E-BOOST Installation Guide

ctrlX World

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01. Introduction

What is E-BOOST?

E-BOOST is an application for monitoring and managing the energy efficiency and environmental impact of complex energy systems. The tool helps users to collect and process operational data from assets in real time, gain a better understanding of their energy consumption, and interpret energy data in an intuitive and user-friendly way. This enables optimised energy performance, economic savings and reduced environmental impact.

How does it work?

E-BOOST collects data from the data layer of the ctrlX CORE in which it is installed, giving the user great flexibility in data management and visualisation. Data is sent using the MQTT protocol, ensuring efficient real-time communication between the data layer and the E-BOOST server. Real-time data can be viewed at any time, from many types of devices (PCs, tablets, smartphones) and different operating systems (Windows, MacOS, Linux, etc.).

How to use this Guide:

This guide will take you step-by-step through the installation, setup, and post-setup process. It will explain how to connect the CORE to the E-BOOST mobile app and how to configure settings during the post-installation and setup phase. Should you encounter any technical issues or problems, please do not hesitate to contact our technical support team at: eboost-support@veil-energy.eu

!!! WARNING !!!

This manual guides the user through the E-BOOST installation and configuration process in Windows. For other operating systems, please refer to the specific configurations of the operating system in use.

02. Pre-requisite

To use E-BOOST, you need:

- Internet connection
- ctrlXCORE with internet access
- Switch to configure the internet connection of ctrlXCORE
- E-BOOST application license and the E-BOOST Adapter installed in the CORE

!!! WARNING !!!

If you are having problems connecting to your device, please contact Bosch ctrlX Support.

03. Licenses

After purchasing the E-BOOST application from the Bosch Store, the licence to use the software must be uploaded to CORE.

There are several licenses for the cloud platform based on the number of devices you want to view:

- 1-10 maximum Devices
- 11-20 maximum Devices
- 21-50 maximum Devices
- 51-100 maximum Devices

Those licenses are cumulative; for example, if you need to display 30 devices, you can combine a license for 10 devices and a license for 20 devices etc.

To do this, click on "Settings" in the bottom left corner, click on "Licences" and upload the licence file by clicking on the upload icon in the top right corner (Fig. 1).

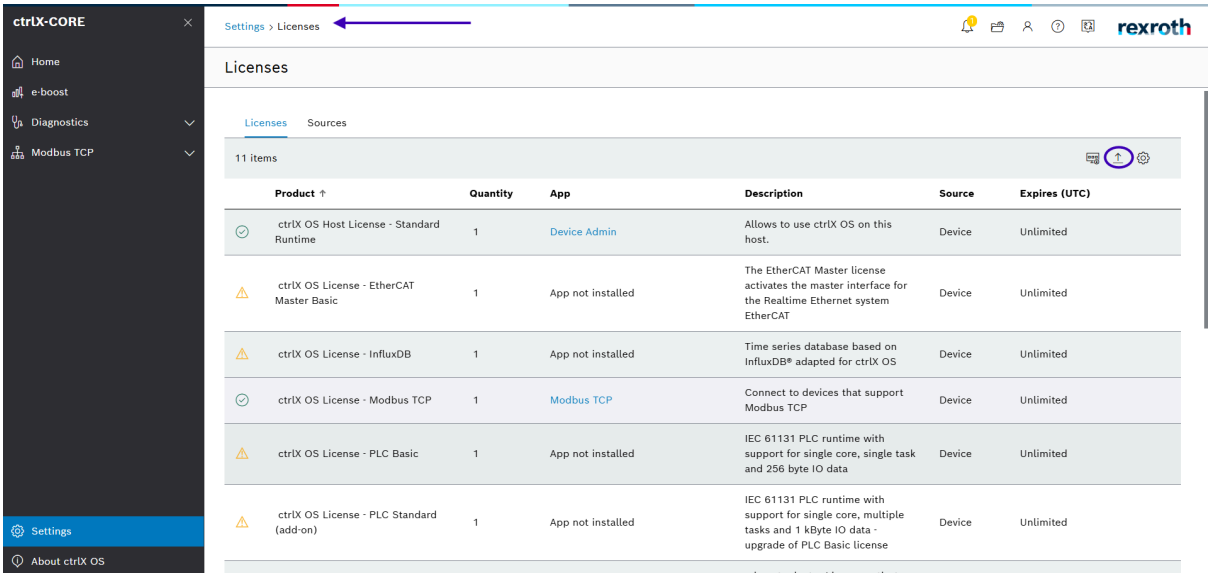


Figure 1

04. Post set up

After completing the physical installation, follow these steps to create your user account and begin configuring the E-BOOST platform:

4.1 Account set up:

1. Access the E-BOOST Setup Page by clicking on “E-BOOST” in the left side menu of the ctrlXCORE.
2. Click on “Account” (Fig. 2).
3. Enter a username (Fig. 3).
   Note: The selected username will also be used as the plant name within the platform.
4. Provide a valid email address and create a password.
   Note: This email address will be used for account verification, system notifications, and alerts.
5. Check your inbox for a confirmation email.

If the confirmation does not appear within a few minutes, contact technical support at: eboost-support@veil-energy.eu

Figure 2

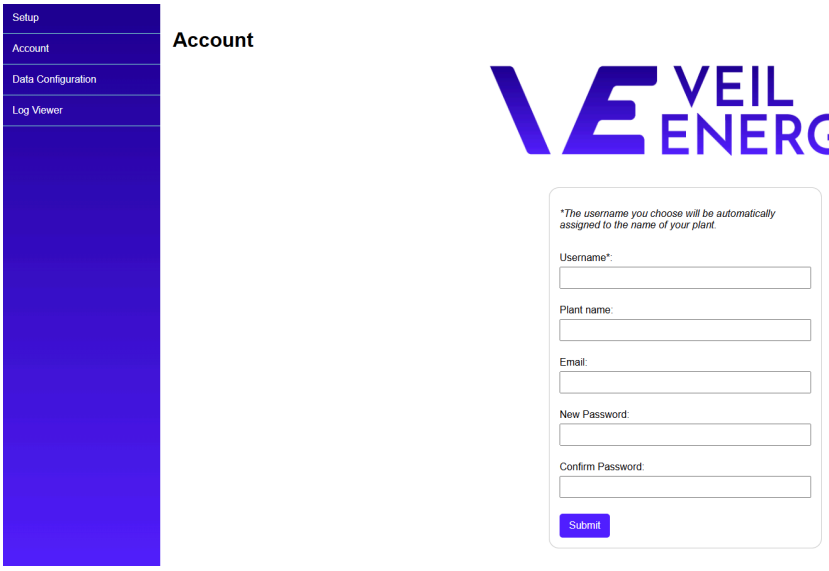


Figure 3

4.2 Node set up:

1. From the Setup Page (Fig. 2), click on “Data Configuration”.
2. Select the nodes (data sources) you wish to monitor.
3. Click “Save” to confirm your selection (Fig. 4).

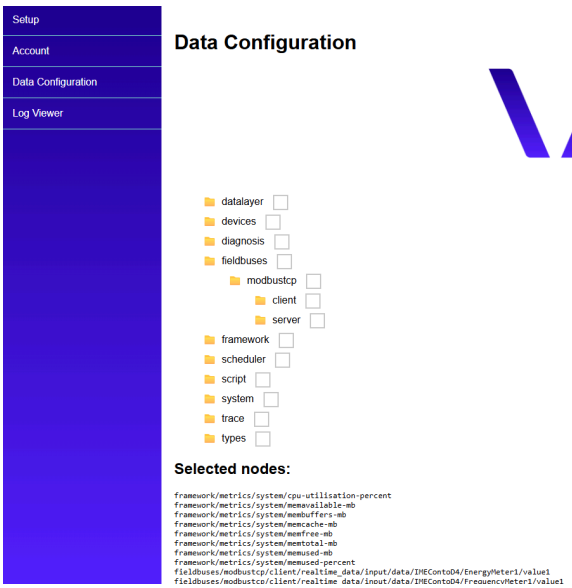


Figure 4

4.3 Connection verification:

4. To confirm successful connection and data transmission, open the “Log Viewer” in the Setup Page.
5. Check for active data flow and absence of connection errors (Fig. 5).

Figure 5

Once the cloud setup is complete, proceed to configure the E-BOOST Mobile Application.

05. E-BOOST application set up

5.1 Installation and first boot

The E-BOOST system can be accessed through both a web application and a mobile application. Users can choose either interface based on their operational needs. Both interfaces are synchronized and allow consistent access to system data and controls.

- The web application does not require any installation. It is accessible from any device with an internet connection and a supported browser.
- The mobile application offers access to core features and is intended for use in the field or mobile environments. Installation instructions are provided in the following section.

5.1.1 Web app

To utilise the E-BOOST application through a web browser, simply follow this link: https://eboost.veil-energy.eu/data/perspective/client/ctrlXboost

5.1.2 Mobile app

To use the E-BOOST application on a mobile or tablet device, you will first need to download the Ignition Perspective app, which is available from both the Android and Apple app stores. Follow the steps below to configure the E-BOOST Mobile Application on your device:

Download the App:

Search for and download the Ignition Perspective App from the App Store (iOS) or Google Play Store (Android).

Add the E-BOOST Project:

1. Open the Ignition Perspective App on your mobile device.
2. Tap the "+" icon located in the top-right corner of the home screen.
3. Select "Scan QR Code."
4. Scan the QR code here below using your device's camera:
   Note: If prompted, grant the necessary camera permissions to the app.

5. Once scanned, the "E-BOOST ctrlX Mobile" project will appear in the list of available views.
6. Tap on "E-BOOST ctrlX Mobile" to launch the mobile version of the application.

5.2 Log in

Once the application is installed, users will be able to access the E-BOOST Set Up Page from which they can configure and view logs and set up the credentials required to access the cloud platform.

5.3 Configuration

Once logged in, the user will need to assign meaning to the data sent from the data layer of the ctrlXCORE. This can be done by executing the following steps (Fig. 6):

1. Select Asset Type: From the drop-down menu, choose the category of the asset to be monitored (e.g., Auxiliaries, Photovoltaic, Heat Pump).
2. Select CORE Source: Choose the relevant CORE unit from which the asset's data will be acquired.
3. Select Device: From the drop-down list, select the specific device connected to the selected CORE.
4. Name the Asset: Assign a unique and identifiable name to the asset. This label will appear throughout the application interface for monitoring and analysis purposes.
5. Configure Power Threshold: Based on the selected asset type, input the required power parameter:
    - For general assets (e.g., auxiliaries): Enter the idle power value (in kW). This value defines the threshold between the standby state (measured power < idle power) and the active state (measured power ≥ idle power).
    - For Photovoltaic systems or Heat Pumps: Enter the maximum power value (in kW), which represents the expected peak output of the asset.

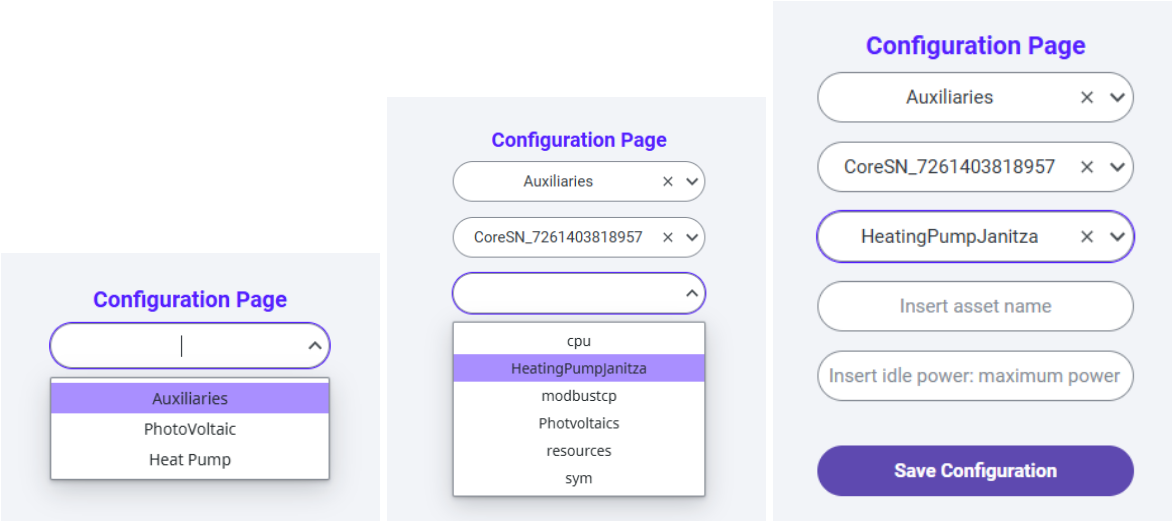


Figure 6

6. Tag Mapping and Parameter Configuration: At this stage, a Matching Table will be displayed. This table provides a complete list of all data tags transmitted by the ctrlX CORE. Each row corresponds to a specific data point detected by the system.

   Note: By default, all data points are marked as "Not considered", meaning they are excluded from measurement and visualization.

To enable a data point for display and analysis, select the appropriate quantity or measurement type from the drop-down menu in the corresponding row, as shown in Figure 7. This step allows users to map raw data tags to meaningful energy or operational parameters for monitoring within the application.

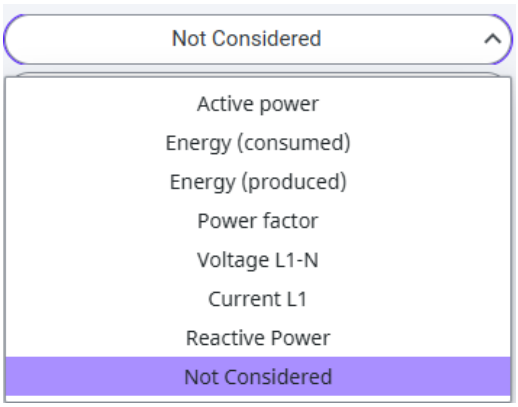


Figure 7

7. Tap on "Save Configuration" to save the asset and finalize the process (Fig. 8).

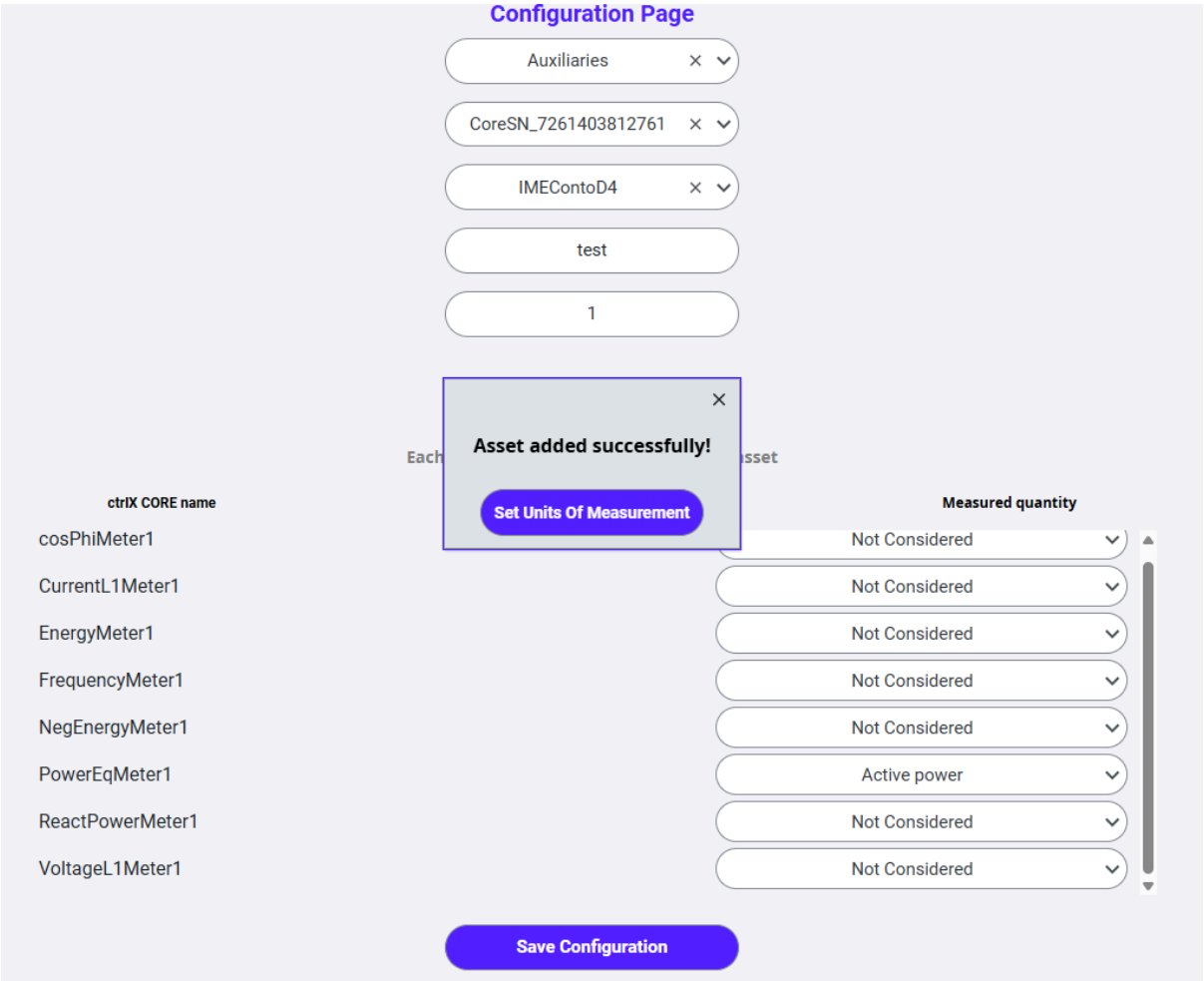


Figure 8

8. Unit of Measurement Configuration: After saving the tag configuration, it is mandatory to define the correct units of measurement to ensure proper data display and interpretation across the application. The system uses the following standard units for data processing:

Power	Kilowatt (kW)
Current	Ampere (A)
Tension	Volt (V)
Energy	Kilowatt-hour (kWh)
Temperature	Degrees Celsius (°C)

Ensure that each parameter is associated with the correct unit to maintain consistency and accuracy in data representation.

The procedure described above can be repeated for each asset and quantity that the user intends to configure and display.

If an asset has been created with incorrect information or by mistake, it can be deleted as follows:

1. Navigate to the Real-Time page.
2. Enter the Aux number associated with the asset to be removed.
3. Click on Delete Selected Aux to permanently delete the selected asset.

For the deletion of Photovoltaic or Heat Pump assets, follow the same process using the respective dedicated buttons provided for each asset type.

NOTE: The Aux number can be found on the Real Time page next to the Asset number. Figure 9 shows an example where the Aux number would be '8'.

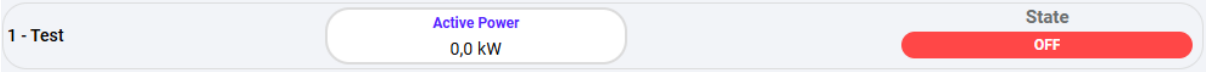
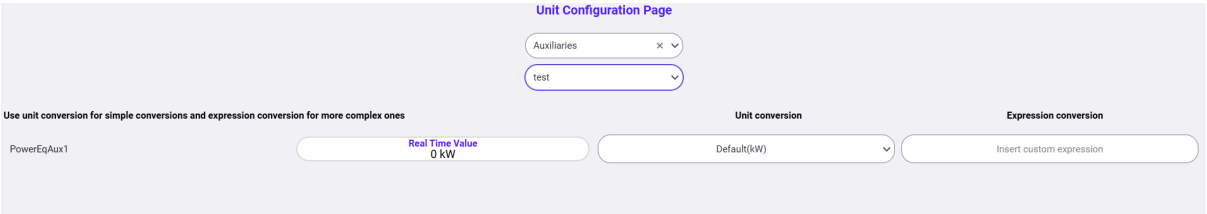


Figure 9

5.4 Unit Configuration

The Unit Configuration page allows the user to define conversion factors to display collected data in the appropriate units, as outlined in the reference table above.

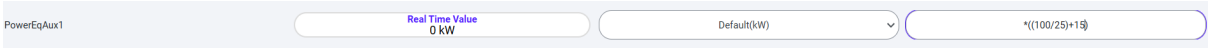
Three conversion configuration options are available: **Default conversion** (from predefined options), **Custom conversion**, **No conversion**.



For cases requiring specific conversion logic, a custom multiplier can be manually entered in the input field next to the dropdown menu. The input must begin with a mathematical operator (e.g., *, /, +, -) to ensure correct parsing.

For example, to apply a scaling factor of 0.5102, enter: *0.5102

Complex expressions are also supported, such as: *(0.100/35)



The system will automatically display the converted real-time value as the configuration is applied. To activate and save your settings, click Save Configuration.

Note: Conversion values can be modified at any time after the initial setup.

5.5 Real-time

The Real-Time Monitoring feature enables users to track the current energy consumption and operational status of all configured assets.

Each asset is identified by a unique ID number and the custom name assigned during the configuration phase. The interface displays the asset's active power and operational state, determined by comparing the current power value against the defined idle power threshold.

To view detailed measurement values associated with a specific asset, tap on the corresponding asset entry. The selected asset's assigned quantities will be shown in real time.

Note: Operational states are classified as either idle or active, based on whether the current power is below or above the configured idle power value.

5.6 Historical Charts

The Historical Chart page allows users to visualize historical data for assets configured and displayed on the Real-Time page. Two distinct charts are provided:

- Power Chart: Displays historical active power values.
- Measurements Chart: Displays selected measurement values other than power.

This section is divided into four tabs:

- Single Aux: Enables the user to select an individual auxiliary asset and view its historical power and measurement data (Fig.10).
- Aux Comparison: Displays a comparative view of the active power for all auxiliary assets currently configured in the system (Fig.11).

- Photovoltaic: Allows selection of a specific photovoltaic asset to visualize its historical performance data (Fig.12).
- Heat Pump: Allows selection of a specific heat pump asset to display its historical power and measurement trends (Fig.13).

Note: Graphs support time-based navigation and zooming to facilitate detailed analysis over selected periods.

Figure 10

Figure 11

Figure 12

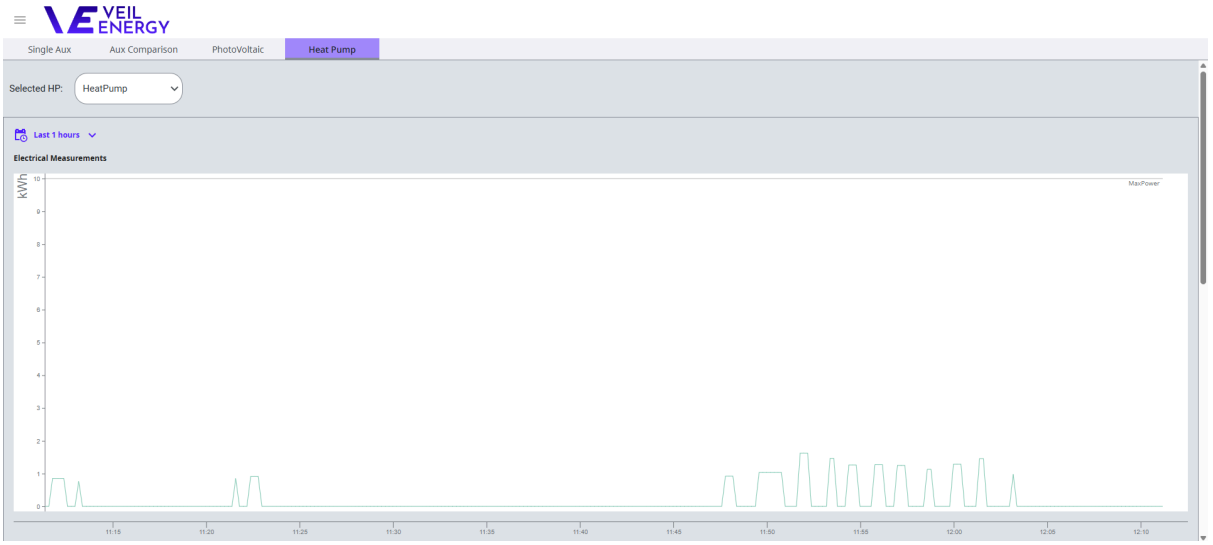


Figure 13

5.7 Historical Summary

The Historical Summary page provides an overview of energy consumption for selected auxiliary assets over a user-defined time range.

- The time range can be set using the two date picker fields.
- Energy consumption for each selected auxiliary is displayed and can be compared either with the total energy consumption of the plant or other selected auxiliaries by choosing “Total Energy Consumed” from the dropdown menu.

Data export options depend on the platform. If you are using the web version, click on “Download Data” to export daily consumption values for the selected time range. If you are using the mobile version, tap on “Get Data by Email” to receive the data report via email.

Note: The exported report includes energy consumption values for each selected asset, broken down by day within the specified range.

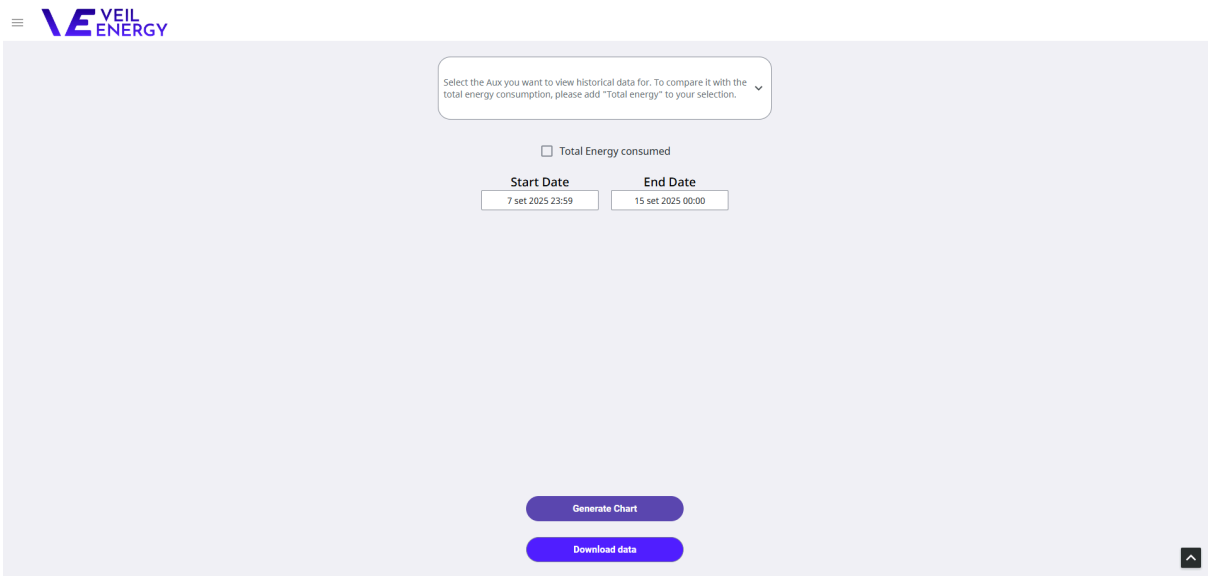


Figure 14