Firm PV Power – introduction to Task 16

Dave Renne

Webinar – 16.08.2022
What is IEA PVPS?

• The International Energy Agency (IEA), founded in 1974, is an autonomous body within the framework of the Organization for Economic Cooperation and Development (OECD).

• The Technology Collaboration Programme (TCP) was created with a belief that the future of energy security and sustainability starts with global collaboration.

• The Photovoltaic Power Systems Programme (PVPS) is one of the TCPs established within the IEA in 1993.

• The objective is to facilitate the role of photovoltaic solar energy as a cornerstone in the energy transition.
International Collaboration of Task 16

- Universities, research organizations, met services, and service providers
- 19 countries

Global horizontal irradiance. Source: www.meteonorm.com Version 8.0
Why a Solar Task?

- Solar resources are the fuel of PV, CSP and solar thermal energy
- Big PV and high penetration need high quality of meteorological information

- Added values
  - Independent benchmarks
  - State of the art descriptions
  - Lower uncertainties $\rightarrow$ lower costs of implementation $\rightarrow$ more PV
- **Main outcome:** Solar Resource Handbook\(^1\) – updated regularly

Task organization

• Subtask 1: **Measurements & Models** (M. Sengupta, NREL, S. Wilbert, DLR)
  - Ground based methods models, benchmarking framework

• Subtask 2: **Enhanced data & bankable products** (P. Blanc, Mines Paristech)
  - Quality & format, long term variability, PV at urban scales, data for bifacial modules

• Subtask 3: **Solar forecasting techniques** (E. Lorenz, Fraunhofer ISE)
  - Regional forecasts, Probabilistic forecasts, All sky imagers, **Firm PV power**

• Subtask 4: Dissemination & Outreach (J. Remund, Meteotest)
  - Reports, Papers, **Update of Solar Resource Handbook**, Workshops, **Webinar**, online code archive