



SANDY FORECAST SERVICE:

# Photovoltaic Production Forecast



## KNOWING WHAT TO EXPECT

The economic efficiency of PV systems is significantly determined by the amount of the self-consumption. It can be actively increased when power consumers or battery storages are incorporated. But how can the increase of the self-consumption be planned without knowing when the PV system will delivery a sufficient amount of power?

The SANDY “**Photovoltaic Production Forecast**” makes it possible to predict the hourly output of a PV system to be expected up to the end of the following day. This prognosis incorporates historical production measurement values of the PV system and the local weather forecast. The economic potential of self-produced energy can thereby be fully exhausted.



“The SANDY ‘Photovoltaic Production Forecast’ incorporates historical production measurement values of the PV system and the local weather forecast.”



## YOUR BENEFIT

By integrating the intelligent and innovative SANDY “**Photovoltaic Production Forecast**”, you are making your product more attractive to the customer. Because if the PV production to be expected is known, the when and how this energy will be utilized can be planned better.

This helps to optimize the economic efficiency of the system, for example by increasing the self-consumption rate in your service to manage consumers or battery storages or for information about when which energy quantities can be produced and marketed or fed into the network.

The SANDY “**Photovoltaic Production Forecast**” is based on the counter data of an existing production counter, is self-learning and adapts the prognosis to changing conditions. System-specific characteristics are automatically taken into consideration in the prognosis model, for instance degradation, drop of power or shading. In addition to private users, business operators or network operators, the SANDY “**Photovoltaic Production Forecast**” can also be used for large freestanding systems to optimize energy commercialization.



“By integrating the SANDY ‘Photovoltaic Production Forecast’ you are making your product more attractive to the customer. Because if the PV production to be expected is known, the when and how this energy will be utilized can be planned better.”

## TARGET GROUP

- › Smart Home providers
- › Energy management system developers
- › Power brokers
- › Manufacturers of battery storage systems
- › Providers of solutions surrounding photovoltaics
- › App and application developers

## ADDED VALUES FOR YOUR CUSTOMERS

- › Increased economic efficiency of PV systems
- › Increased transparency

## ADDED VALUES FOR YOUR COMPANY

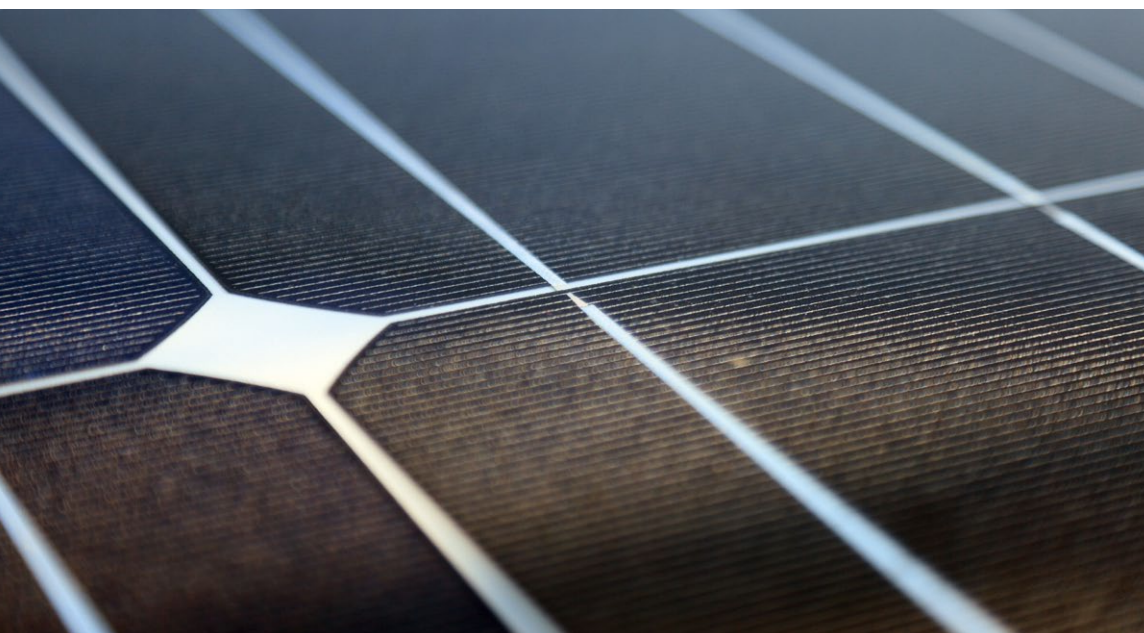


“Optimal availability, automatic updates and no maintenance expense thanks to the software as a service.”

- › intelligent and innovative enhancements for your products
- › Increase of customer satisfaction because your customer is saving money and energy
- › quick and easy integration
- › scaling with growing customer base
- › all of the benefits of “Software as a Service”, for instance high availability, automatic updates, no maintenance expense
- › no transmission of personal data necessary

## TECHNICAL DETAILS

- > Cloud service
- > Communication via state-of-the-art RESTful API
- > Input:
  - Amount of energy produced by the PV system every 15 minutes
  - Customer's postal code for location identification
- > Output:
  - Production prognosis up to the end of the following day in 15 minute intervals
- > Security:
  - encrypted data transmission via HTTPS
  - authorization via individual API key
  - reliable operation in the Microsoft Azure Cloud



"The SANDY 'PV Production Prognosis' makes it possible to predict the output to be expected in 15 minute intervals up to the end of the following day."

## USE SCENARIO

### Application example private household

If the PV system produces more power than can be self-consumed at present, it either throttled in the output or the excess power is fed into the public network at a low price. Vice versa, any required power due to a lack of solar irradiation must be procured from the network at a high cost. If it is known in advance when a high PV production is to be expected, the use of specific power consumers can be specifically scheduled during those times. For example, the use of a washer or dryer, charging an electric car or heating up the hot water tank.

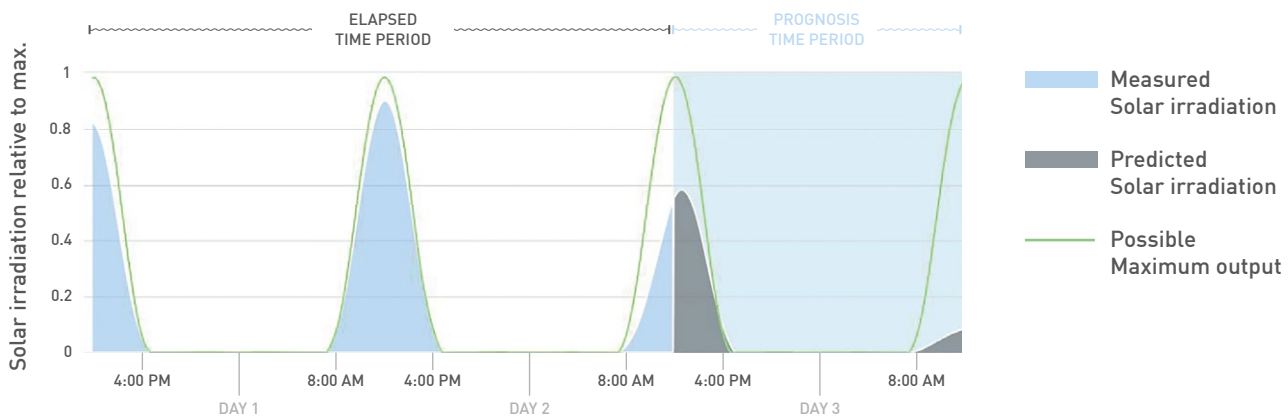


Fig.: Prognosis of the power production in relation to the possible maximum output



## A SOLUTION WITH MANY CAPABILITIES

The SANDY “Photovoltaic Production Forecast” is quite suitable for the combination with our product “Household prognosis”. Instead of the regular transmission of PV production data, a one-time transmission of production data from past years is also possible. However, automatic post-learning requires a regular transmission of actual data. A customer-specific connection is possible upon request.

## WE ARE HAPPY TO ASSIST YOU!

Take advantage of the innovative SANDY concept and contact us today!  
We look forward to your inquiry:

Phone: +49-221-2612-167  
[info@energizedanalytics.com](mailto:info@energizedanalytics.com)



“We look forward  
to your inquiry!”

# SANDY TURNS DATA INTO VALUES

SANDY Energized Analytics supplies companies with innovative, cloud-based analytics as a service solution. We deliver realtime data based decision-making recommendations to our customers for the continuous increase of the value of their products, services and processes – quick, precise and safe. Our young dynamic team unites the functional competence from IT expertise and business model development and shares the passion to discover great things in small things. From complete solutions to an individual Carefree Service Package, we have the perfect answer to your digital challenge – for your decisive competitive edge.



New  
perspectives  
for your  
business

SANDY Energized Analytics  
Siegburger Str. 229 · 50679 Cologne · Germany  
Phone: +49-221-2612-167  
[info@energizedanalytics.com](mailto:info@energizedanalytics.com)  
[www.energizedanalytics.com](http://www.energizedanalytics.com)



**SANDY**  
Energized Analytics

An innovation of

