

TASK 1: STRATEGIC PV ANALYSIS & OUTREACH



IEA PVPS workshops at WCPEC-7 2018 – Hawaii, Big Island, USA

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

Description: 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:

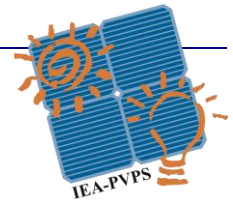
- 8:30 – 8: 40: Roadmap development process (Garvin Heath)
- 8:40 – 8:50: Synthesis of trends in c-Si PV recycling technologies (Keiichi Komoto, Task 12)
- 8:50 – 9:00: Synthesis of literature describing novel PV recycling technologies (Garvin Heath)
- 9:00 – 9:15: A PV module recycling solution (Taisuke Doi, NPC Incorporated)
- 9:15 – 9:45: Preliminary cost modeling of 2 novel c-Si module recycling processes (Garvin Heath)
- 9:45 – 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

Description: 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



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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.

Planned Program:

10:30 – 10:35: Introduction to the topic (Sven Teske)

10:35 – 10:50: US roadmaps from the 1980's to today (Robert Margolis)

10:50 – 11:05: The Sunshine Programme and roadmap activities in Japan (Izumi Kaizuka)

11:05 – 11:20: From the European Union Green paper on Renewable Energy to the 2050 Roadmap (Arnulf Jäger-Waldau)

11:20 – 11:35: Industry roadmaps (Gaëtan Mason)

11:35 – 12:00: Moderated Discussion (Moderated by Sven Teske)

(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

Description: 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 contributed 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.

13:30 – 13:35: Introduction to the topic (Gaëtan Masson)

13:35 – 13:50: Status of the PV market and PV industry mid-2018 (Izumi Kaizuka)

13:50 – 14:05: A new challenge for the industry: quality through EOI inspection (Richard Moreth)

14:05 – 14:20: The role of utilities in developing distributed PV (Johan Lindhal)

14:20 – 14:35: The role of solar mobility: introducing the new Task 17 (Keiichi Komoto)

14:35 – 15:00: Moderated discussion (moderated by Gaëtan Masson)



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More information: *Gaëtan Masson, Task 1 Operating Agent* g.masson@iea-pvps.org