

# SG CONNECT

## HIGHLIGHTS



[WWW.SGCONNECT.EU](http://WWW.SGCONNECT.EU)



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## INTRODUCTION

# General Information

Smart Grid Connect is an independent digital energy platform that creates a virtual environment to connect electricity producers and consumers. Through the intelligent control of energy flows in real time, all users benefit from the advantages of this platform. Dynamic power generation and the use of battery system capacities at both household and industrial level enable the Smart Grid Connect community to manage their energy resources reliably, efficiently and economically.

## OUR PLATFORM OFFERS:

**1**

User friendly software solution with centralized management via mobile application.

**2**

Energy cost reduction by using dynamic market prices and smart management of our own resources.

**3**

Increase of self consumption and reduction of carbon footprint.

**4**

Highest level of cyber security, using EU based servers and our own security software.

**5**

Highest level of reliability and comfort with the possibility of emergency power supply.

# SG CONNECT

## Your Benefits



### PEAK SHAVING

It optimizes energy consumption from the electricity grid by limiting to a predefined threshold. If the actual consumption exceeds this limit, the difference is compensated by activating the battery.

**Your benefit:** Grid fees are effectively reduced.



### LOAD SHIFTING

Energy demand is shifted from peak to off-peak times. With the in-house ESGP platform, time frames with low electricity prices can be specifically utilized.

**Your benefit:** Energy costs are reduced.



### BACKUP POWER

In the event of a blackout, the SG-Connect system switches to emergency power supply within 20ms.

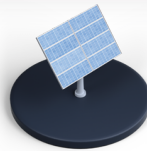
**Your benefit:** Ensuring the continuous functionality of your household appliances.



### CARBON FOOTPRINT REDUCTION

Stabilizing the electricity grid and management of production and consumption fluctuations lead to a reduction in backup devices based on conventional energy sources such as diesel or natural gas.

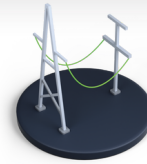
**The benefit for all of us:** Improved efficiency of photovoltaic systems means a reduction in CO2 emissions and other greenhouse gases.



### SELF CONSUMPTION OPTIMISATION

The most effective energy savings result from increasing self-consumption. By storing energy, the surplus from the photovoltaic system can be stored and used when there is little or no sunlight.

**Your benefit:** Energy costs as well as grid fees are reduced.



### GRID SERVICES

As an owner of an SG-Connect system, you can actively participate in national system services. The electricity transmission system, for example, is crucial for European independence, economic prosperity, and social security. (Country-specific function)

**Your benefit:** A stable electricity grid reduces maintenance costs and increases the competitiveness of the local economy.



### DYNAMIC FEED IN

The SG-Connect platform adjusts the feed-in power of the photovoltaic system based on the grid loads and allows for feeding-in that exceeds the export limit defined by the grid operator. With dynamic feed-in, solar energy can be partially or fully injected into the grid during low grid loads. (Country-specific function)

**Your benefit:** Significant reduction in the amortization time of the system.



### DEMAND RESPONSE

Together with the ESGP platform and the SG-Connect system, we enable you to respond flexibly to requirements for relieving the electricity grid. In the event of an overload caused by the feed-in of unstable energy producers, the request is activated by the transmission system operator and forwarded to the Synaptic unit. This unit activates battery charging and additionally connected SG-Ready devices. (Country-specific function)

**Your benefit:** During activation, only reduced grid fees apply.



### DYNAMIC PRICES

If your energy provider offers dynamic electricity tariffs, SG-Connect allows you to charge the battery and activate devices connected to the SG-Ready interface during favorable time frames. By combining this with the load shifting function, you can efficiently take advantage of price fluctuations on the European spot and day-ahead markets. (Country-specific function)

**Your benefit:** Low prices and free electricity during certain time frames.

## COMPONENTS

# Smart Box

Connection interface for a building's energy management system.



### PRE-INSTALLED

Simple, cost-efficient Installation.



### EQUIPPED

The intelligent Synaptic unit increases the system's energy efficiency.



### TIMED

Real-time visualization in 2 second intervals via an additionally integrated smart meter.



### SEAMLESSLY

Simple concept for integrating the inverter and battery storage system.



### ACTIVATION

Simple control of intelligent consumers:

- Heat Pumps
- Electric heating elements
- Electric charging stations
- SG-Ready devices.

## COMPONENTS

# Synaptic

Synaptic from NGEN SG Connect is the central control system within the Smart Grid Connect ecosystem. As the heart of the infrastructure, it enables seamless communication and control of various components in the energy management system.



## ITS FUNCTIONS INCLUDE:



Central control of all connected devices such as solar systems, battery storage and smart household appliances.



Enables real-time monitoring of energy consumption, energy production and other relevant parameters throughout the system.



Advanced algorithms and AI technologies to optimize energy management based on consumption profile.



Integration of the power grid and support for bidirectional communication to directly respond to market signals.

## COMPONENTS

# SG Connect

Enables seamless integration of a variety of energy producers and consumers into the local energy management system.



## THIS INCLUDES:

### INVERTERS

To ensure the perfect communication of our products we offer our Ngen-Star inverters.

### BATTERY STORAGE

Ngen also has state-of-the-art energy storage systems that store excess energy for later use.

### SMART DEVICES

Heat pumps, washing machines, kitchen appliances, and other SG-Ready devices can be integrated to optimize electricity consumption.

### EV CHARGER

A state-of-the-art, secure, and reliable charging solution for integration into local energy management and utilization of surplus photovoltaic energy.

## GET CONNECTED!

# Smart Grid Connect App

### INSTALLATION

The App is available for download on Google Play Store (Android) or the App Store (iOS). Search for “Smart Grid Connect” in the App Store and follow the installation instructions.

### REGISTRATION AND LOGIN

Register once with a valid email address and password. You will then receive a confirmation email with an activation link. Follow the instructions in the email to complete the registration.

### USING THE APP

Easily manage and monitor your system in our app:



# SG CONNECT

## Advantages for the end customer

### EFFICIENT ENERGY MANAGEMENT

By centrally controlling and monitoring various energy sources and consumers, NGEN SG Connect enables efficient use of energy and resources.

### COST SAVINGS

The intelligent optimization of energy consumption and energy flows helps end customers to reduce their electricity bills by maximizing the use of cost-effective energy sources and reducing expensive peak loads (peak shaving as well as dynamic pricing).

### ENVIRONMENTALLY FRIENDLY

By integrating renewable energy sources such as solar and battery storage systems as well as the intelligent use of energy sources, NGEN SG Connect helps to reduce the carbon footprint and minimize environmental impact.

### ENERGY INDEPENDENCE

NGEN SG Connect enables end customers to optimize and control their own energy production, resulting in increased self-sufficiency and independence from external energy suppliers. The system also offers a complete emergency power supply that can easily compensate for power outages.

### ENERGY INDUSER-FRIENDLINESPENDENCE

NGEN SG Connect's intuitive user interface allows end customers to easily monitor their energy consumption, adjust settings and receive notifications, making the system easier to use and manage.

### GRID STABILITY

Through bidirectional communication with the power grid and intelligent grid integration, NGEN SG Connect helps to stabilize the power grid by responding to market signals and helping to reduce overloads.



**Simple  
Installation**



**High  
Efficiency**



**Expandable  
System**



**90% Discharge  
Range**



**Heatpump  
Integration**



**EV Charger  
Ready**



**Backup power  
4,5-30 kW**