

RENEWABLES WORKING TOGETHER

COP 2013

REN Alliance side event

Warsaw, Climate Change Conference

18 November 2013

16:45 – 18:15

Room Cracow

The National Stadium, Warsaw

Integrated technologies towards 100% renewables: Case studies and examples at national and regional levels

16:45:	Introduction: The way to a 100% renewable energy future; The REN Alliance roadmap until 2035 Speaker: President, Heinz Kopetz, World Bioenergy Association
16:55:	The integration of Renewables – case studies:
	Hydro pumped storage: balancing the grid of the future Programme Director, Oliver Griffiths, International Hydropower Association
	A community based on geothermal energy Executive Director, Marietta Sander, International Geothermal Association
	Integrating solar with other Renewable Technologies President, Dave Renne, International Solar Energy Society
	Wind energy in combination with other RES: case of Denmark Secretary General, Stefan Gsänger, World Wind Energy Association
17:30:	The Global Status Report of REN 21 Executive Secretary, Christine Lins, REN 21
17:40:	The green climate fund, facilitating energy transformation Climate Energy Director, Stefan Schurig, World Future Council
	Go 100% renewable – why this campaign? Climate Energy Director, Stefan Schurig, World Future Council
17:55:	General discussion
18:15:	End of the side event

United Nations climate change conference COP19/CMP9

<http://bit.ly/cop19-cmp9>

Side events: 11-22 November 2013 – COP19, The National Stadium, Warsaw

<http://bit.ly/cop19-sideevents>

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 the global renewable energy community with a collective, scientifically credible voice and up-to-date information gathered and synthesized by its talented members.

<http://www.ises.org>



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 wind energy technology.

WWEA provides a platform for the communication of all wind energy actors worldwide.

<http://www.windea.org>



The 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 largely refers to the combustion of fossil fuels leading to increased levels of greenhouse gases, causing climate change.

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. 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 energy supply can be provided by renewable energy by 2035.

In addition to mitigating climate change, increasingly renewables 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 growth in developing countries.

REN Alliance members support authoritative studies such as REN 21's *Renewables Global Futures Report (2013)*, 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 100% soon thereafter), 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.

1. REN21, 2013: Renewable Global Futures Report 2013. 15, Rue de Milan, F-75441 Paris CEDEX 09, France.

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

