Appendix to instruction manuals
StoraXe PowerBooster GSS
StoraXe Storage Systems SRS

EMS StoraXe® Machine Interface

Interface description for
StoraXe® battery storage systems SRS and GSS

adstec

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1 General information

1.1 General information

This instruction manual explains how to use a StoraXe® storage system via the "EMS StoraXe® Machine Interface" web interface.

Read these instructions carefully before using and store for future reference.

The manual contains important information about the product.

Hand over the manual to all users (= persons with access) together with the product.

1.2 Relevant device documentation

The original documentation supplied with the respective storage system is the documentation relevant for setup and operation of the storage system. This instruction manual contains information on commissioning and operation of the system as well as technical specifications.

1.3 Data, figures and modifications

All data, text and figures were prepared to the best of our knowledge. They do not represent any assurance for the properties themselves. Despite taking utmost care, no liability can be assumed for accuracy, completeness and actuality of the information. Subject to changes.

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2 Requirements

2.1 Access to the EMS StoraXe® Machine Interface

You can operate a StoraXe® storage system via the "EMS StoraXe® Machine Interface" web interface in the following ways:

- Directly (touch-screen on the StoraXe® storage system)
- Indirectly (web browser)

Indirect access is possible via all devices that have a web browser, e.g.:

- Computer
- Smartphone
- Tablet

2.2 Supported web browsers

The web interface is compatible with all commonly used web browsers.

> ⓘ Old or future versions of web browsers can lead to minor display or performance problems.

3 Login

3.1 User overview

The EMS StoraXe® interface has a simple user management system with the following user authorisations:

- Guest (read only for restricted parameters)
- StoraXe (read/write for operation-relevant parameters)
- Service (read/write for operation-relevant parameters and service functions; reserved for service personnel)

3.2 Dial-in via web browser

Entering the IP address in the web browser opens the web interface:
The IP address must be in the same network as the storage system.

- Open the browser.

- Check which IP address has been assigned to the storage system.
  The "detection tool" from ADS-TEC lists the IP addresses of all ADS-TEC systems.
  Link to download centre with detection tool:
  Industrial IT - Software - ads-tec (ads-tec-iit.com)

- Enter the IP address in the browser line.

ⓘ Alternatively, if you have a BigLinXs account, you can set up a VPN connection and access the web interface.
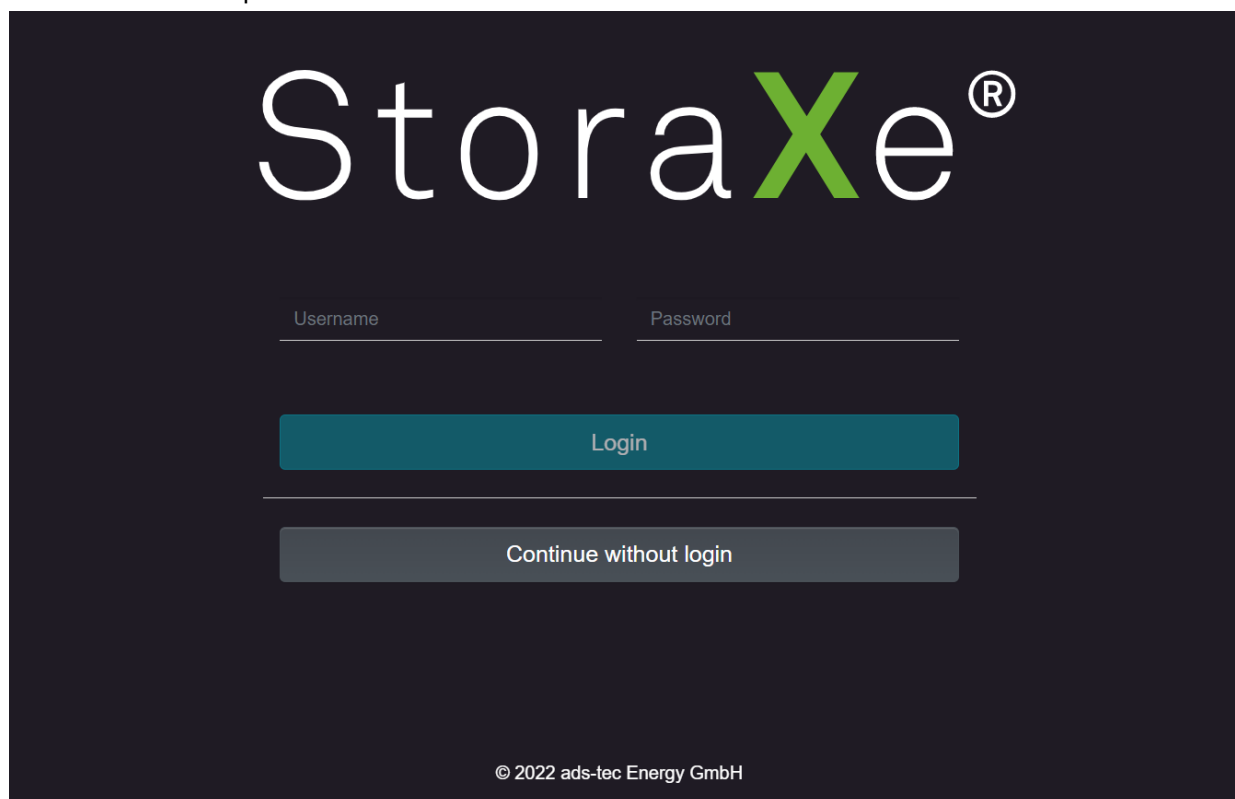
The web interface opens.

Figure 1 – Access to the web interface via the IP address of a StoraXe® system

- Dial in:

Username	Password
guest	No password
storaxe	storaxe

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4 Operation

4.1 General page layout

After you have logged in as the user **storaxe** or, alternatively, as **guest** by selecting "Continue without login",

you are forwarded to the homepage. Depending on the system, the page will have the following appearance:
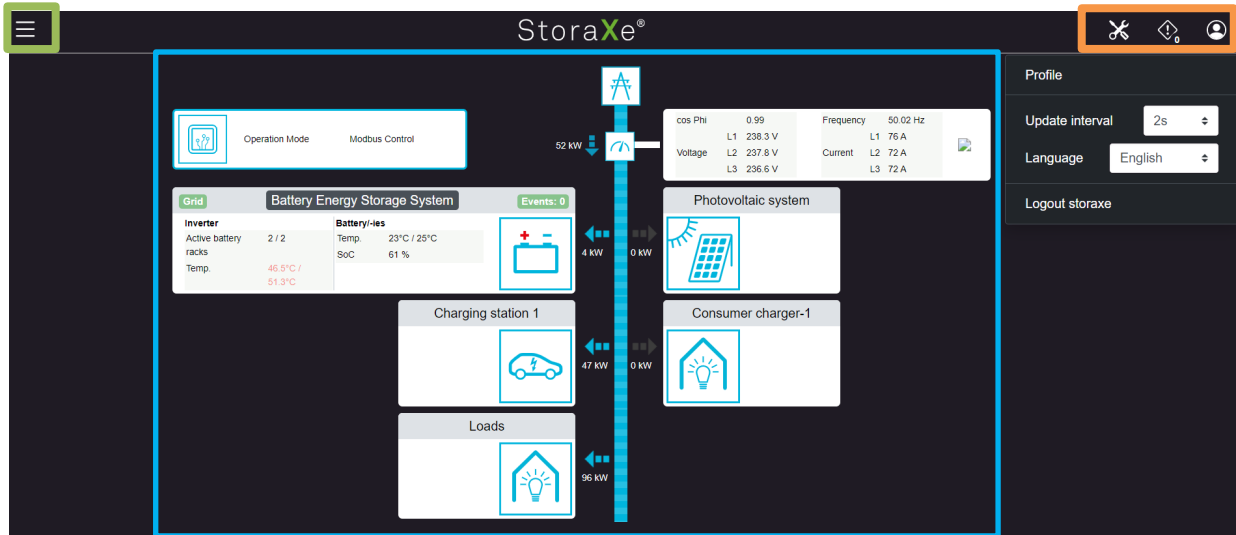

Figure 2 – Basic page layout taking the homepage as an example

After user login, the overall view can essentially be divided into three areas:

- Button for the left menu ribbon (green)
- Right menu ribbon with icons (orange)
- Main area of the web interface (red) in which the respective page is loaded

Clicking the button for the left menu ribbon (marked green in Figure 2) opens the web interface main menu on the left side. Clicking "x" or clicking outside this menu hides the main menu again.
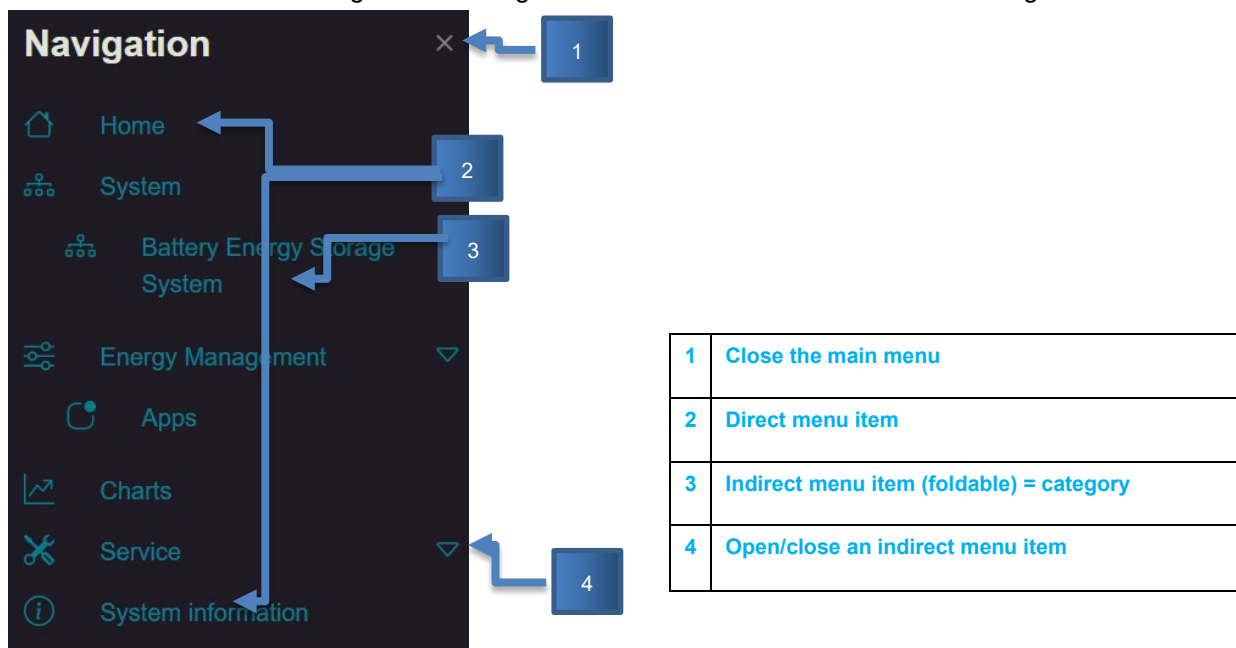

1	**Close the main menu**
2	**Direct menu item**
3	**Indirect menu item (foldable) = category**
4	**Open/close an indirect menu item**

Figure 3 – Main menu for Service users

The main menu consists of two types of menu item: direct and indirect menu items.

Clicking indirect menu items (= category) opens or closes a drop-down menu containing all submenu items that belong to this category.

Clicking a direct menu item opens a new page in the main area of the web interface. Each submenu item of a category is automatically a direct menu item.

Depending on the system setup, the menu ribbon on the right consists of up to four icons:

1. Tool icon: By clicking the icon, users of the Service or Admin user groups can navigate directly to the manual control options.
2. Bell icon: Clicking the icon displays an overlay window in which users of the StoraXe, Service and Admin user groups can view the status of all rules used for activating potential-free signals
3. Warning icon: By clicking the icon, users of the Service or Admin user group can navigate directly to the active error memory.
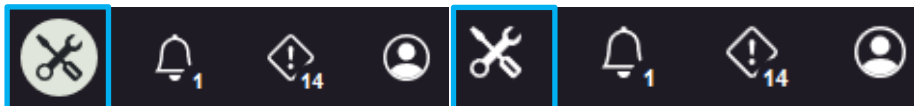4. Profile image icon: Clicking this icon opens the user menu.

Figure 4 – Right menu ribbon (left: manual mode active; right: manual mode not active)

If signal rules are activated, and at least one of the active rules is incorrect, the figure indicating the number of active rules is highlighted in red
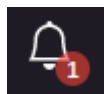

Figure 5 - Incorrect signal rules active

In the user menu (Figure 6), you can log out, open your profile page to change your password, change the display language or set the refresh interval.
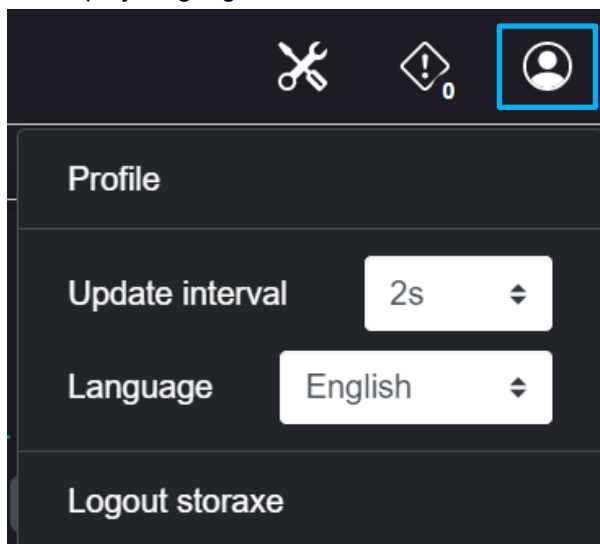

Figure 6 – User menu

4.2 Typical operator menus

4.2.1 Overview menu

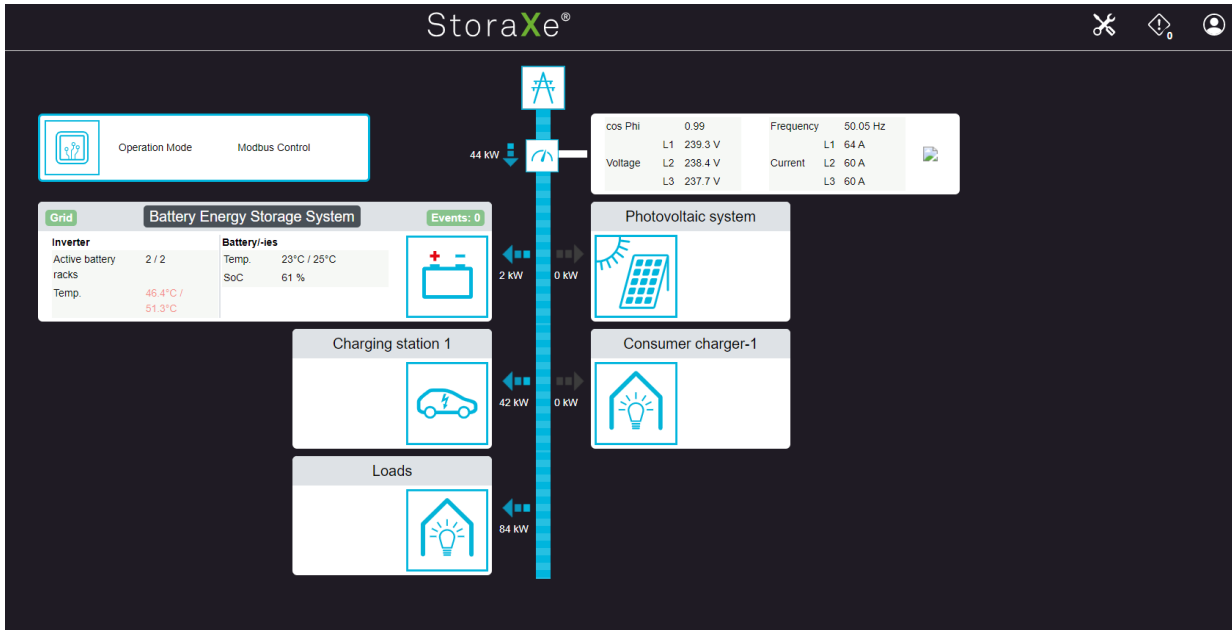Representation of the general overview of a battery storage system

Figure 7 – Typical representation of a storage system

4.2.2 Battery storage system menu

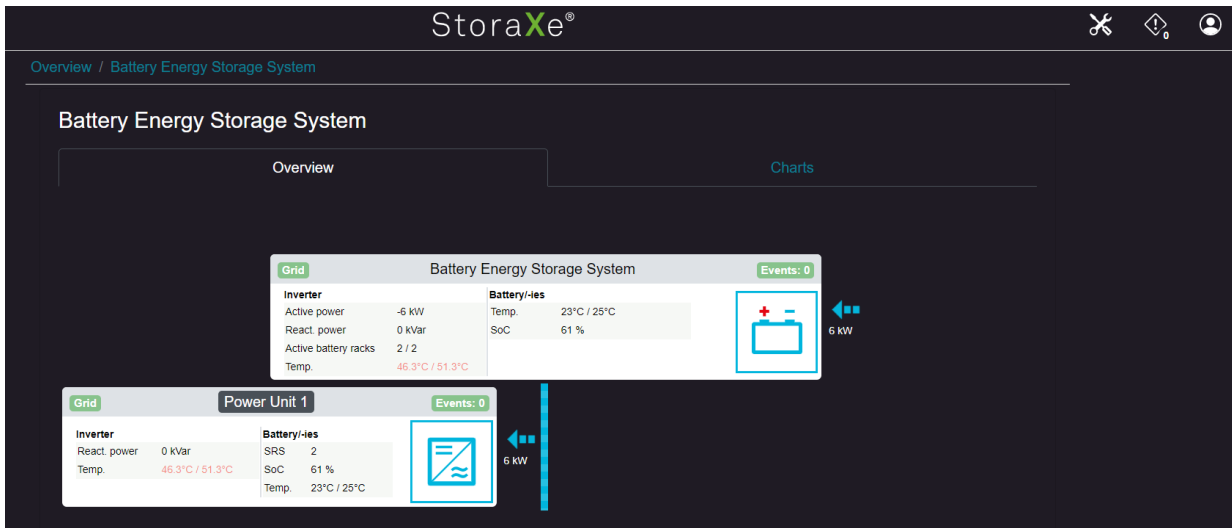The "Overview" tab shows the specific battery storage system

Figure 8 – Specific battery energy storage system
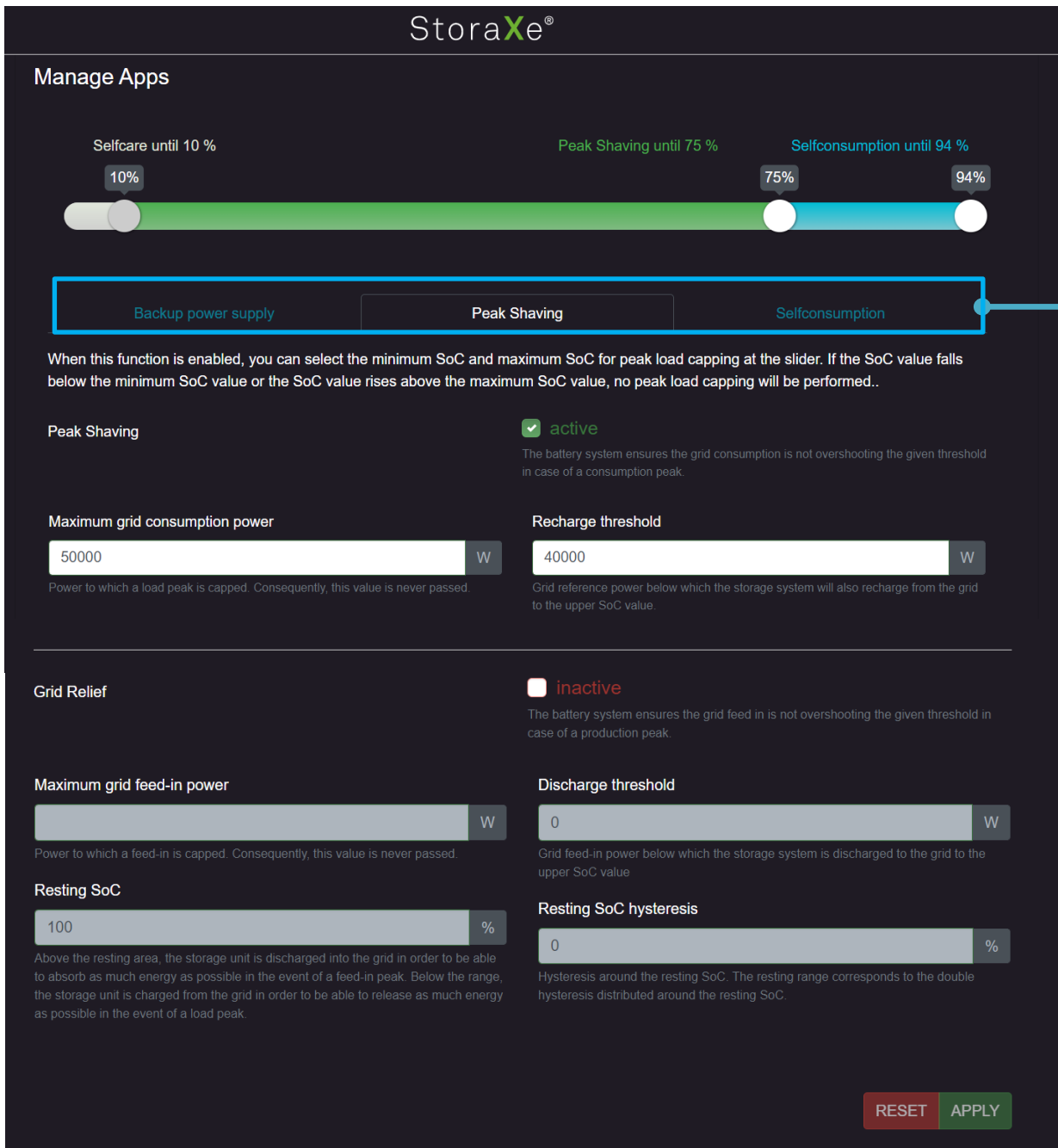
4.2.3 Energy management menu

Figure 9 – Representation of energy management; peak-load capping

1 **Menu items:**

Backup power supply: The backup power supply is only displayed if it is supported by the system.

Peak-shaving: The capacity intended for this application can be adjusted using slide controls.

Descriptions of backup power supply, peak-shaving and self consumption are shown in the respective menu items.

4.2.4 Charts menu

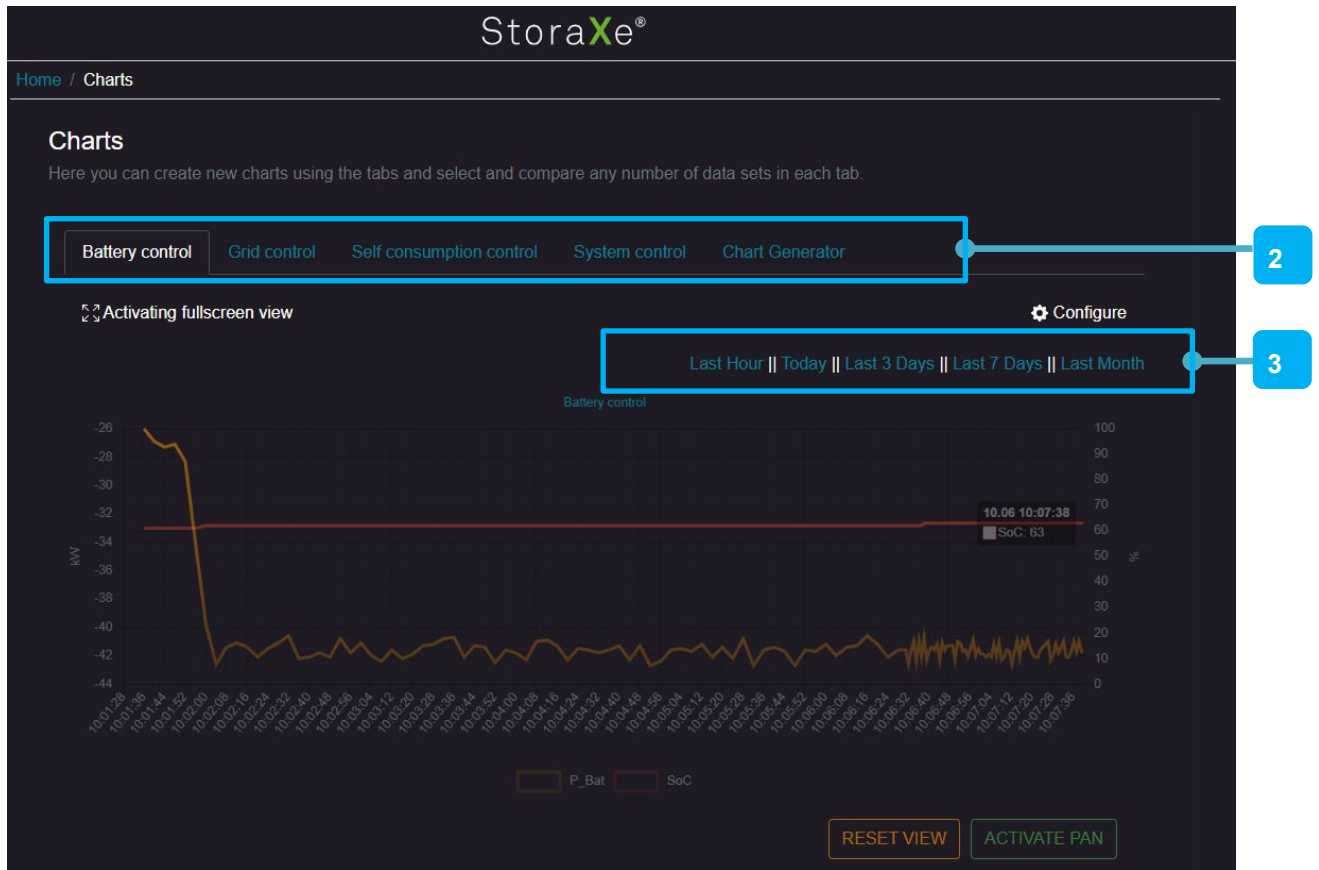The Charts menu is used for representation and monitoring of the system.

Figure 10 – Chart menu battery control

2   **Battery control menu item**

The Battery control menu displays the battery status.

P_Batt   Battery status
SoC   State of Charge

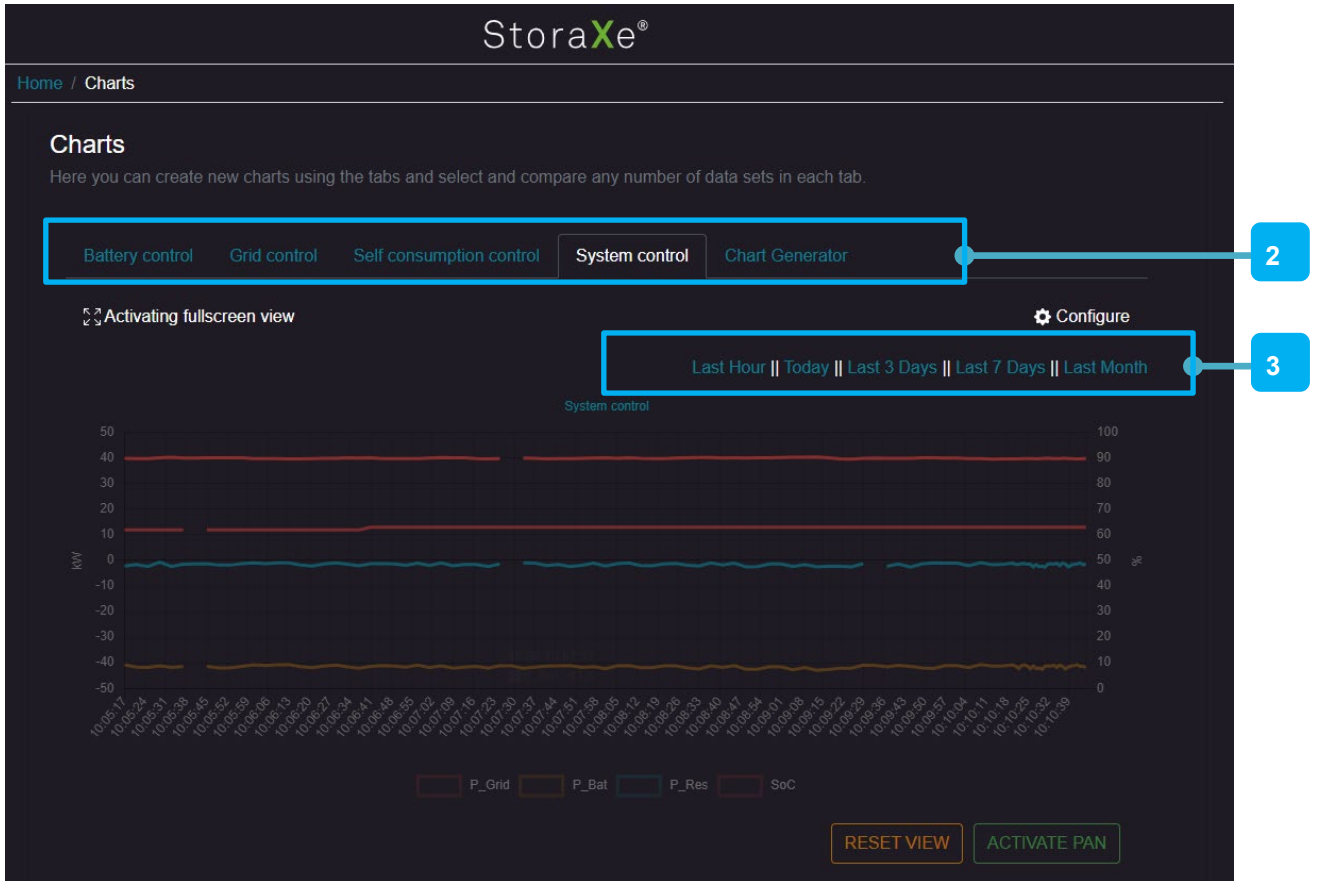**3**   Period for the desired representation can be selected

Figure 11 – Chart menu system control

2 **System control menu item**

The System control menu shows the general overview of the system.

P_grid   Power at the grid connection point
P_Batt   Battery status
P_Res   Power of all loads
SoC   State of Charge

3 Period for the desired representation can be selected

5 Options energy management

Information on the menu item "Energy management" (excerpt from the operating instructions):

With the energy management display in the browser, you can keep an eye on all operating parameters of the storage system from your PC, notebook, smartphone or tablet. The display provides information on the usage behaviour of the storage system and presents it in graphical form. All settings for the energy management system of the battery storage system can be carried out conveniently via this display.

5.1.1 Optimisation of personal consumption

Excess energy from power generators that cannot be used is stored in the battery storage system. This stored energy can then be discharged to the loads at a later time, e.g., at night or during inclement weather. As a result, power does not need to be supplied from the public grid or the amount of power that is supplied is significantly reduced.

5.1.2 Peak-load capping

Peak-load capping is targeted explicitly at end customers who wish to operate the battery storage system in situations where the electricity rates have a connection and service price. Here, the battery storage system is used to cap peaks in the energy drawn from the public grid.
In this case, the storage system is used so as to keep the effective power drawn from the public grid below the average value within the 15-minute billing interval.

If the system detects that the requirement cannot be met, the "PeakLoadMgr" signal is set.

Configuration

Peak-load capping: Maximum power drawn from the public grid that should not exceed the 15-minute average.
Peak load power: Definition of the maximum load power.

5.1.3 Selfcare

This application prevents a deep discharge of the storage system by continuously monitoring the battery charge level. If the minimum charge level is reached, further discharging is initially prevented. If the charge level drops further, the storage system automatically recharges until the minimum battery charge level is again exceeded.
This takes place automatically in the background and is not visible to or configurable by the customer.

Configuration

There are no parameters than need to be set.

6 Appendix

6.1 List of figures

6.2 Revision history

Date	Revision	Change	Creation	Release
02.12.2021	V1.0	Initial document and takeover of software department	Ruoss	
06.06.2022	V1.1	Adaptation of text and menu items to GSS and SRS storage systems for customers. Without service functions.	Ruoss	Metzger
13.06.2022	V1.2	Supplement Chap. 5 Customer applications	Ruoss	