

## TECHNOLOGY COOPERATION PROGRAMME ON PHOTOVOLTAIC POWER SYSTEMS

### IEA PVPS Workshops at 7<sup>th</sup> WCPEC, Waikoloa, Hawaii

IEA PVPS will conduct 3 workshops with specific focus in conjunction with WCPEC-7. The IEA PVPS (International Energy Agency, Photovoltaic Power Systems Programme) is one of the Technology Collaboration Programmes within the IEA. The mission of the IEA PVPS is to enhance the international collaborative efforts which facilitate the role of photovoltaic solar energy as a cornerstone in the transition to sustainable energy systems. Registration information and latest agenda will be in the IEA PVPS official site (<http://iea-pvps.org/>).

Date: 14<sup>th</sup> June 2018

Venue: Kona 1, Waikoloa Village

#### **8:30 - 10:00 Session 1: “Towards a R&D Roadmap for Crystalline Silicon Module Recycling”**

Session Chair: Garvin Heath, NREL and PVPS Task 12 Operating Agent

Under the International Energy Agency (IEA) Photovoltaic Power Systems (PVPS) program, Task 12 aims to foster international collaboration on the area of sustainability of PV and to compile and disseminate reliable information on sustainability such as environment, health and safety (EH&S), associated with the life-cycle photovoltaic technology including end-of-life management. This session will focus on recycling of crystalline silicon PV. Building from several recently published Task 12 reports, the focus of this workshop session is to interact with audience members toward the development of a roadmap for future research on PV module recycling technologies. A comprehensive review of prior research as well as preliminary results from techno-economic analysis of one or more existing PV crystalline recycling processes will be presented as a way to solicit audience feedback and generate discussion, which is invited during and following the presentations.

Planned Program:

8:30 – 8:40: Roadmap development process (Garvin Heath)

8:40 – 8:55: Synthesis of trends in c-Si PV recycling technologies (Keiichi Komoto)

8:55 – 9:10: Synthesis of literature describing novel PV recycling technologies (Garvin Heath)

9:10 – 9:40: Preliminary cost modeling of 2 novel c-Si module recycling processes (Garvin Heath)

9:40 – 10:00: Discussion

**(Coffee break)**

#### **10:30 - 12:00 Session 2: “Past and present forecasts for the development of the PV Market - Why forecasts were wrong”**

Session Chair: Arnulf Jäger-Waldau, JRC

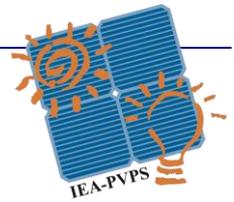
Over the years a large number of forecasts on the development of PV markets have been published in various countries all over the world. The first exercise was done in the USA in the 1980's followed by the Japanese vision of the Sunshine Programme and the European Union's Strategy for renewable energy sources in the 1990's with a horizon of 2010. International Organisations like the IEA are publishing forecasts in the mid-and long-term until 2050. However, all these forecast have underestimated the pace how PV would develop and the critical question to be discussed in this session is: Why were all forecasts wrong? The focus of the session is less on technologies, which are discussed in details during the rest of the conference programme, but more on the reasons, why experts and politicians alike were and to some extent are still underestimating the potential of solar photovoltaic electricity generation. The session will shortly present the overall situation and the forecast activities in the three regions of the USA, Japan and the European Union.

**(Lunch break)**

#### **Session 3: 13:30 - 15:00 “PV enablers from PVPS perspective: what will drive the PV market in the coming years?”**

Session Chair: Gaëtan Masson, Becquerel Institute and PVPS Task 1 Operating Agent

In 2017, newly added PV capacity reached close to 100 GW globally. The growth of PV is expected to change radically the way how the world is powered in the coming decade, much faster than expected, and in sectors that haven't been considered until now, such as buildings' heating and cooling or transport. The IEA-PVPS has been researching such challenges associated with PV development for well over 20 years. This session will discuss how such enablers will contribute to accelerate PV development. This session will provide a fresh look at market numbers, forecasts, past and future scenarios, emerging business models and in general the role of PV in the energy transition.



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**Contact for further information:**

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