Smart Grid Connect

Application Manual

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1. Introduction

Welcome to SG Connect, a comprehensive application designed to optimize and manage your home energy system. With SG Connect, you can monitor and control your solar PV plant, battery storage, large consumer appliances, and manage your connection to the electrical grid—all in one place.

2. Getting started

2.1. System requirements

2.1.1. Supported Operating Systems:

- Windows
- macOS
- iOS
- Android

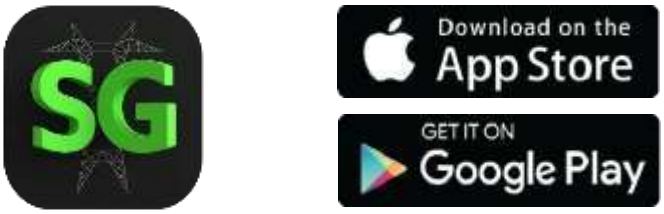
2.1.2. Internet Connection:

- Cloud synchronization to keep your data up to date across devices.
- Real-time updates for optimal performance and the latest features.
- Remote access and monitoring of your system.

2.2. Installation and Access Instructions

2.2.1. Mobile Devices (iOS & Android)

- Download the Smart Grid Connect App from the Apple App Store or Google Play Store.



- Follow the on-screen instructions to complete the installation.

2.2.2. Desktop Access

- Open your web browser and visit the Smart Grid Connect Monitoring Portal: app.ngen.si

3. User Interface Overview

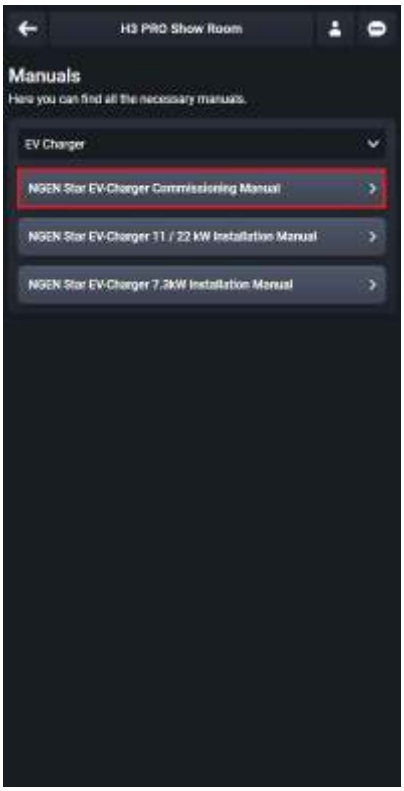
When you open the Smart Grid Connect App, the Device Overview screen appears first. Here, you can select the device you want to manage, view detailed information, monitor system performance, and adjust settings if needed. The Device List Provides a comprehensive overview of all devices linked to the selected location. This interface is designed to provide users with quick access to system management tools and a clear overview of all connected devices.

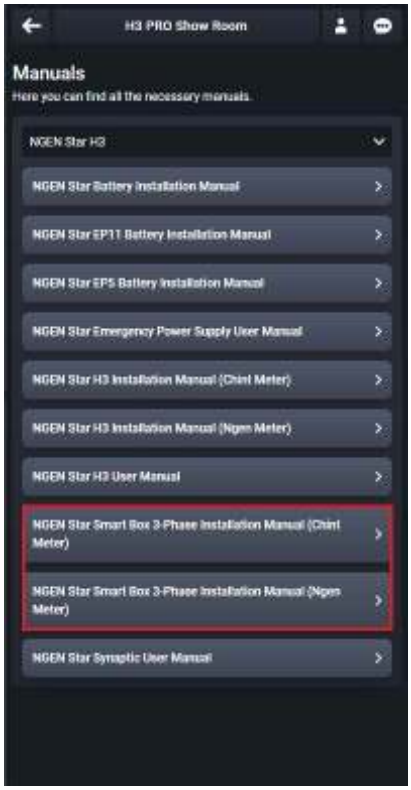
3.1. Buttons for adding new Devices

To set up a new system in the Smart Grid Connect App, the following options are available:

- **Add Device**: Select this option to integrate a NGEN-Star System (inverter, battery, Smart Box).
- **Add Charger**: Select this option to integrate an EV charging station.

For proper commissioning and configuration of the respective system, please refer to the corresponding commissioning instructions. The commissioning manuals can be found in the Smart Grid Connect App. Please see Section 8 of this manual for details.





3.2. Home page

The Home Page screen displays a real-time overview of your energy system's performance, providing insights into solar generation, home consumption, grid interaction, and battery storage status:

1. **Solar Power Generation:** The "Solar" section shows the current power output of your solar panels in kilowatts (kW). This allows you to monitor how much energy your system is generating from sunlight.
2. **Home Power Consumption:** The "Home" section indicates the energy being consumed by your household. This helps you understand your current power usage.
4. **Grid Connection**: The „Grid" section shows the power flow between the system and the grid, indicating the amount of energy being imported or exported.
5. **Battery Status:** The "Storage" section provides the battery's state of charge (in percentage) and its current operational mode (e.g., Standby, Discharging, Charging). This helps you track your battery usage and available backup power.
5. **Interactive 3D Visualization**: The graphical representation of your home shows how energy flows between the solar panels, grid, battery, and your household appliances. This allows you to quickly get an overview of the system operating status.

3.3. Shortcut Menu Buttons

- **Battery Settings**: Adjust battery-related configurations such as charging and discharging thresholds. (See 6.1)
- **Relay Control**: Manage the relays for connected intelligent devices. (See Section 6.2)
- **Operation Mode**: Switch between modes like Standard Peak-Shaving mode, Advanced Peak-Shaving mode or Time-based control (See Section 6.3)
- **Electricity Prices**: Insights into Day-Ahead electricity prices enable you to optimize your energy consumption efficiently. (See Section 7.)

4. Energy

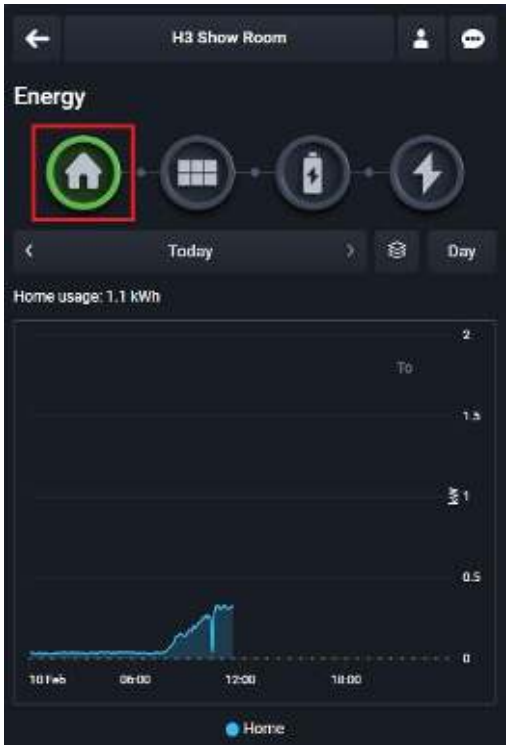
On the Home Page, within the “Today Energy” section, you will find tabs for different energy categories such as Solar, Home, Grid, and Storage. Each tab is interactive and provides detailed insights into the selected category on the Energy Screen.

4.1. Navigating to the Energy Screen

Step 1: Tap on any of the tabs under the Today Energy section:

- **Solar:** Opens the Energy Screen with data on energy generation.
- **Home:** Displays detailed insights into energy usage within your home.
- **Grid:** Shows grid import and export activity.
- **Battery Storage:** Provides information on battery charge and discharge performance.

Step 2: The selected category will be highlighted on the Energy Screen, with corresponding energy data displayed (e.g., home usage).



4.2. Energy Screen Icon-Features

In the Energy section of the Smart Grid Connect App, there are three icons located in the top right corner just below the energy icons. These icons allow you to change the timescale for the displayed data and adjust the view for better insights.

Timescale Icon:

- **Description:** Represents a calendar or clock.
- **Function:** Opens a drop-down menu allowing you to select different timescales for data visualization. Options include:
    - Day
    - Month
    - Year
    - Lifetime

Once you select a timescale, the displayed data on the graph will adjust accordingly, showing energy data for the chosen period.

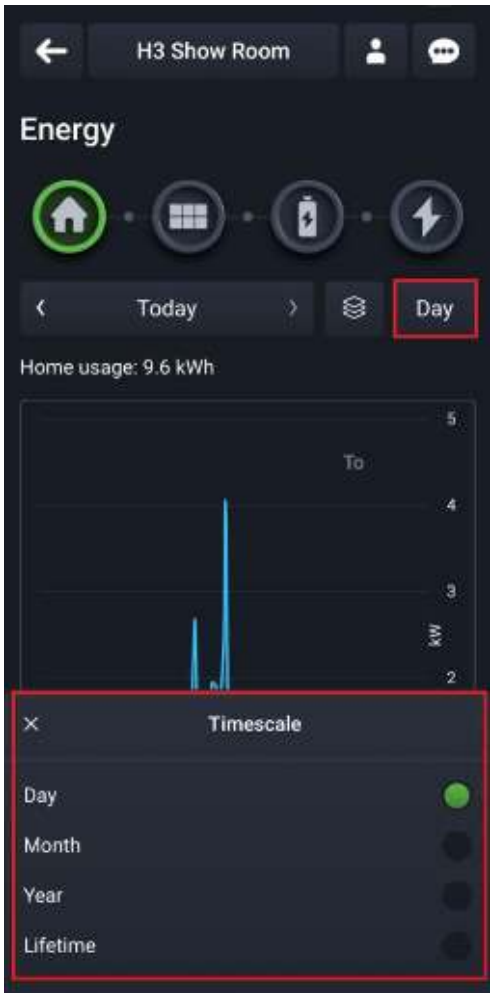
– **Example**: Switching between the days will change the graph to display daily data points for the entire day.

Stacked Chart Icon:

- **Description:** Represents stacked lines or bars.
- **Function:** Toggles the visualization style between stacked charts and overlay charts, offering different perspective on the distribution and comparison of energy sources and usage.
- **Example:** Switching to a stacked chart displays the contribution of solar, battery, and grid sources stacked on top of each other, providing a cumulative view of energy flow.

Day/Month/Year/Lifetime Dropdown:

- **Description:** Shows "Day", "Month", "Year" and "Lifetime“ based on the current view.
- **Function:** When clicked, this dropdown allows you to quickly toggle between day, month, year and lifetime views.
- **Example:** In "Day" view, you see hourly data for the selected day. In "Month" view, you see daily data for the selected month.



4.3. House consumption tab

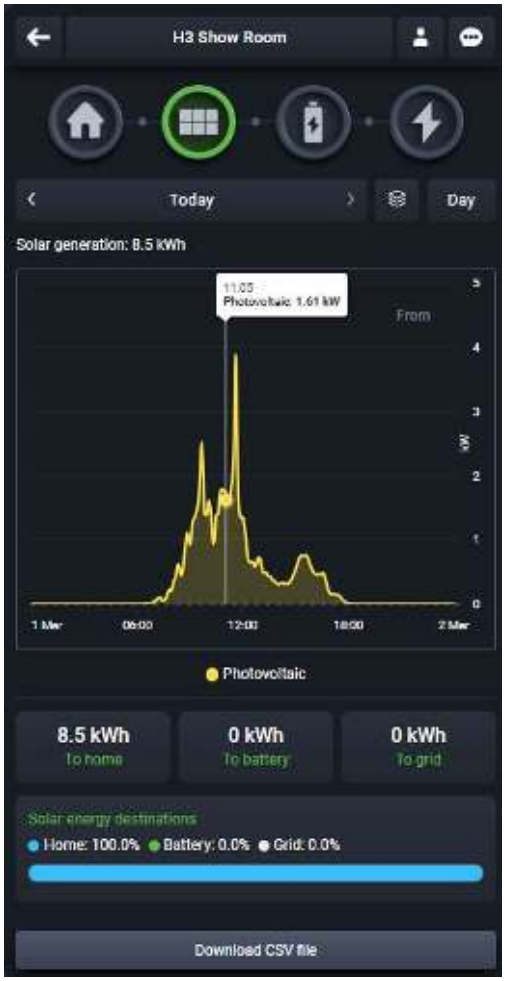
The house consumption tab within the energy section provides insights into the energy consumption of your household.

- **Graph:** Displays a time-based graph of your home energy usage. The x-axis represents the time of day, while the y-axis represents the power in kilowatts (kW).
- **Home usage:** Displays the cumulative home energy usage shown at the top (e.g., 9.6 kWh).
- **From solar:** Current energy generated from solar panels.
- **From battery:** Current energy supplied by the battery.
- **From grid:** Energy drawn from the grid.
- **Home energy sources:** A bar showing the percentage contributions from the solar, battery, and grid to the total home energy usage:
    - **Yellow (from solar):** Percentage of energy provided by solar (e.g., 88.3 %).
    - **Green (from battery)**: Percentage of energy provided by batteries (e.g., 11.8 %).
    - **Gray (from grid):** Percentage of energy provided by the grid (e.g., 0.0 %).
- **Download CSV:** Option to download all of your house consumption data in a CSV-file format for further analysis of the system efficiency.

4.4. Solar production tab

The solar production tab within the energy section provides insights into the energy generated by your solar panels.

- **Graph:** Displays a time-based graph of your solar energy generation. The x-axis represents the time of day, while the y-axis represents the power in kilowatts (kW). Hover over the graph to see specific values at different times of the day.
  Example: At 11:05, the photovoltaic output was 1.61 kW.
- **Solar generation details:** Displays the cumulative solar energy generated (e.g., 8.5 kWh).
- **From solar:** Energy generated by solar panels (e.g., 8.5 kWh to home, 0 kWh to battery, 0 kWh to grid).
- **Solar energy destinations:** A bar showing where the generated solar energy is being directed in percentage (%):
  - **Home (blue):** Percentage of solar energy used directly by the household (e.g., 100 %)
  - **Battery (green):** Percentage of solar energy stored in the battery (e.g., 0.0 %).
  - **Grid (grey):** Percentage of solar energy fed back into the grid (e.g., 0.0 %).
- **Download CSV:** Option to download your solar energy data in a CSV-file format for further analysis of the system efficiency.



4.5. Battery tab

The battery tab within the energy section allows you to monitor the status and usage of your battery storage system.

- **Graph:** Displays a time-based graph of your battery charge and discharge activities. The x-axis represents the time of day, while the y-axis shows power in kilowatts (kW). Positive values indicate discharge (energy being supplied), and negative values indicate charge (energy being stored).
  Example: At 11:05, the battery was discharging with 0.162 kW.
- **Battery discharge details:** Displays the cumulative battery discharge for the day (e.g., 1.1 kWh).
- **From battery:** Energy supplied by the battery (e.g., 1.1 kWh).
- **To battery:** Energy stored in the battery (e.g., 0.0 kWh).
- **Battery charge sources:** A bar showing the sources of energy used to charge the battery:
  - **Grid (white):** Percentage of energy sourced from the electrical grid (e.g., 0.0 %).
  - **Solar (yellow):** Percentage of energy sourced from solar panels (e.g., 0.0 %).
- **Battery charge level graph:** Another graph that displays the battery charge level percentage over time.
  Example: At 12:00, the battery charge level was at 99 %.
- **Download CSV:** Option to download your battery data in a CSV-file format for further analysis of your system.

These features enable you to efficiently manage and optimize the charging and discharging cycles of your battery storage system, ensuring you have energy available when you need it.

4.6. Grid tab

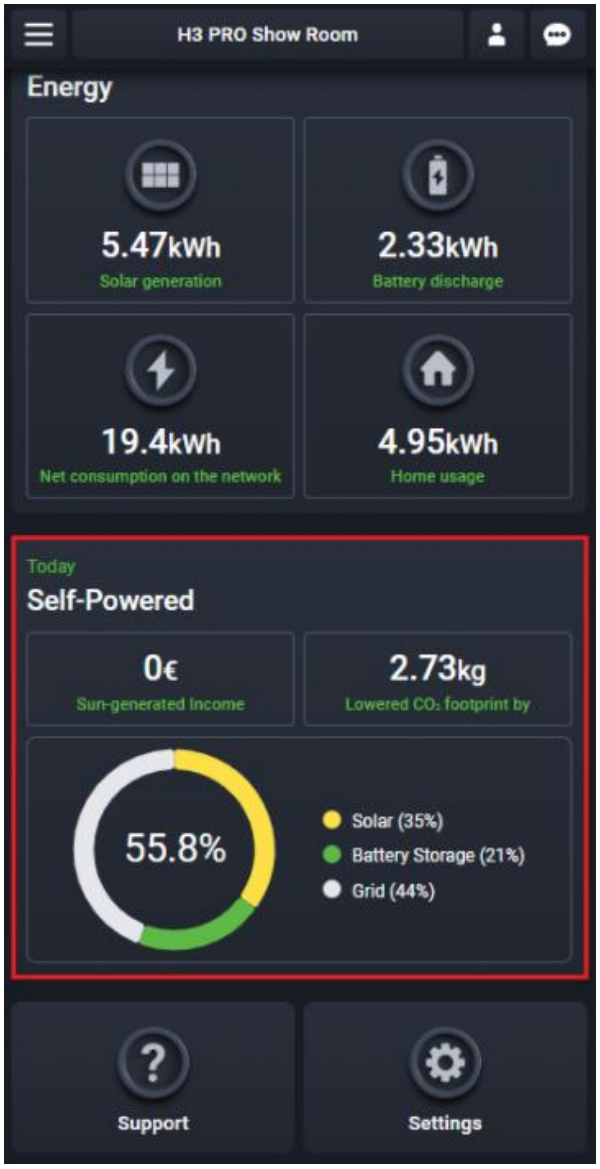
The grid tab within the energy section provides insights into your interaction with the electrical grid, including energy drawn from and supplied to the grid.

- **Graph:** Displays a time-based graph of your net grid consumption. The x-axis represents the time of day, while the y-axis shows power in kilowatts (kW). Positive values indicate energy drawn from the grid, and negative values indicate energy supplied to the grid.
  Example: At 17:35, the grid consumption was 1.002 kW.
- **Net consumption details:** Displays the cumulative net grid consumption for the day (e.g., -25.3 kWh).
- **From grid:** Total energy drawn from the grid (e.g., 1.0 kWh).
- **To grid:** Total energy supplied to the grid (e.g., 26.3 kWh).
- **To home:** Energy drawn from the grid used by the home (e.g., 0.0 kWh).
- **To battery:** Energy drawn from the grid stored in the battery (e.g., 1.0 kWh).
- **Grid energy destinations:** A bar showing where the energy drawn from the grid is being utilized:
  - **Home (blue):** Percentage of grid energy used directly by the household (e.g., 1.1 %).
  - **Battery (green):** Percentage of grid energy used to charge the battery (e.g., 98.9 %).
- **Download CSV:** Option to download your grid energy data in a CSV-file format for further analysis of your system.

These features ensure you have a clear understanding of your grid interaction, helping you manage your energy consumption effectively and optimize costs.

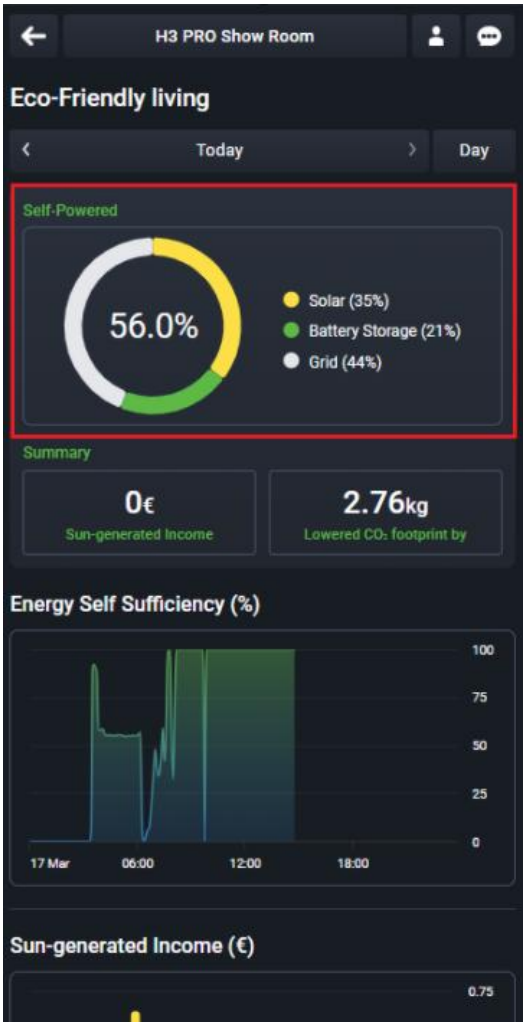
5. Eco-Friendly Living

On the Home Page, within the “Today Self-Powered” section, you will find a comprehensive overview of your energy independence, highlighting your energy sources and their contributions to sustainability. Each tab is interactive and takes you to the Eco-Friendly Living screen, where detailed statistics and visualizations help you understand and optimize your self-powered practices.



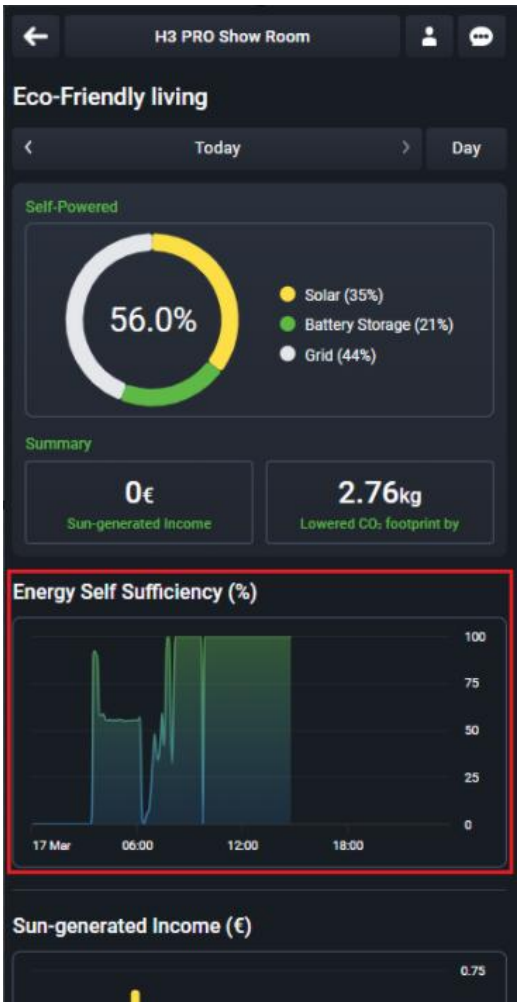
5.1. Self-powered

- **Donut chart:** Displays the percentage of energy that is self-powered versus sourced from the grid.
- **Solar (yellow):** Percentage of energy from solar panels (e.g., 35.0 %).
- **Battery storage (green):** Percentage of energy from battery storage (e.g., 21.0 %).
- **Grid (grey):** Percentage of energy sourced from the electrical grid (e.g., 44.0 %).
- **Overall self-powered percentage:** The overall percentage of energy that is generated from renewable sources (e.g., 56.0 %).



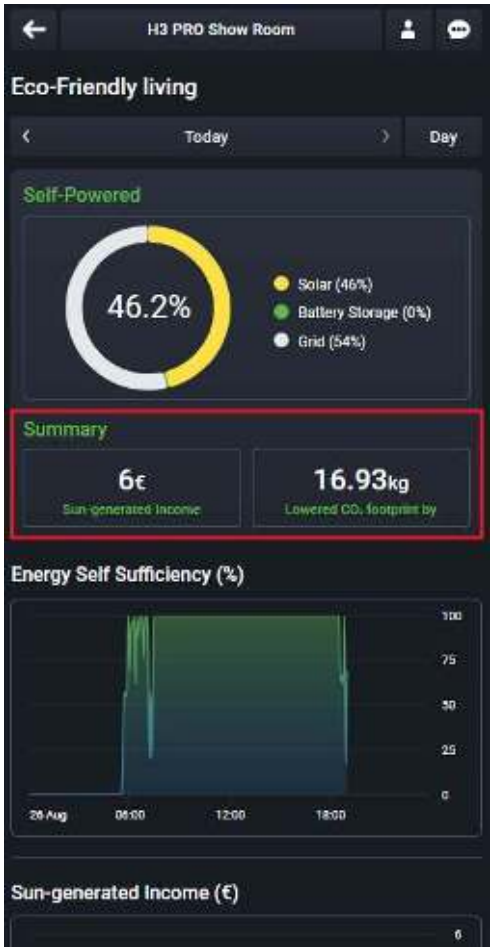
5.2. Energy Self-Sufficiency

- **Line diagram:** Displays the daily energy self-sufficiency percentage for the selected month. Each bar represents a day, showing the contributions from solar and battery storage.



5.3. Summary

- **Sun-generated income:** Displays the income generated from solar energy (e.g., 6.0 €).
- **Lowered CO2 footprint:** Calculates and displays the reduced carbon footprint from using renewable energy sources (e.g., lowered by 2.76 kg).



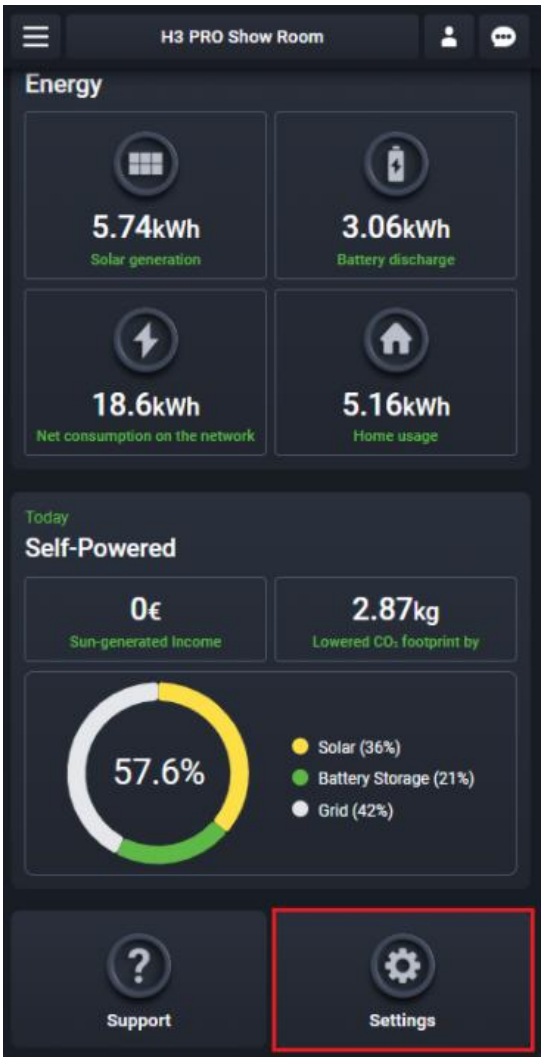
5.4. Solar Offset

- **Energy offset comparison:** Compares the total solar energy generated to the total home energy consumption.
- **Energy offset percentage:** The percentage of home energy consumption offset by solar generation (e.g., 118.3 %).
- **Solar energy generated:** Total solar energy generated (e.g., 5.74kWh).
- **Home energy consumption:** Total home energy consumption (e.g., 4.85 kWh).

These features enable you to track your progress towards a more sustainable and eco-friendlier lifestyle, helping you make data-driven decisions to reduce your environmental impact.

6. Settings

The Settings menu, accessible via the bottom menu on the home page, allows you to adjust various configurations of your energy system. This section provides detailed information on the available settings options within the application.

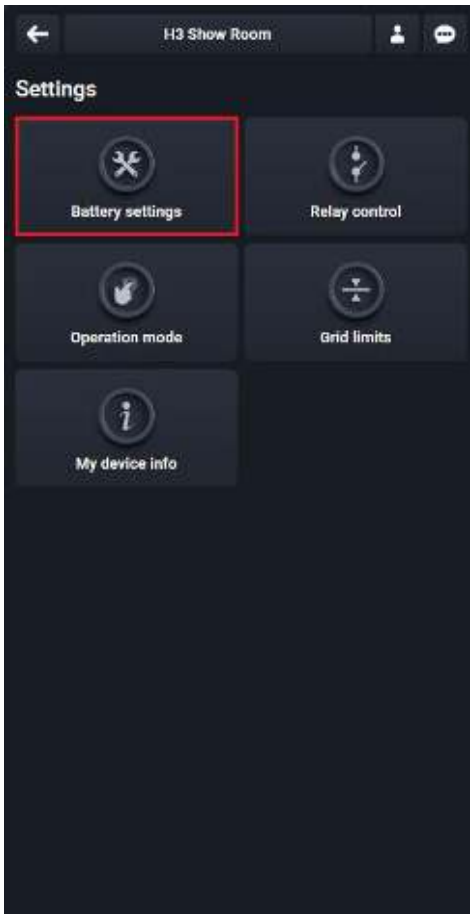


6.1. Battery settings

The battery settings section allows to configure the operational parameters of the battery system, ensuring optimal performance and efficiency. Below are the adjustable settings available in this section.

6.1.1. Accessing Battery Settings

From the settings page, tap the "Battery settings" menu item. You will be directed to the battery settings page where you can view and adjust various battery parameters.

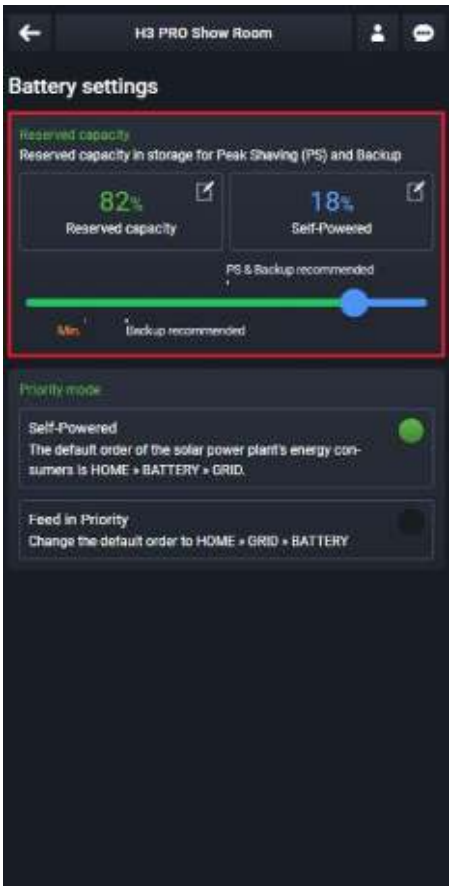


6.1.2. Configurable Battery Settings

1. **Reserved capacity:**

Within the Reserved capacity section, you can specify how much of the battery's capacity should be reserved for specific purposes.

- **Reserved Capacity (%):** Set the portion of the battery reserved capacity for Peak Shaving (PS) and Backup. Tap the pencil icon to adjust the percentage as needed.
- **Self-Powered (%):** Displays the remaining capacity allocated for regular self-consumption. You can edit this value by tapping the pencil icon.
- **Usage:** Use the slider to adjust the desired percentage for reserved capacity. The recommended level for Peak Shaving & Backup is indicated on the slider for optimal settings.



2. **Priority mode:**

Within the Priority mode section, you can choose how your system prioritizes energy distribution:

- **Default mode - Self-Powered:** This is the standard mode where solar energy is first used to supply the household consumption, then to charge the battery. The remaining surplus energy is then fed into the grid. Switch this option on to maximize self-consumption and minimize grid dependency.
- **Feed in Priority:** Activate this option if you prefer to prioritize feeding excess solar energy to the grid before charging the battery. This could be useful if your electricity provider offers favorable feed-in tariffs.

Usage tips:

- **Balance self-powered and backup:** Ensure that the reserved capacity is set to a level that balances your need for self-sufficiency and provides enough backup power when needed.
- **Optimize operational mode:** Select the operational mode that aligns best with your energy usage patterns and goals.
  - **Monitor feed-in limits:** Regularly check and adjust the feed-in priority limits to maximize the benefits of your energy system and minimize costs.
  - By carefully configuring the battery settings, users can enhance the efficiency and reliability of their home energy system, ensuring optimal use of available resources.

6.2. Relay Control

The relay control function enables the management and configuration of Synaptics integrated relays for connected intelligent appliances. This feature provides flexibility in managing energy distribution by enabling or disabling relays for specific devices.

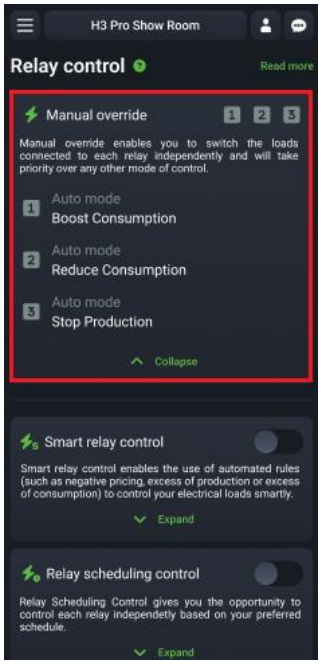
6.2.1. Accessing Relay Control Settings

1. On the Homepage, tap the "Relay Control" menu item.
2. You will be directed to the Relay Control page where you can view and adjust different parameters.

6.2.2. Configuring Relay Control Settings

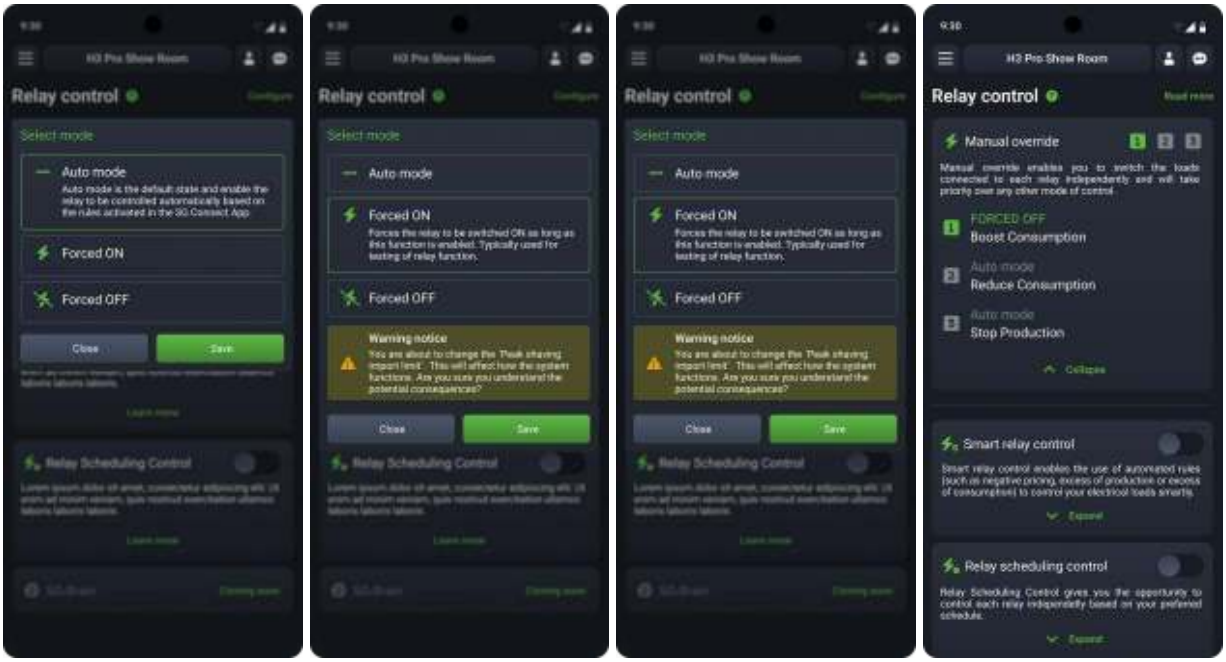
1. Manual Override:

The Manual Override Function allows you to switch the loads connected to each relay individually. This Mode takes priority over all other control modes. It is particularly useful for testing the relays, for example during commissioning.



Step 1: Enable or Disable the Manual Override

To use the Manual Override function for one of the three relays, first select the desired relay to start the configuration. In the configuration menu, you can set the selected relay to be either permanently on or permanently off. When the operating mode (On or Off) is saved and activated for a relay, it will automatically be highlighted in green. To deactivate the Manual Override function, please select as default the “Auto Mode”.



Note: If you activate the Manual Override function on one of the three relays, please remember to switch it back to “Auto Mode” after testing. Leaving Manual Override permanently active may quickly lead to significantly higher electricity costs (e.g., due to the continuous operation of an electric heater).

If the Manual Override function is activated, it always takes priority over all other intelligent functions such as Smart Relay Control or Relay Scheduling Control. In this case, a message is displayed within the respective functions indicating that Manual Override is active:

2. Smart Relay Control:

The Smart Relay Control function allows the use of automated rules (such as negative pricing, surplus production, or excess consumption) to manage the connected electrical loads intelligently.

Smart Relay Control – Rules:

The Smart Relay Control function offers different rules and operating modes. The individual rules are explained below:

1. **Boost Consumption of excess energy**

This rule is used to increase local energy consumption (e.g., by activating electrical heaters, air conditioners, EV chargers, or heat pumps) to optimize the utilization of generated photovoltaic energy and reduce feed-in to the grid.

2. **Reduce peak Consumption**

This rule is used to reduce local energy consumption (e.g., by deactivating electrical heaters, air conditioners, EV chargers, or heat pumps) to prevent exceeding the Peak Shaving limit and to avoid discharging the battery below the reserve level.

3. **Boost consumption of free energy**

This rule is used to increase local energy consumption (e.g., by activating electrical heaters, air conditioners, EV chargers, or heat pumps) when the dynamic electricity prices are negative (Free Energy).

4. **Stop Production during negative prices**

This rule is used to stop your local energy production (e.g. Photovoltaic Systems) when the dynamic prices are negative.

Note: If you want to use Rules 3 & 4 for negative prices, your system must be in a country where dynamic prices are publicly available and integrated into SG-Connect. To fully benefit from these rules, please check with your local energy supplier whether you have a dynamic price contract.

Step 1: Open the configuration settings of the Smart Relay Control

On the Relay control page, tap the Configure menu item. You will be redirected to the configuration page where you can view and adjust various parameters of the Smart relay control function. By clicking the gear icon on the right side of each rule, you can open the configuration settings. To configure the rules, please follow steps 2 through 5.

Step 2: Configuration of Rule 1

Rule 1 activates Synaptic Relay #1. To ensure proper operation and to avoid unnecessary switching of the relay, set the Relay Activation (Minimum Export) value to at least the rating of the load connected to Relay 1. If the export at the house node exceeds this value for more than 15 seconds, Relay 1 will be activated.

By default, Relay Deactivation (Minimum import) is set to 0 kW. In this case, the relay will deactivate as soon as the grid imports power for more than 15 seconds. If required, you may increase this value.

Step 3: Configuration of Rule 2

Rule 2 activates Synaptic Relay #2 when the grid import exceeds the Peak Shaving Limit defined in the Operation Mode settings. To adjust the Peak Shaving settings, refer to section 6.3.2. To ensure proper operation of the rule and to avoid unnecessary switching of the relay, set the Relay Deactivation (Load) value to at least the rating of the load connected to Relay #2.

Step 4: Configuration of Rule 3

Rule 3 activates Synaptic Relay #1 when Dynamic Prices are zero or negative, allowing consumption of free energy from the grid. To enable this rule, your system must be located in a country where Dynamic Prices are publicly available and integrated into SG-Connect. You can check the Dynamic Prices for your country in the “My Electricity Price” screen (Section 7.1) of the SG-Connect app.

Step 5: Configuration of Rule 4

Rule 4 activates Synaptic Relay #3 when Dynamic Prices are negative to stop or reduce the production of your photovoltaic system. To enable this rule, your system must be located in a country where Dynamic Prices are publicly available and integrated into SG-Connect. You can check the Dynamic Prices for your country in the “My Electricity Price” screen (Section 7.1) of the SG-Connect app.

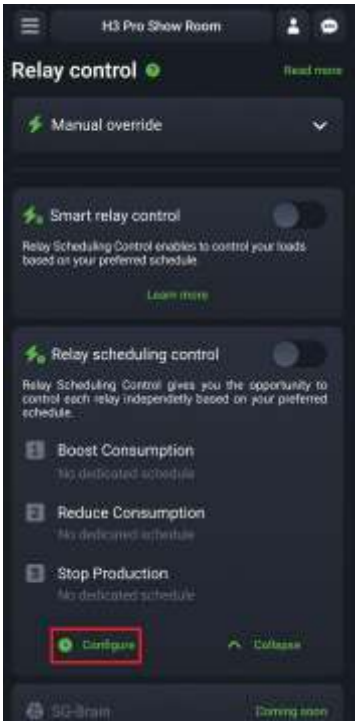
Note: If you activate the desired Rules, ensure that the Smart Relay Control function is also enabled. To enable the Smart Relay Control function, toggle the Activate button on the main page of Relay Control. Refer to the picture below:

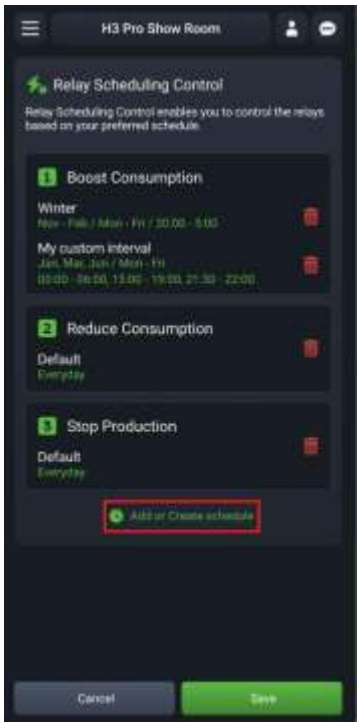
3. Relay Scheduling Control:

The Relay Scheduling Control allows you to configure and operate each relay independently according to your user-defined schedule.

Step 1: Open the configuration settings of the Relay Scheduling Control

On the Relay control page, tap the Configure menu item. You will be redirected to the configuration page, where you can view and adjust various parameters of the Relay scheduling control function. At the bottom of the Relay Scheduling Control section, click the “Add or Create Schedule” button to open the configuration settings.



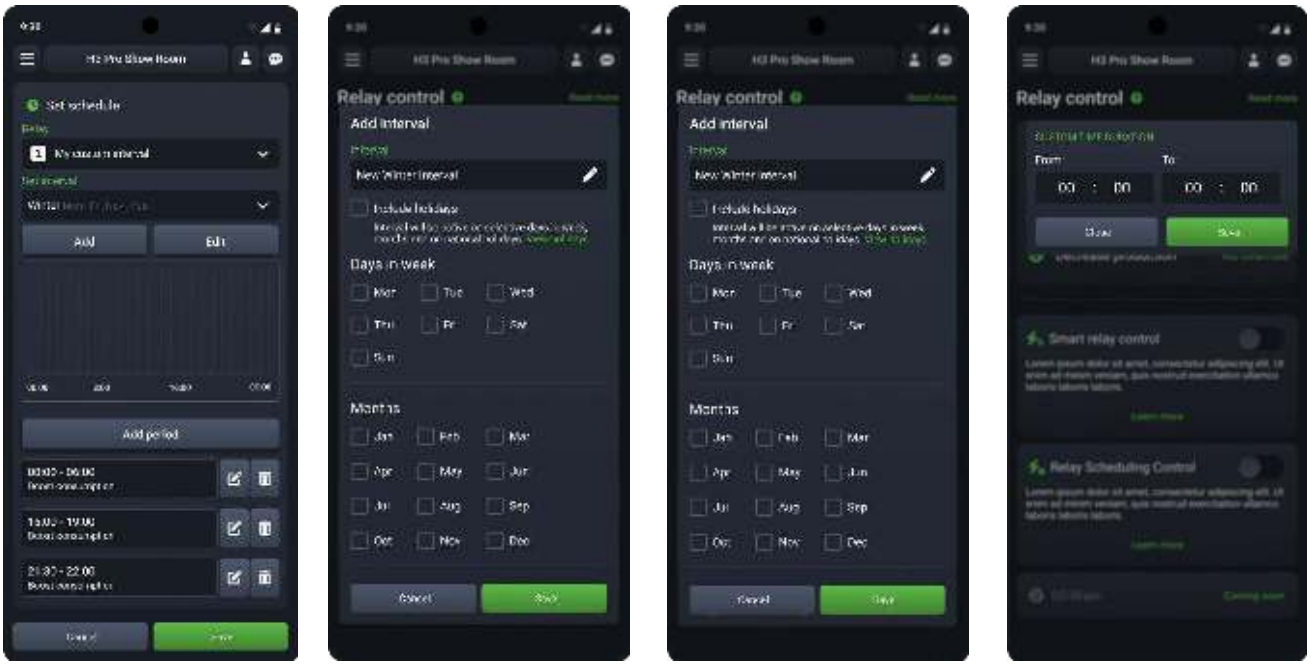


Step 2: Configuration of the Relay Scheduling Control

To create or configure the Intervals and Periods for the Relay Scheduling Control, please refer to Section 6.3.2 (Step 2a and 2b). This section provides detailed instructions on how to:

- **Define Intervals:** Set the specific time ranges during which the relay will operate
- **Configure Periods:** Determine the recurring days or cycles (e.g. daily, weekly) that the defined intervals will follow.

Following these steps ensures that the Relay Scheduling Control is accurately aligned with your operational requirements.

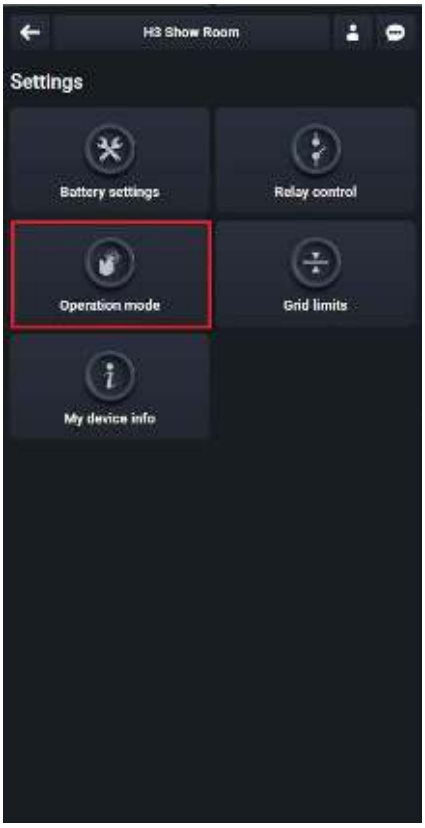


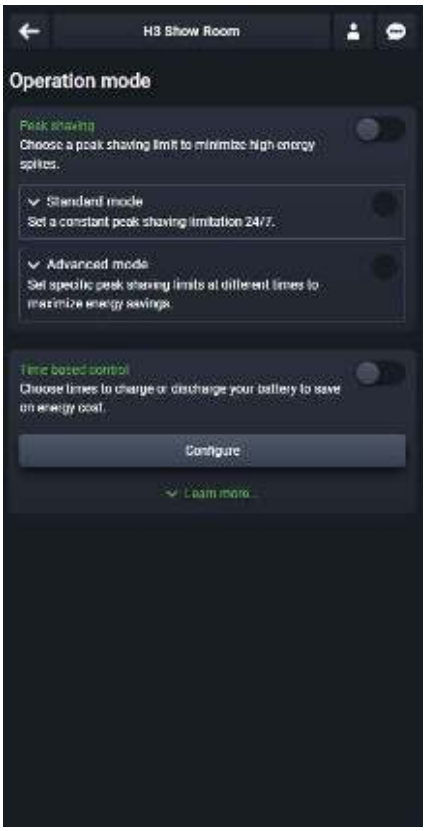
6.3. Operation Mode

The Operation Mode allows to configure smart grid settings, including peak shaving import limits and time-based controls to optimize efficiency and reduce costs. These settings optimize the interaction between your energy system and the electrical grid, helping to reduce grid fees and improve the energy management.

6.3.1. Accessing Operation Mode Settings

1. From the Settings page, tap the "Operation Mode" menu item.
2. You will be directed to the Operation Mode page where you can view and adjust different parameters.





6.3.2. Configuring Operation Mode Settings

6.3.2.1. Peak Shaving – Standard Mode

With the Peak Shaving – Standard Mode you can configure a constant limit on the power imported from the Grid to minimize energy spikes and manage costs effectively. The Peak Shaving function requires battery activation to reduce demand spikes, so it is important that sufficient battery capacity is ensured. To configure this function, please follow the steps below:

Step 1: Enable Peak Shaving

- Toggle the Peak Shaving switch to activate the feature.
- Select Standard Mode to set a fixed peak shaving limit that applies 24/7.

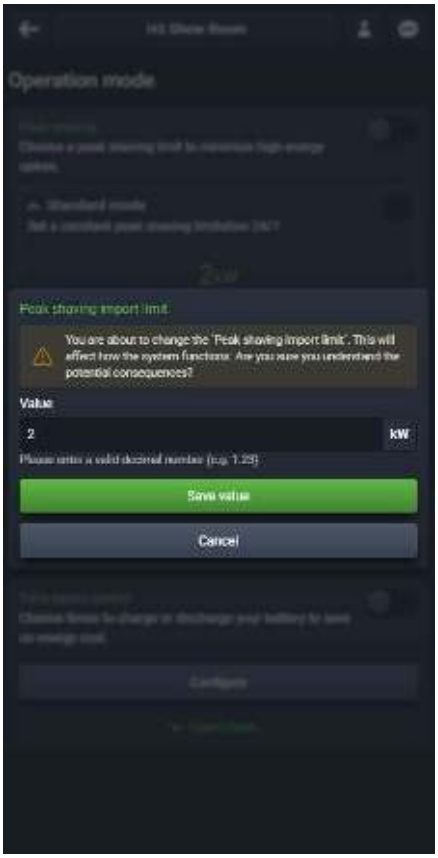
Step 2: Set the Peak Shaving – Standard Mode Import Limit

a. Adjust the Limit:

- Use the slider to set the maximum power (in kW) that can be imported from the grid. For example, you can set it to 2 kW, as shown.
- The slider ranges from 0 kW to 16 kW, allowing you to select the appropriate limit based on the energy needs.

b. Refine Settings:

- Press the Configure button to access detailed settings or make fine adjustments to the set limit.



Usage tips:

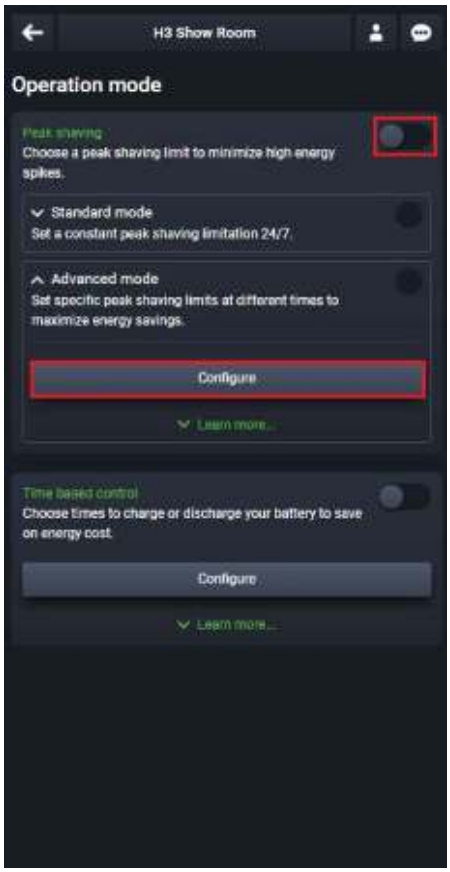
- Monitor and adjust limits: Regularly check and adjust the peak shaving import limits to align with changes in energy consumption needs and grid fees.
- Ensure sufficient capacity: When setting peak shaving import limits, ensure your battery capacity is sufficient to handle demand peaks without relying on the grid excessively.

6.3.2.2. Peak Shaving – Advanced Mode

The Peak Shaving - Advanced Mode allows you to set custom peak shaving limits for different times, days, or months, in addition to the Peak Shaving – Standard Mode, providing maximum flexibility for energy savings. To configure this function, please follow the steps below:

Step 1: Enable Peak Shaving:

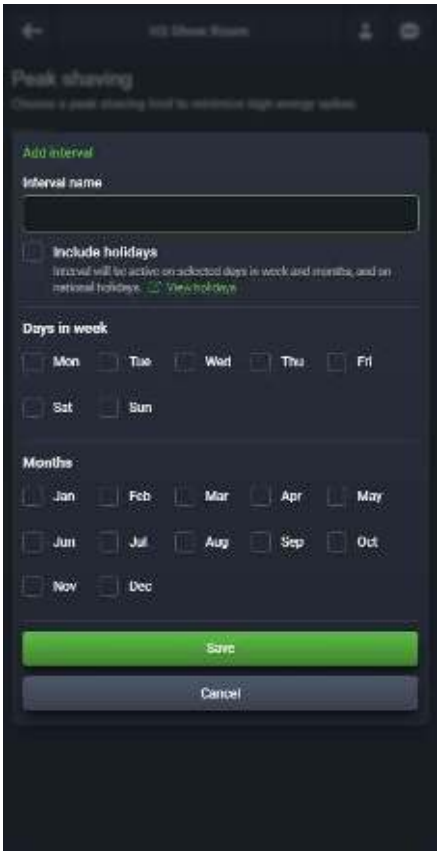
- Toggle the Peak Shaving switch to activate the feature.
- Press the configure button of the Advanced Mode to set a specific peak shaving limit that can apply at different times depending on the configuration.



Step 2: Set the Peak Shaving – Advanced Mode:

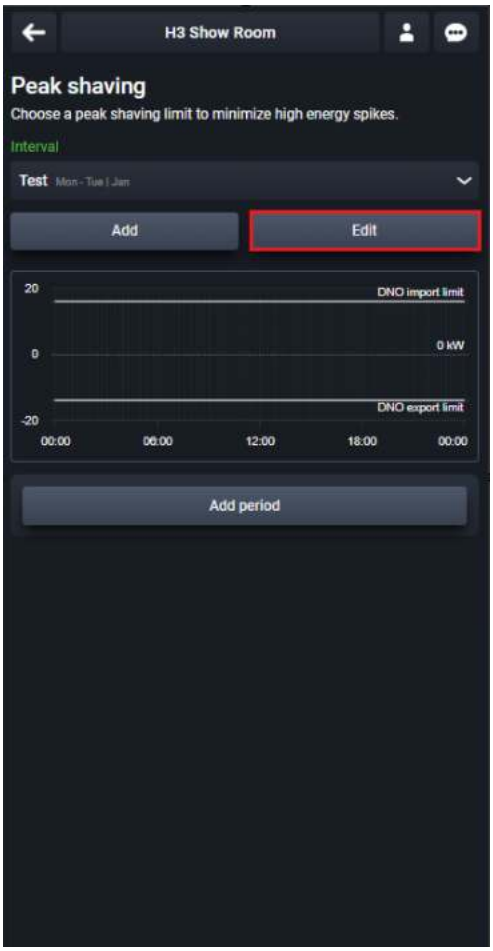
a. Adding an Interval:

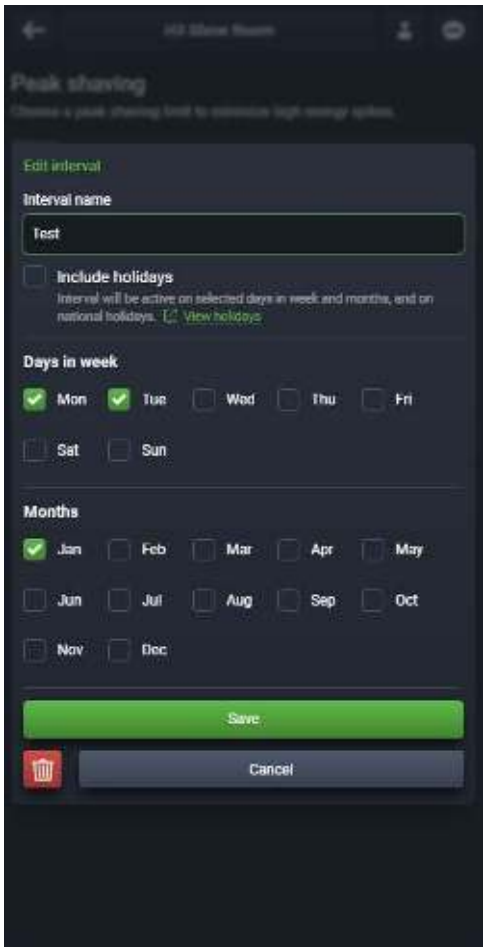
- Press **Add** to create a new interval
- Name the interval (e.g. “Weekdays High Demand”)
- Choose the applicable days of the week (e.g. Monday to Friday) and months (e.g. June to August)
- Check **Include Holidays** to apply the interval on national holidays
- Press **Save** to confirm the settings



b. Editing an Interval:

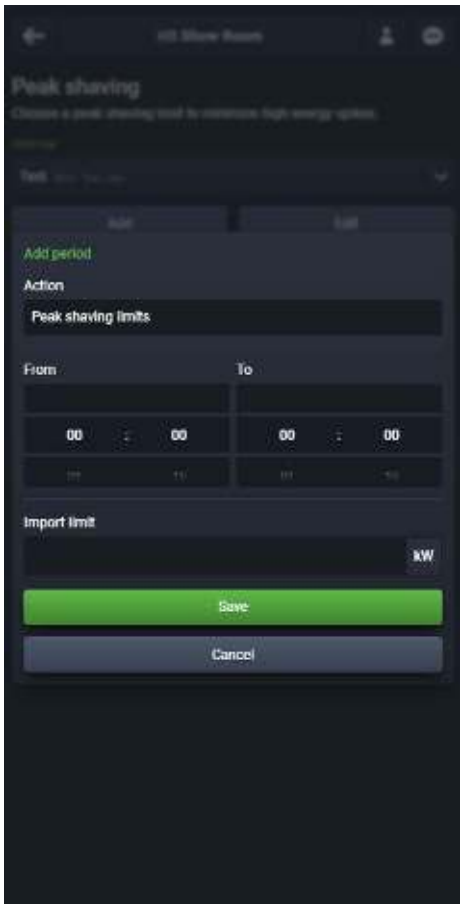
– Select an existing interval from the dropdown list and press **Edit** to modify the settings.





c. Add a period:

- Press **Add Period** within the selected interval
- Set the **From** and **To** times for the period (e.g. 12:00 to 16:00)
- Specify the Import Limit in kilowatts (e.g. 5 kW)
- Press **Save** to add the period



Usage tips:

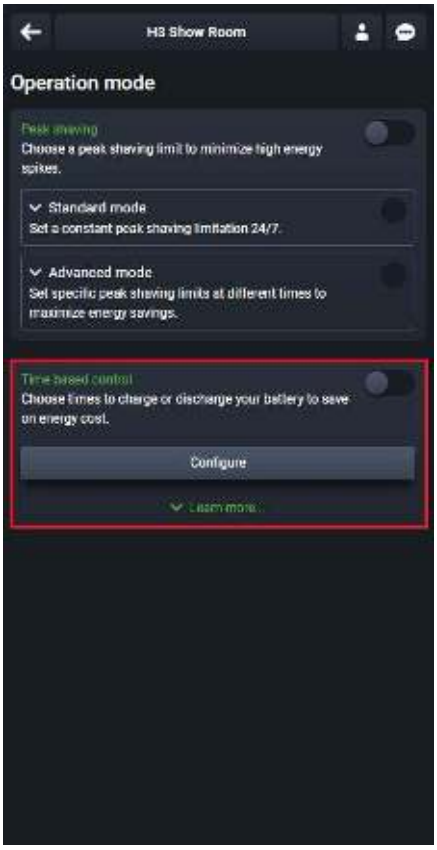
- Customize intervals for high-demand periods to minimize grid reliance during peak times.
- Use different settings for weekdays, weekends, or seasons to optimize energy use year-round.
- Refer to the Learn more section for further guidance on maximizing the feature.

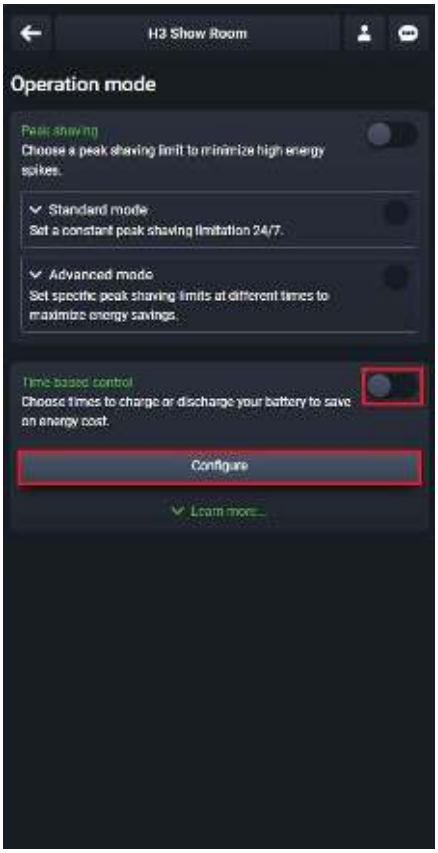
6.3.2.3. Time-Based Control

The Time-Based Control feature allows you to schedule battery charging and discharging to optimize energy costs and efficiency. With a dynamic energy tariff, the battery can be charged during low-tariff periods and discharged during peak-rate times.

Step 1: Enable Time-Based Control:

- Toggle the Time-Based Control switch to activate the functionality.
- Press the configure button of the Time-Based Control to access the interval settings.

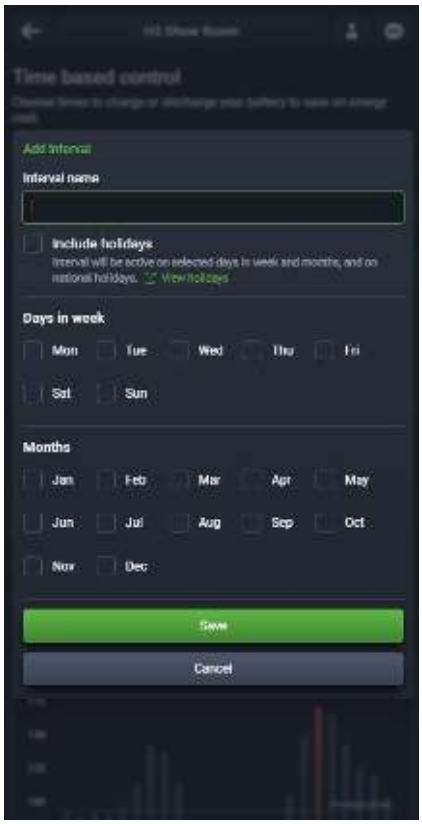




Step 2: Set the Time-Based Control Mode:

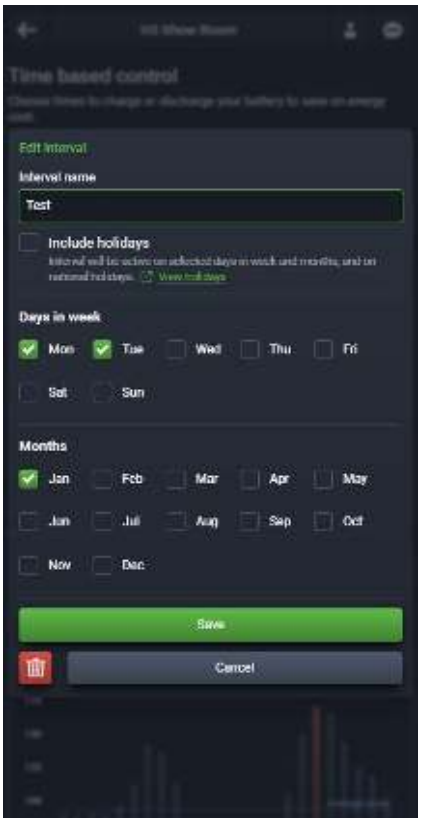
a. Adding an Interval:

- Press **Add** to create a new interval
- Name the interval (e.g. “Weekly Off-Peak”)
- Choose the applicable days of the week (e.g. Monday to Friday) and months (e.g. June to August)
- Check **Include Holidays** to apply the interval on national holidays
- Press **Save** to confirm the settings



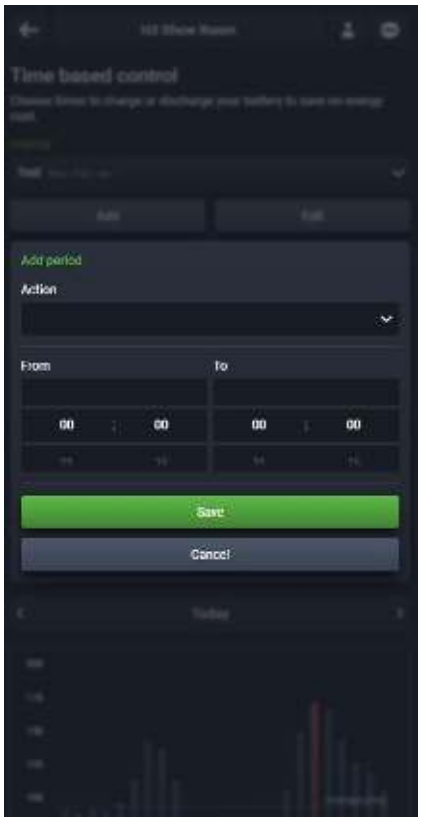
b. Editing an Interval:

– Select an existing interval from the dropdown list and press **Edit** to modify the settings.



c. Add a Period:

- Press **Add Period** within the selected interval
- Set the action by choosing between Charge Battery or Discharge Battery from the dropdown menu.
- Specify the start and end times for the period (e.g. 00:00 to 4:00 for charging during low tariff periods)
- Press **Save** to add the period



d. Add a Period:

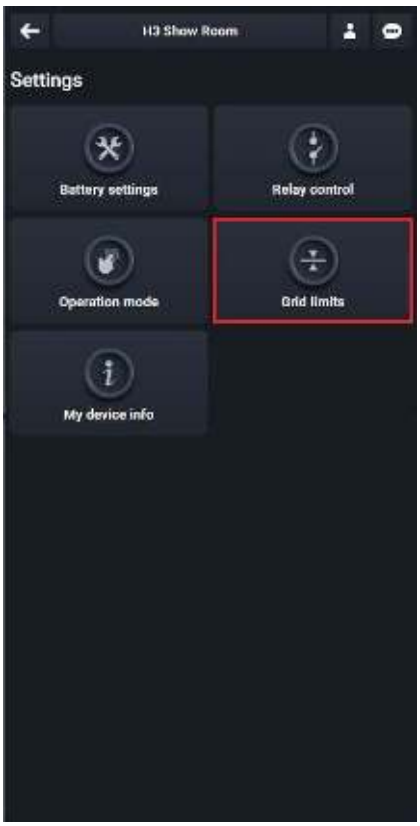
The graph at the bottom of the screen visualizes electricity prices throughout the day of your country, helping you identify the best times for charging and discharging the battery.

6.4. Operation Mode

The grid limits section inside the setting menu allows users to view the network limitations for their home energy system. These limitations dictate how much power can be imported from and exported to the grid, and they are established with the consent of your distribution system operator (DSO).

6.4.1. Accessing Grid Limits

1. From the settings page, tap the "Grid limits" menu item.
2. You will be directed to the grid limits page where you can review the import and export limits.



6.4.2. Viewing and managing grid limits

Grid Limits Information:

These are the network limitations that you have received with the consent of the DSO. Any changes to these settings must be carried out by your installer with valid consent.

Import limit:

- **Description:** This limit specifies the maximum power that can be imported from the grid into your home energy system.
- **Usage:** Review this limit to understand the maximum power your system can draw from the grid during peak demands.

Export limit:

- **Description:** This limit specifies the maximum power that can be exported from your home energy system to the grid.
- **Usage:** Review this limit to ensure you are aware of the maximum amount of excess energy your system can send back to the grid.

Usage Tips:

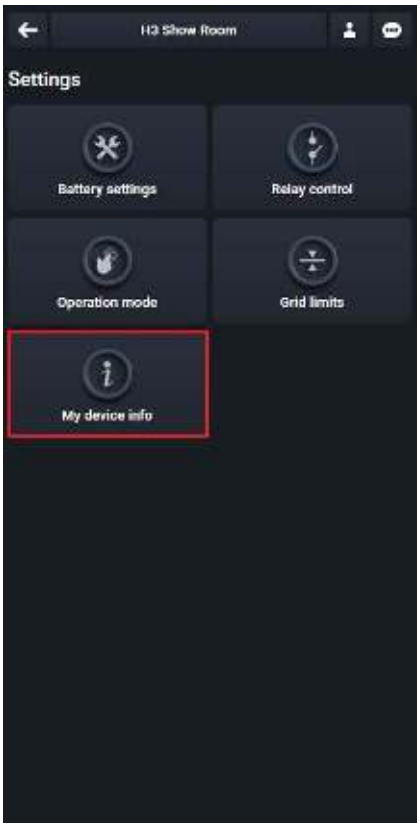
By understanding and adhering to the grid limits, users can ensure that their home energy system operates safely and efficiently within the set network constraints. This compliance helps prevent potential issues and optimizes the overall performance of the energy system.

6.5. My Device Info

The My device info section inside the settings menu provides detailed information about the devices connected to your home energy system. This information is crucial for system management, troubleshooting, and support purposes.

6.5.1. Accessing My Device Info

1. From the settings page, tap the "My device info" menu item.
2. You will be directed to my device info page where you can view details about your connected inverter.



6.5.2. Device Information

Inverter Model:

- **Description:** This field displays the model number of the inverter connected to your home energy system.
- **Usage:** Make a note of your inverter model number for any support or maintenance requirements.

Inverter Serial Number:

- **Description:** This field displays the serial number of the connected inverter.
- **Usage:** The serial number is essential for warranty claims, technical support, and tracking the specific device within your energy system.

Usage tips:

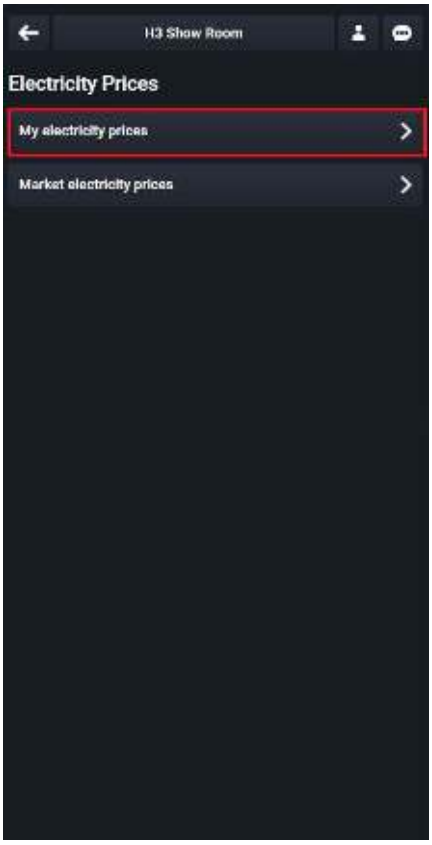
- **Record device information**: Keep a record of your inverter model and serial number for easy reference during support interactions or maintenance activities.
- **Regularly review device info:** Regularly review the device information to ensure that it matches the actual device installed in your system and update any changes if a new device is installed.
- **Provide information for support:** When contacting technical support, provide the inverter model and serial number to help the support team quickly address any issues or queries.
- By maintaining accurate device information, users can ensure more efficient management, troubleshooting, and support for their home energy system. This section helps streamline communications with service providers and ensures that users have all necessary details at their fingertip.

7. Electricity Prices

The Electricity Prices section of the SG Connect app provides real-time and historical data on electricity price data, enabling you to make informed decisions on when to use stored energy or draw from the grid based on cost.

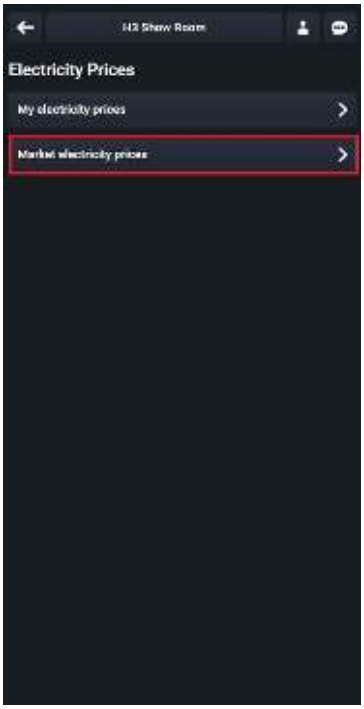
7.1. My Electricity Prices

In this section, you can view the electricity prices specific to your country.



7.2. Market Electricity Prices

This provides a more comprehensive overview of electricity prices in the selected country, including the day-ahead prices shown in the graph.

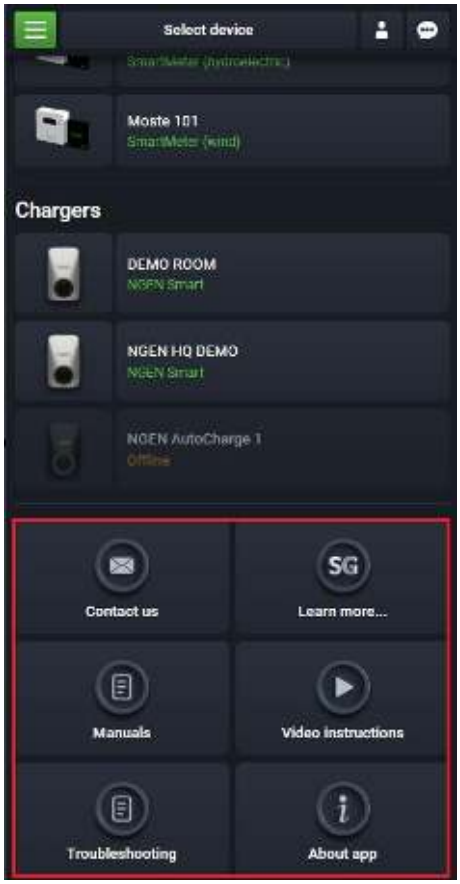


- **Graph:** Displays a graph of the market price of electricity (day ahead) for each hour of the day. The x-axis represents the time of day, while the y-axis represents the price in €/MWh.
    - Example: At 18:00, the market price is usually significantly higher than at other times of the day.
- **Download CSV:** Option to download the electricity price data in a CSV file format for further analysis.
- **Statistics:** Provides key statistics for the selected day.
- **Min. price:** The lowest electricity price of the day (e.g., 3.15 €/MWh).
- **Max. price:** The highest electricity price of the day (e.g., 170.88 €/MWh).
- **Average price:** The average electricity price throughout the day (e.g., 93.85 €/MWh).
- **Price spread:** The difference between the max and min prices (e.g., 167.73 €/MWh).

These features provide you with comprehensive information on electricity costs, enabling you to optimize your energy consumption and storage based on price fluctuations.

8. Support

You need help? The Support section in the application menu offers valuable resources to assist you with the Smart Grid Connect application. Use these tools to resolve technical issues, learn more about the application, or find the documentation you need to operate your SG Connect system effectively.



The Support section includes:

- Contact Support: Get directly in touch with our support team for assistance.
- Learn more about SG Connect
- User Manuals
- Video Instructions
- Troubleshooting
- Information about the App

Thank you for choosing SG Connect. We are dedicated to supporting you achieving efficient and sustainable energy management for your home.

9. Contact the Manufacturer NGEN

Further information about the SG Connect system and other NGEN products can be found on the manufacturer's website: https://www.sgconnect.eu/en.

9.1. Technical Support / Complaints and Warranty

For technical support or questions about the NGEN-Star system, please use the following support channels:

- Chatbot inside the Smart Grid Connect App:

- Support Function inside the Smart Grid Connect App:

- E-Mail: support@ngen.si

For information about warranty, complaints, or product replacement, please use the support function of the Smart Grid Connect app to contact NGEN technical support.