

#PVPMC2025

May 15th, 2025

Live presentation of the PVRADAR Python package:

Extension to pvlib for faster and easier modeling



THORE MÜLLER

PVRADAR Labs



15.05.25



THE PVRADAR TEAM

CORE TEAM



**THORE
MÜLLER**
CEO

Seven years in soiling
measurement and cleaning
optimization



**KONSTANTIN
POGORELOV**
CTO

Twenty years in software
development and team-
leadership



**FRANCO
CLANDESTINO**
Head of Product

Five years as specialist in
yield estimation and
bifacial PV

ADVISORS



Prof. THOMAS HAMACHER
Munich Techn. U.

Leading expert in the field of
energy and systems analysis



Prof. LEONARDO MICHELI
University of Rome

Leading researcher in the field of
soiling, 30+ publications



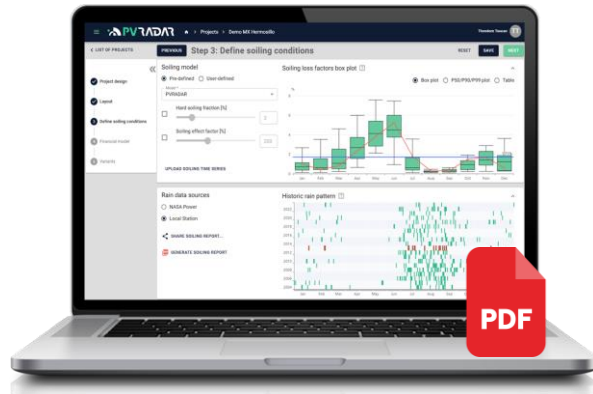
BEN FIGGIS
QEERI (ex)

Former program manager at Qatar
Environment and Energy Research
Institute

PVRADAR – A FRAMEWORK FOR MODELING WITHOUT LIMITS

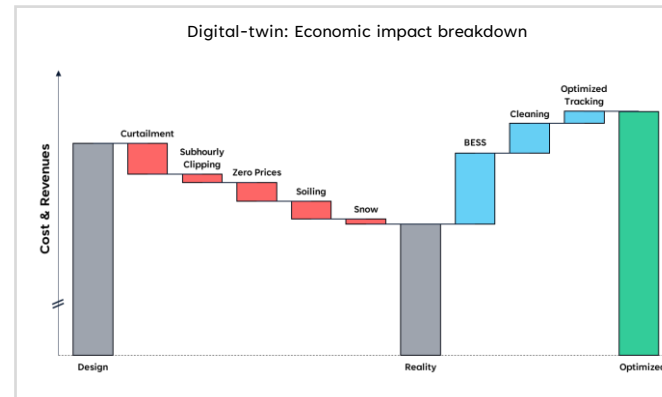
“We help the solar industry quantify and mitigate losses.”

Modeling Platform



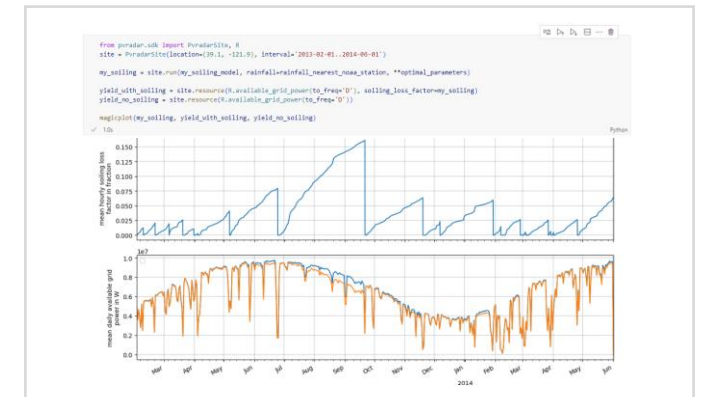
Soiling & snow loss estimation
and cleaning optimization

Custom Analysis



Custom analysis to quantify
site specific losses and gains

Python Package



Toolbox to develop and
validate your own models

EXAMPLES OF CUSTOM ANALYSIS

- Integrated analysis of battery storage, variable electricity prices, curtailment, soiling, and cleaning strategies for a 230 MWp PV asset in the Atacama Desert.
- Portfolio-wide assessment of soiling impact and cleaning benefits to quantify risk exposure across global PV portfolio.
- Development of a custom web-based tool to evaluate snow-related energy losses in Northern Europe and accelerate project development.

[Link: More information](#)



“

The detailed energy flow analysis gave us a much clearer understanding of how the plant is operating and how each factor affects its performance. This kind of breakdown definitely helps us make smarter and more informed decisions.

Álvaro Puelma

Deputy Manager of Solar / Generation Division



“

At Iberdrola, optimizing the performance of our PV plants is essential. PVRADAR's assessment helped us evaluate soiling and snow losses more accurately, thus contributing to the profitability of our projects.

Esther Gomez Ruiz

Head of Studies and Modeling, Global Engineering



“

The tool gave us a much clearer understanding of how snow affects our projects — and the ability to explore different scenarios really helped us make informed design choices.

Eero Vartiainen

Senior Solar Technology Manager

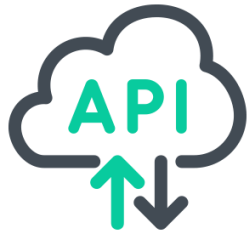


PVRADAR-SDK – MAIN FEATURES



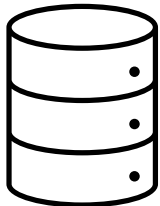
#1)

Flexibly combine pvlib and your own models to custom model chains.



#2)

Easy access to input data – use 1 command to get data from dozens of sources.



#3)

Access to measured data to validate models and fit parameters for maximum accuracy.

Live coding session

Code examples available on our website.

START USING PVRADAR TODAY – FOR FREE

pip install pvradar-sdk [link: [installation instructions](#)]

Request your free API key from pvradar.com

Free access:

- Open-source model library
- Data from public sources: ERA5, NOAA, etc.

Paid subscription:

- PVRADAR soiling model
- Measured data – soiling alone from 120 sites worldwide
- Access to third-party tools and services
- Private measurement DB to organize your internal data
- Customized solutions and data access

Regular webinars – more info on www.pvradar.com [link: [webinars](#)]

Let's work together!

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17.05.25

