Performance, Operation and Reliability of Photovoltaic Systems

IEA PVPS Task 13

PV Power Plants – Performance & Operation

Intersolar Europe 2019
14 May, 2019, 2.30 pm – 4:00 pm

PVPS

Panelists

- **Ingo Klute**, PV-Experts.co, Germany
- **Thomas Nolden**, BayWa r.e. Operation Services GmbH, Germany
- **Mike Green**, M.G.Lightning Electrical Engineering, Israel
- **Edward Gillespie**, Axis Capital, London, UK

Moderation

- **Joachim Berner**, Journalist, Munich, Germany

1. Question to Ingo Klute, PV-Experts

- Which typical risks do occur when selecting PV components? Please give examples.

1. Question to Thomas Nolden, Baywa r.e.

- How can **digitalization and artificial intelligence** (AI) help an O+M service provider within the daily business?

1. Question to Mike Green, M.G.Lightning

- What will change **in data analysis** in the future? What developments do you expect (e.g. big data analysis)?

1. Question to Edward Gillespie, Axis Capital

- What are the important considerations in the planning/design phase of PV power plants to mitigate the project location risks?

2. Question to Ingo Klute, PV-Experts

- In your experience, which are the main technical risks in the implementation of plant installations?

2. Question to Thomas Nolden, Baywa r.e.

- What is important in operational monitoring to be able to react in time to malfunctions and failures?

2. Question to Mike Green, M.G.Lightning

- Many sensors are needed to carry out performance monitoring at PV Power Plants. Can you imagine a **monitoring process without sensors**?

2. Question to Edward Gillespie, Axis Capital

- What are the main sources of failure in the construction of PV plants?

3. Question to Ingo Klute, PV-Experts

- How can PV technologies and components be evaluated in advance in order to reduce risks in subsequent plant operation? Which criteria do you use to assess the risks?

3. Question to Thomas Nolden, Baywa r.e.

- Why it is important to develop and to implement new international and national O+M standards?

International Standards on O&M

- DIN EN 62446-1 VDE 0126-23-1:2019-04 und DIN EN 62446-2, VDE 0126-23-2:2017-04 (Draft) „Photovoltaik(PV)-Systeme – Anforderungen an Prüfung, Dokumentation und Instandhaltung“
- VDI/VDE 2883 Blatt 1:2017-09 (Draft) und VDI/VDE 2883 Blatt 2 (Discussion, possible to 01/2020) „Instandhaltung von PV-Anlagen“
- IEC TS 63049: 2017 “Terrestrial Photovoltaic (PV) Systems - Guidelines for Effective Quality Assurance in PV Systems Installation, Operation and Maintenance”

3. Question to Mike Green, M.G.Lightning

- What is important for software maintenance protocols in order to be able to anticipate failures or mitigate them in advance?

3. Question to Edward Gillespie, Axis Capital

- Once operational, what are the best maintenance practices for a PV plant?

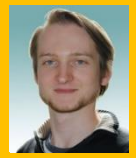
Best Practice Concepts for Operation & Maintenance of PV Power Plants

Moderation

Ulrike Jahn
Introduction of this IEA PVPS Task 13 Workshop

Dr. Marc Köntges
Applications and Interpretation of UV Fluorescence Imaging for PV Plants

Magnus Herz
Common Practice for Quantifying the Impact of Technical Risks During Operation



Caroline Tjengdrawira
Operation & Maintenance Guidelines in Different Climates

Panel Discussion

Edward Gillespie
Renewable Energy Assistant Underwriter, Axis Capital, United Kingdom

Mike Green
Consultant and Owners Engineer, M.G. Lightning Electrical Engineering Ltd., Israel

Ingo Klute
Publicly Certified Expert for PV Systems, PV-Experts.co, Germany

Thomas Nolden
Team Leader PV Germany, BayWa r.e. Operation Services, Germany

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04:00 pm - 04:30 pm Coffee Break