



SANDY FORECAST SERVICE:
**Household Power
Load Forecast**



HIGHER RETURN FOR YOUR PRODUCTS – KNOWING WHEN HOW MUCH IS CONSUMED

The power demand of households is very different and subject to individual fluctuations. Depending on times of presence and consumption behavior of the residents, the load may vary throughout the week or day. This presents a major challenge for the efficient use of local energy management systems because the production, consumption, storage and supply of power must be coordinated in detail and intelligently to be able to utilize the entire available potential. The suitability of standard load profiles for this purpose is very restricted.

The SANDY “**Household Power Load Forecast**” provides you with the expected household-specific power consumption in detail and thereby establishes the prerequisite for truly intelligent energy management solutions.



“Depending on times of presence and consumption behavior of the residents, the load may vary throughout the week or day.”



PRODUCT BENEFITS IN DETAIL

The investment in high-quality local generation systems, such as PV systems or block heating stations, are tied to corresponding expectations for returns on the customer side. In this case, all technical efficiencies that can be realized must be utilized. A simple option is the utilization of existing Smart Meter data for an individual consumption prognosis on a 15 minute basis for the next 48 h. This permits the determination of the ideal energy management strategy between generation, consumption, storage and supply as well as the prevention of throttle losses in detail. This provides optimal management of the energy flows.

The SANDY Forecast Service thereby analyzes and predicts the ACTUAL consumption data of the household and creates a detailed prognosis of the consumptions 48 h into the future. The SANDY “**Household Power Load Forecast**” is based on state-of-the-art Machine Learning Algorithms, is thereby self-learning and continuously adapts itself to changed consumption behavior. Individual behavior patterns, changes in household size (for instance due to family additions), vacation weekends and local holidays are thereby continuously taken into account to further increase the prognosis accuracy.

Because of the automatic integration of the individual consumption prognosis in existing energy management solutions, the user can profit from higher efficiency and returns of their solution.



“The SANDY Forecast Service delivers the ideal energy management strategy between generation, consumption, storage and supply.”

TARGET GROUP

- › Smart Home providers, battery storage system manufacturers, providers of solutions surrounding photovoltaics and BHKW's, app and application developers, system and component suppliers of intelligent energy solutions

ADDED VALUES FOR YOUR CUSTOMERS

- › higher return and faster amortization
- › innovative product feature in the energy management system

ADDED VALUES FOR YOUR COMPANY

- › intelligent and innovative enhancements for your products
- › better accuracy than with standard load profiles
- › dynamic adaptation to new consumption patterns
- › Increased economic efficiency of your product selection
- › fast, easy, cost-efficient integration in existing systems
- › scaling with growing customer base
- › all of the benefits of "Software as a Service", for instance high availability, automatic updates, no maintenance expense
- › no use of personal data
- › high degree of security with secured and encrypted interfaces



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

TECHNICAL DETAILS

- › Cloud service
- › Communication via state-of-the-art RESTful API
- › Input:
 - power consumption measured by Smart Meters every 15 minutes
 - City or Zip code of the customer
- › Output:
 - Power consumption prognosis in 15 minute intervals for the next 48 hours
- › Security:
 - encrypted data transmission via HTTPS
 - authorization via individual API key
 - reliable operation in the Microsoft Azure Cloud



"Predicted consumption of the customer in the requested prognosis period."

USE SCENARIO

Increase of the self-consumption rate

As a provider of energy management systems or battery storages, you want to present the greatest possible economic efficiency of your system to your customer. The knowledge of the individually expected household-specific power demand presents a major contribution for the maximum increase of the self-consumption rate and the reduction of the residual current consumption.

The example below shows deviations of load profiles of actual households with individual times of presence and absence compared to an H0 standard load profile. It becomes clear that the knowledge of the actual household power load to be expected is a relevant input variable for the management of efficient systems.

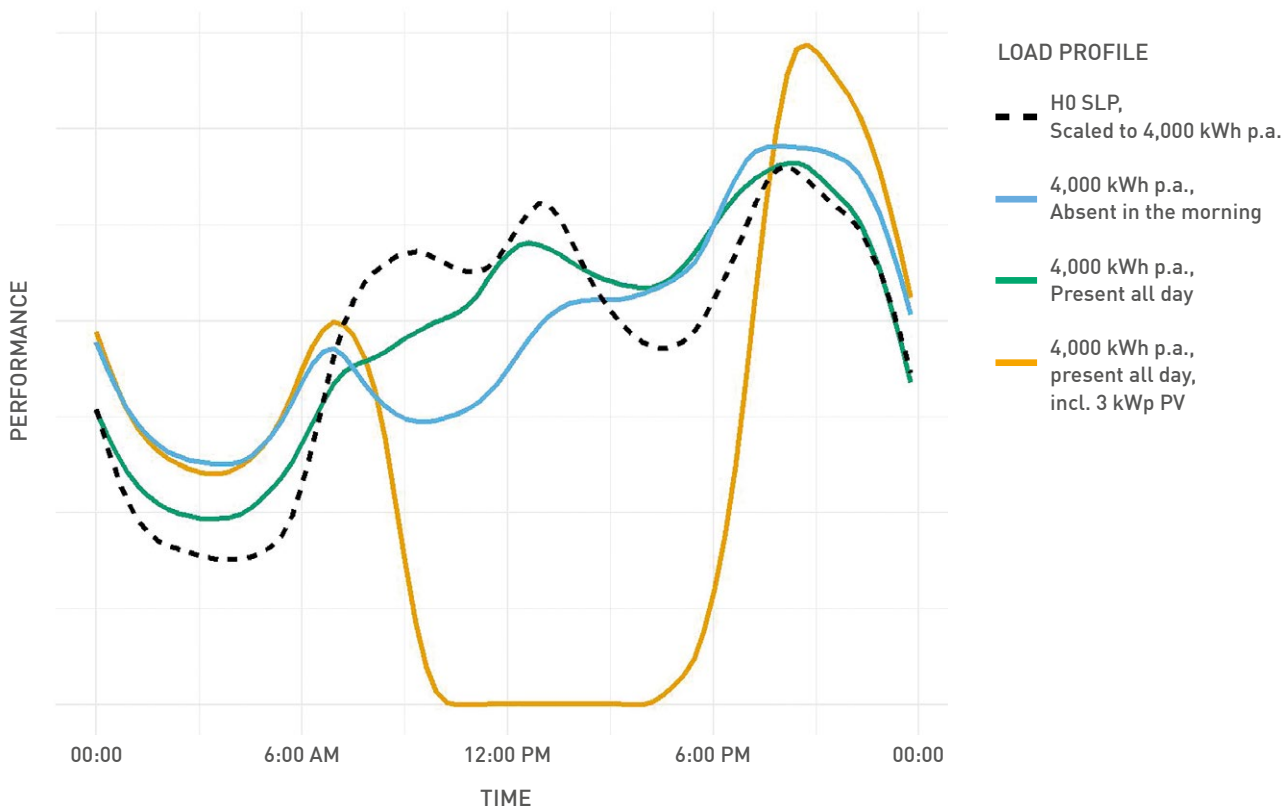


Fig.: Load profile on a summer day in July

A SOLUTION WITH MANY CAPABILITIES

The product is also well suited for combination with our product SANDY “Photovoltaic Surplus Forecast” for intelligent charging of batteries. Also interesting for households without digital measurements are our “**individual household power load profiles**” and our prognosis services for the PV production. 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:

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“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

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