SolarAnywhere® SystemCheck®

Highly accurate, real-time solar resource data and PV production estimates

Advanced Solar Intelligence for O&M

✔ Benchmark PV performance

✔ Streamline asset monitoring using an enterprise-class API

✔ Decrease OPEX by transitioning to reliable satellite data feeds
- Reduce reliance on MET stations
- Decrease unnecessary truck rolls

Power your operations with leading PV production intelligence

True Real-Time Data
Up to the current hour, always

Enterprise-Class API
Unlimited API calls
Easy-to-use, reliable & secure

Advanced Energy Modeling
No-cost energy modeling
Bifacial, soiling, snow loss & more

Enhanced Accuracy
Satellite data retrieved every 30 minutes at 1 km resolution

Global Coverage
Available everywhere you operate to scale with your business

Industry Expertise
Industry-leading irradiance modeling driven by an exclusive partnership with Dr. Richard Perez at SUNY-Albany

Industry-leading irradiance, weather and PV production data for benchmarking and operational monitoring

SolarAnywhere SystemCheck is a modern solar data API that helps asset owners and operators assess system performance. SystemCheck leverages the SolarAnywhere irradiance model to independently estimate the solar resource availability at your site and generate weather-normalized production estimates in real time (trailing 45 days to current hour). Use SystemCheck to evaluate the performance of individual or fleets of PV systems, make intelligent asset management decisions and identify production loss events— all at a fraction of the cost of lost energy production, on-site equipment or unnecessary truck rolls.

Monthly Energy Yield

Legend: Predicted, Expected, Measured, Predicted PR, Measured PR
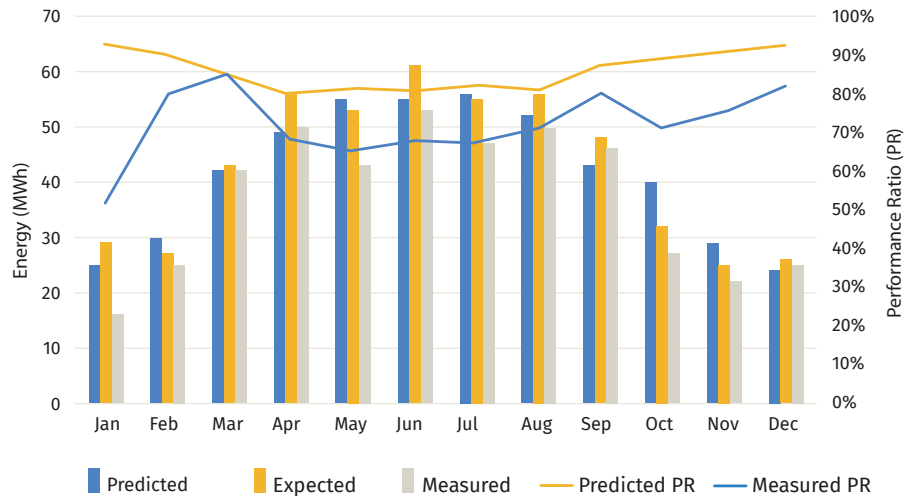
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Tracking KPIs using reliable estimates of expected power from SolarAnywhere SystemCheck

"The difference between the SystemCheck data and that of a professionally installed & Calibrated MET station was calculated to be equal to or less than the measurement accuracy of the weather stations. Combine this accuracy with the increased reliability that SystemCheck offers, and you have an O&M solution that costs less and saves valuable personnel resources that can instead be focused on value-added repairs and maintenance. Less time and truck rolls are dedicated to MET stations, leaving more time for the energy-generating equipment"

Nick Pegnato
Performance Engineering Manager, BayWa r.e.

SolarAnywhere SystemCheck Validation

The SystemCheck real-time model provides data up to the current hour, with observations updated every 30 minutes. This real-time data model is optimized to provide fast results without sacrificing the accuracy of the bankable SolarAnywhere historical model. The table on the right compares relative mean absolute error (rMAE) and relative root mean square error (rRMSE) calculated for real-time and historical (V3.7) data across 12 validation sites in the United States. If you are interested in learning more, request the in-depth validation of the real-time or historical data model from the SolarAnywhere team.

		Real-Time Model	Historical Model V3.7	Difference[1]
GHI rMAE	Annual[1]	1.0%	1.3%	0.3%
	Monthly	3.1%	2.3%	0.8%
	Hourly	11.0%	10.7%	0.3%
GHI rMSE	Annual[2]	1.0%	1.3%	0.3%
	Monthly	3.9%	2.9%	1.0%
	Hourly	17.5%	17.3%	0.2%

[1]Difference = Absolute Value (Historical – Real-Time)
[2]Annual rMAE and rMSE are identical because only one year is considered in the calculation

SolarAnywhere SystemCheck Specifications

Time Period	-45 days through current hour (nowcast)
Access Point	API
Geography[1]	Global
Spatial Resolution	1 km
Temporal Resolution	1-hour, 30-minute, 15-minute

Data Fields

Irradiance
GHI
DNI
DHI
Clear sky irradiance

Weather
Temperature
Wind speed
Snow depth
Relative humidity
Precipitation

Power Modeling
AC energy (kWh)
AC power (kW)
DC power (kW)
Clear sky power (kW)
Plane-of-array irradiance (POAI)
Fixed tilt, single-axis trackers, backtracking
Snow losses
Bifacial PV

Auxiliary
Surface albedo
Elevation

Options
Get any data needed for your application through our seamless API. Include historical data past the trailing 45 days a la carte or ask about including SolarAnywhere Forecast® with your purchase.

[1] See the SolarAnywhere Geographic Coverage Area page for more details

Learn More

Interested in learning more about SolarAnywhere SystemCheck? Visit solaranywhere.com/products/solaranywhere-systemcheck.

About SolarAnywhere

SolarAnywhere solar resource data and intelligence supports the entire solar lifecycle—from prospecting and development, to asset management and production forecasting. To learn more about industry-leading data and services from Clean Power Research, visit solaranywhere.com.