IRENA Session at WFES 2017

Tuesday, 17th January 2017 (9:00-11:30 AM)
Abu Dhabi National Exhibition Centre (ADNEC): Capital Suite 2

Letting in the Light:
Unlocking the Potential of Solar Energy

Renewable energy is now recognised as a key solution in the global response to climate change and for sustainable development generally. At the same time, a new day is dawning in the ways we produce and consume energy. Solar photovoltaic (PV) power generation is at the heart of this transformation, while concentrating solar power (CSP) can complement it with its integrated, low-cost thermal energy storage.

Solar energy has become a key energy technology. Continuous innovation and deployment have seen deployment levels grow from 38 GW to more than 230 GW in the last five years, driven by solar PV module price declines of up to 80% between the end of 2009 and 2015. In both developed and developing countries, large-scale utility-scale solar PV systems have beaten new gas- or coal-fired power stations in terms of costs. Rooftop solar PV systems provide households with cheaper electricity than buying electricity from the grid. Innovative solutions like solar lights and solar home systems are providing cheap electricity to non-electrified regions in Africa and Asia.

Solar power is poised to revolutionise the world's electricity systems, letting consumers produce power for their own needs and feed surplus energy into the grid. It is a boon for advanced economies and the developing world, where deployment can accelerate the energy transition, provide modern electricity and improve the lives of billions of people. However, for solar energy to realise its full potential, electricity markets will need updated policies in line with the latest innovations.

For solar energy to achieve its potential in transforming the energy system, new challenges need to be addressed in order to ensure that solar PV and CSP deployment continues to accelerate. Part of the solution must also be continued rapid technology progress and innovation, both learning-by-doing for monocrystalline and polycrystalline cell production and performance, as well as new technologies and materials based on fundamental R&D efforts. Systems integration and sector coupling creates new technology challenges such as the need for greater system flexibility, while electricity storage will become important early for islands and other small isolated networks and could be important in the longer term for large integrated networks as

well. This will be happening against a backdrop where localized electricity production by solar PV systems will likely be cheaper than electricity from centralized power stations further away, pushing today's utility model to its limit.

IRENA has undertaken analysis to provide a solid and compelling outlook for solar energy, and inform policy makers, industry and decision makers in the energy sector about the transformative potential provided by solar energy. Join IRENA and external experts to hear about:

- Recent cost trends and future cost reduction potentials from technology innovations, market growth and economies of scale. Look at the competiveness of solar energy in different markets.
- Best practices in policy support for renewable energy, how these are evolving and what are the lessons that have been learned that can be applied in new markets.
- How quality infrastructure for solar energy can help reduce uncertainty, improve performance and financial returns. Also hear about what happens at the end of a PV systems life and the new business opportunities that are emerging.

Agenda

9:00-9:30 *Introduction and the Global Context for Solar Energy Today*
- Bruce Douglas, Chief Operating Officer, Global Solar Council

9:30-10:00 *The Power to Change: Global Solar Energy Cost Trends and Reduction Potentials to 2025*
- Michael Taylor, Senior Analyst, IRENA

10:00-10:30 *Policies to Unlock a Solar Future*
- Diala Hawila, Associate Program Officer, IRENA

10:30-10:50 *Extending the Frontier of PV Reliability: The Role of Quality Infrastructure*
- Francisco Boshell, Analyst, IRENA

10:50-11:20 *End-of-Life Management of Solar PV Panels*
- Andreas Wade, IEA PVPS/ First Solar