothermal specialists, the business community, governmental representatives, UN organisations, civil society and the general public.

<http://www.geothermal-energy.org>



The World Bioenergy Association (WBA) is the global organisation dedicated to supporting and representing the wide range of actors in the bioenergy sector. Its members include national and regional bioenergy organisations, institutions, companies and individuals.

The purpose of WBA is to promote the increasing utilisation of bioenergy globally in an efficient, sustainable, economic and environmentally friendly way.

<http://www.worldbioenergy.org>



THE REN ALLIANCE:

Programme for 50% Renewable Energy by 2035

The IPCC's 5th Assessment Report, "Climate Change 2013: The Physical Science Basis", released in September 2013 stated that "it is extremely likely that human influence has been the dominant cause of observed warming since the mid-20th century". This influence is due largely to the combustion of fossil fuels leading to increased levels of greenhouse gases in the atmosphere.

The most aggressive Representative Concentration Pathway mitigation scenario issued by the IPCC (RCP 2.6) involves "peak and decline" emissions. This would see atmospheric concentrations of greenhouse gases increase for only a few more years and then decline, so that by the year 2100 atmospheric radiative forcing is roughly at current levels. The REN-Alliance contends it is possible to achieve such a trajectory by transitioning to renewable energy, coupled with enhanced energy efficiency and a halving of fossil fuel combustion. With increased deployment of renewable energy for electricity, heating, cooling and transport fuels, well over 50% of the world's energy supply can be provided by renewable energy by 2035.

In addition to mitigating climate change, renewables increasingly offer a cost-competitive option that helps ensure energy independence and security worldwide. The resulting transformation of the energy system will create millions of jobs throughout the world, and stimulate economic growth in developing and developed countries alike.

REN Alliance members support studies such as REN 21's *Renewables Global Futures Report (2014)*, which demonstrates that a 50% or more renewable energy supply by 2035 is clearly achievable based on current and projected rates of technology deployments resulting from innovative policy adoption. Further renewable energy penetration is possible with innovations in renewable transport fuels, where the REN Alliance confirms that research and development breakthroughs are feasible.

What needs to happen

The REN Alliance believes that a 50% renewable energy supply by 2035, (and , ultimately, 100% by the end of this century), requires progress in the following areas:

- A reduction of the total primary energy demand in industrialised countries from behavioural change and energy efficiency measures, particularly in the building, industry, transportation and agricultural sectors. Similarly, the international community should facilitate the rapid uptake of energy efficiency measures in developing countries;
- Continued strong growth of solar electricity and wind energy supply, supported by additional energy from biomass, hydropower and geothermal;
- Growth in decentralised energy supplies, strengthened transmission networks and increased uptake of small scale renewables in rural areas disconnected from grids;
- Large-scale deployment of mass energy storage capacity to compensate for the variability of wind and solar, and ensure reliability of supply. Pumped storage hydropower will play a lead role in this;
- New strategies to penetrate the heating sector with biomass, geothermal resources and solar;
- Innovation in renewable transport fuels from biomass, renewable electricity and hydrogen;
- Development and deployment of marine energy and enhanced geothermal systems.

Implementing the Transition

These changes require strong support from governments, and national and international institutions. The REN Alliance supports the following measures to achieve this:

Reinforce competitive advantage:

1. Quickly reduce and ultimately eliminate subsidies to all energy sources to "level the playing field";
2. Quickly reduce investment in fossil-fuel-based power and heat generation;
3. Put a realistic price on carbon.

Ensure the route to market and enhance reliability of supply:

4. Extend, strengthen and 'smarten' power transmission and distribution infrastructure, equipped with adequate interconnections, to create a robust and transnational energy market.
5. Provide preferential grid access for renewable technologies;
6. Continue to invest in energy storage, such as pumped storage hydropower.

Encourage innovation and broaden applications:

7. Encourage innovation of emerging technologies through public incentives or market mechanisms where appropriate;
8. Incentivise the uptake of renewable heat in district heating and cooling systems through public incentives or market mechanisms where appropriate;
9. Continue to fund research and development aimed at improving the scope of innovative technologies, while improving cost competitiveness;
10. Improve and increase education and training in renewable energy systems;
11. Promote energy conservation and awareness of climate change.

Promote a global dialogue:

12. Support global guidance and analysis from bodies such as the International Renewable Energy Agency (IRENA) to aid national-level decision making;
13. Provide the appropriate type and level of climate finance to developing countries;
14. Support the UN's *Sustainable Energy for All* initiative to ensure reliable energy access even to the poorest of populations.

Renewables are working together

