Power Eye Manual

I. Introduction

This manual introduces three interconnected applications: the **Power Eye Service (Service)**, the **Power Eye Application (Application) and Power Eye Gateway (Gateway)**. These applications work together to read, analyze, and visualize data from Modbus devices such as meters and sensors.

1. Power Eye Service

The **Power Eye Service** is a service designed to interact with measurement devices. Its key functions include:

- **Reading and Storing Data**: It reads and stores data from various devices.
- **Data Analysis**: It analyzes the collected data to trigger alarm functions based on specific conditions.
- **Data Sharing**: It shares the collected data with the PE App for further visualization and analysis.
- **Receiving Setup Information**: It receives setup information from the Application to customize its operations according to user preferences.

2. Power Eye Application

The **Power Eye Application** is a comprehensive platform for visualizing and analyzing the data collected by the Power Eye Service. Its features include:

- **Dashboard**: The dashboard visualizes the reading data using text and various types of charts (line, column, etc.).
- **Diagram**: This feature allows users to view real-time data from the device in a diagram format.
- **Trend**: The Trend feature displays trending data from the device in a real-time line chart, helping users track changes over time.
- **Alarm**: The Alarm feature alerts users about device connection issues, data thresholds, and usage limits.
- **Report**: The Report feature generates detailed reports for the collected data.
- **Manual Setup**: All the above features can be manually set up within the app according to user preferences.

3. Power Eye Gateway (Optional)

The **Power Eye Gatewa**y is the gateway service for mobile applications to get data. This component manages user permissions to ensure the right data is shared with mobile users. **This is an optional service that should be installed only if you have a mobile application license.** Its key functions include:

- **Data Gateway**: It serves as the bridge between mobile applications and the data collected by the Power Eye Service.
- **User Permission Management**: It manages user permissions to ensure that only authorized users can access specific data.
- **Data Distribution**: It distributes the right data to mobile applications based on user permissions and preferences.

II. System Requirements

This section outlines the hardware requirements for running the **Power Eye** effectively.

1. PC Requirements

Minimum Requirement

- **CPU**: 4 cores x86 CPU (Like Intel Core I3 10300)
- **RAM**: 8GB
- **SSD**: 256GB
- **Operating System**: Win 11 Pro x64

Recommended Requirement

For optimal performance, we recommend a workstation PC with the following specifications:

- **CPU**: Intel Xeon/AMD EPYC (at least 6 cores)
- **RAM**: 32GB ECC
- **SSD**: 512GB
- **Operating System**: Win Server 2022 x64

You can find suitable PCs at your local computer store or online. For your convenience, we have provided links to some options that meet these requirements. Please note that All-in-One PCs do not require a separate monitor.

2. Display Requirements

For monitoring, you can use a monitor or TV. We recommend a TV of 40 inches or larger for a better view. Additionally, the display resolution should be at least **Full HD (1920x1080)** for optimal clarity. Here are some options that you can consider:

Please note that the links provided are for reference only. The availability of the products may vary.

Remember to ensure that your hardware meets or exceeds the recommended requirements to ensure smooth operation of the **Power Eye Application**. If you have any questions or need further assistance, feel free to contact our support team.

III. Installation

1. Power Eye Application and Power Eye Service:

The **Power Eye Application** and **Power Eye Service** are included in a single setup file: **PowerEye-Setup.exe**. You can download it from the official **Power Eye website**

- Locate the **PowerEye-Setup.exe** file.
- Double-click on it to run the installer.
- Follow the on-screen instructions to complete the installation. This will set up the necessary components for both the **Application** and the **Service**.
- For detailed instructions on running the **Application** and **Service**, please refer to the **README.txt** file located in the installation folder.

2. Power Eye Gateway:

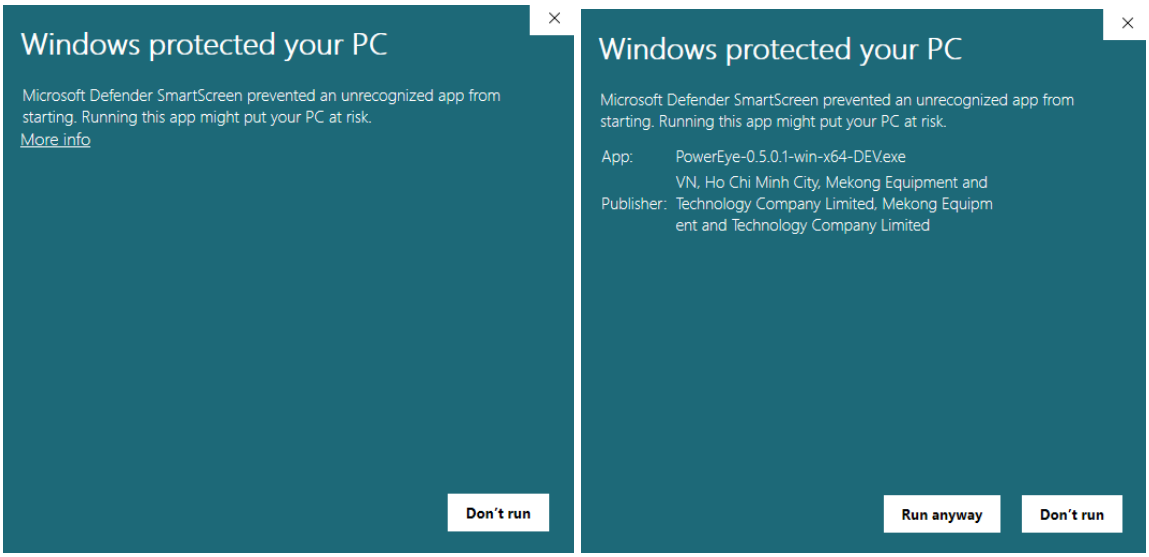
The **Power Eye Gateway** setup file is **PowerEyeGateway-Setup.exe**. You can download it from the official **Power Eye website**

- Locate the **PowerEyeGateway-Setup.exe** file.
- Double-click on it to run the installer.
- Follow the on-screen instructions to complete the installation. This will set up the necessary components for the **Gateway**.
- For detailed instructions on running the **Gateway**, please refer to the **README.txt** file located in the installation folder.

Note:

If the 'Windows protected your PC' popup appears, simply click on 'More Info' and then select 'Run anyway' as long as the Publisher is Mekong, as shown in the image below.

Please ensure your PC doesn't go to sleep to keep the Service/Gateway running continuously.



Getting Started

Once you have successfully installed the Application, Service and Gateway(optional), you can start exploring its features. This section will guide you through the initial steps of using the application.

I. Activation

1. License Key

A license key is a unique code that is required to activate the Power Eye and its associated devices. The license key not only validates your software purchase but also determines the number of devices you can connect to the application.

There are four types of licenses included in the license key:

- **Software License**: Activates Power Eye, granting access to all software features.
- **Device License**: Determines the number of devices that can connect to the application.
- **Control License:** Determines the number of devices that can be remotely controlled via Power Eye.
- **User License:** Defines the number of mobile users who can access the application.

For example, if you need to **connect 10 devices** and **5 mobile users**, you must purchase:

- **Device License** for **10 devices** (for data collection)
- **User License** for **5 users** (for remote operation)

Please note that each license key is unique and should not be shared with others. If you need to connect more devices or mobile users than your current license allows, you will need to purchase an additional license key.

Proper licensing is not only legally required but also ensures that you can fully utilize the capabilities of the Power Eye. If you have any questions about licensing or need further assistance, please visit our website for more information and support.

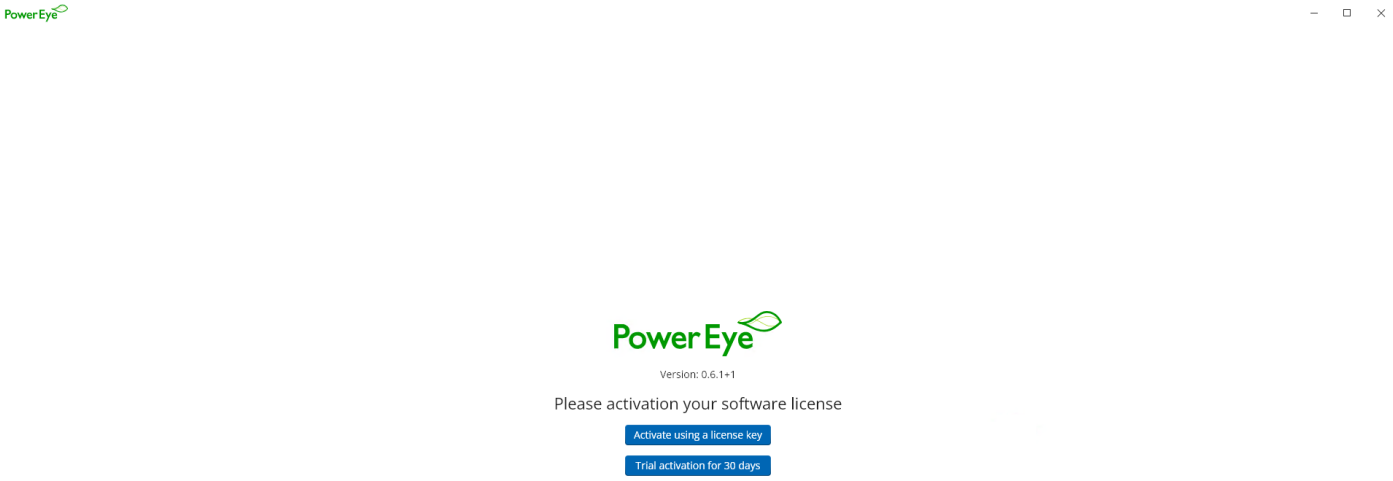
2. License Activation

Before you can start using the Application, you need to activate your license. This is an essential step as it verifies your purchase and unlocks the full capabilities of the software.

Here's a step-by-step guide on how to activate your license:

1. **Locate Your License Key**: Upon purchasing the Power Eye, you should have received a license key. This is usually provided as a file. Please locate this file on your system as it will be required for the activation process.
2. **Open the Application**: Launch the **Service** and the **Application** on your system.
3. **Navigate to License Activation**: Look for an option in the application's menu for 'License Activation', 'Enter License Key', or something similar.
4. **Select Your License Key File**: In the license activation screen, you should see an option to select your license key file. Navigate to the location of your license key file on your system and select it.

5. **Activate**: After entering your license key, click on the 'Activate using a license key' button. The application will then verify your license key. If your license key is valid, you should see a message confirming successful activation. You can now access the full features of the Power Eye.

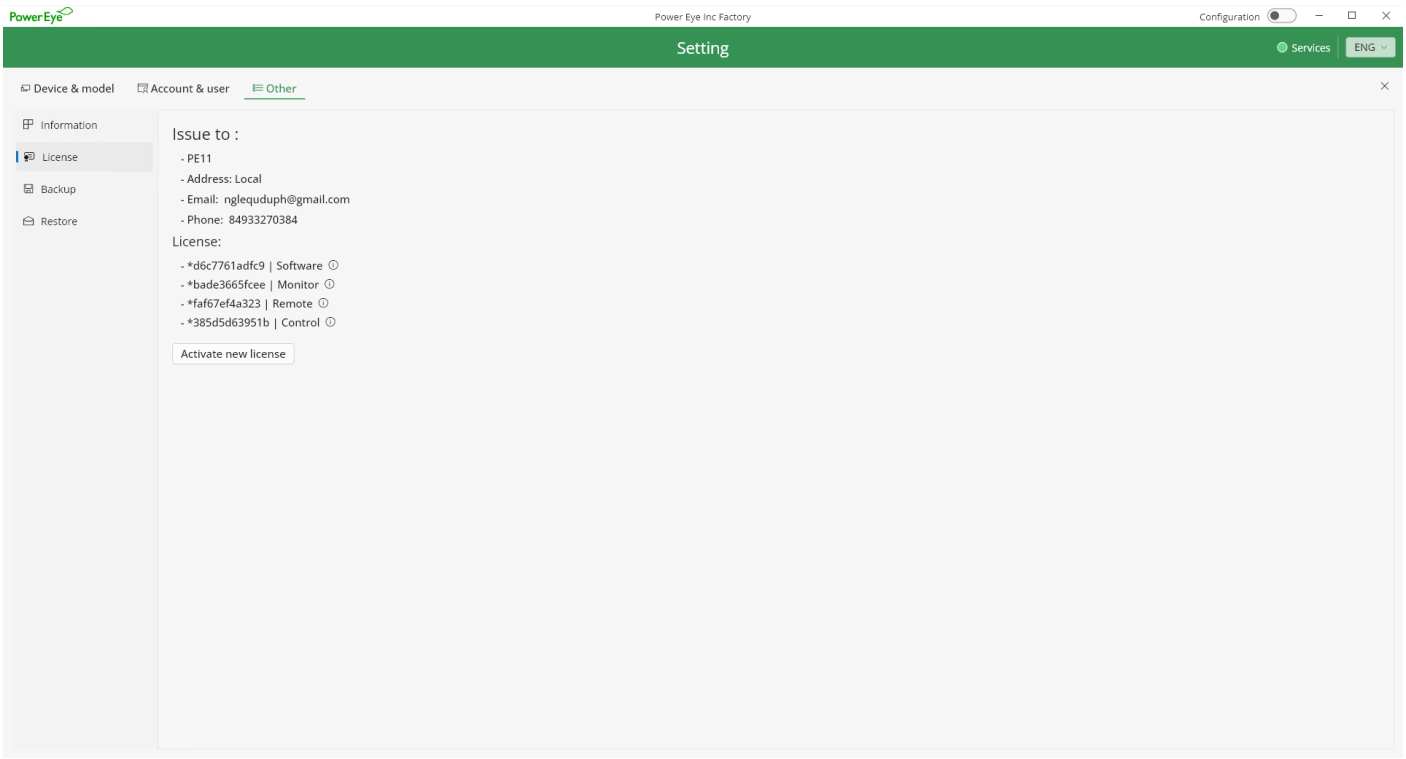


Remember, each license key is unique and should not be shared with others.

3. Activating Additional Licenses

After your initial activation, which includes both the software and devices, you can activate additional licenses at any time through the application settings. Here's how:

1. Launch the Application and go to the **Settings** menu.
2. In the settings interface, click on the **Other** tab.
3. Within the **Other**, find and click the **License** option.
4. Click **Activate New License** to add a new license.
5. Follow the on-screen instructions to complete the activation



You can repeat this process for new device or software component that requires a license. Remember to keep all license keys secure, as they are unique to your purchase and should not be shared.

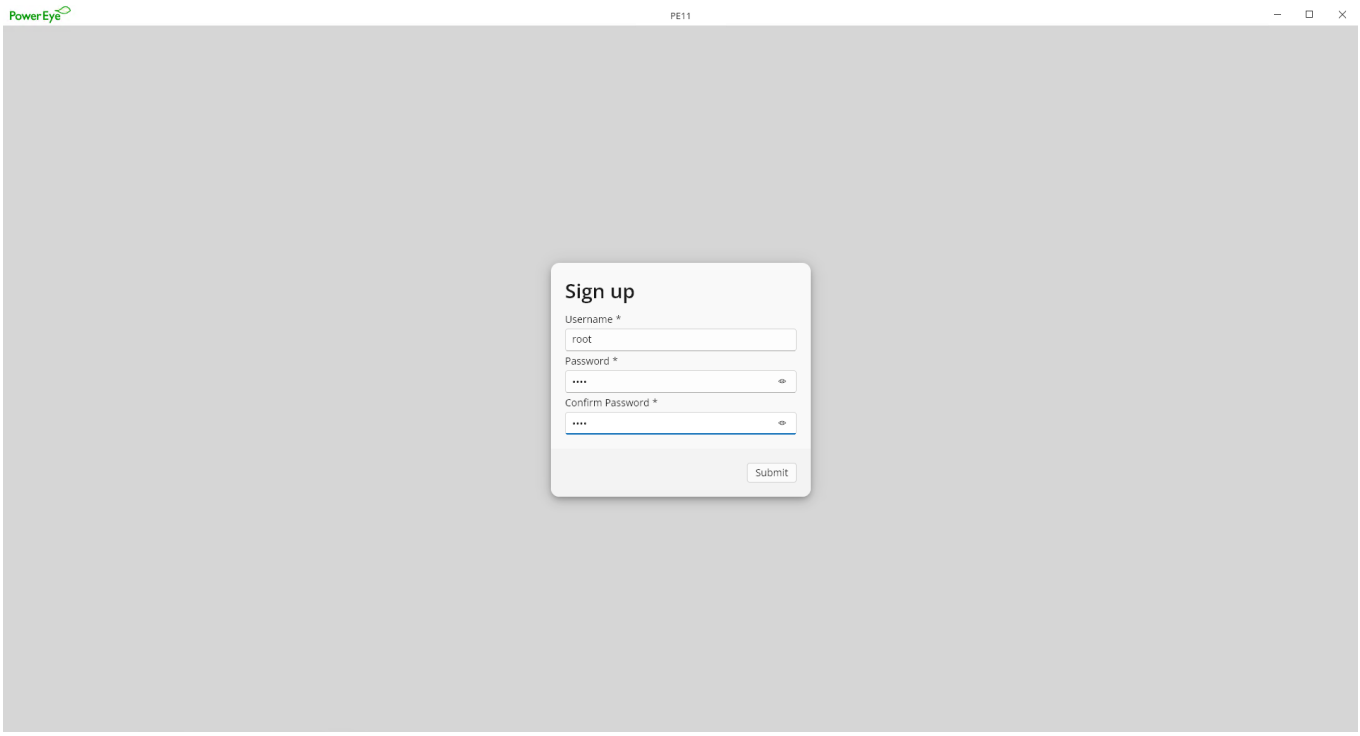
II. Account

1. Root Account Setup

Setting Up the Root Account Immediately following activation, a prompt to set up the root account will appear. This is a mandatory step as the root account is essential for managing the application and has full administrative privileges.

Creating the Root Account When the root account setup prompt appears:

1. Enter a **username** for the root account.
2. Create a **password** that is strong and secure.
3. Re-enter the password for **verification**.
4. Click **Submit** to finalize the account setup.



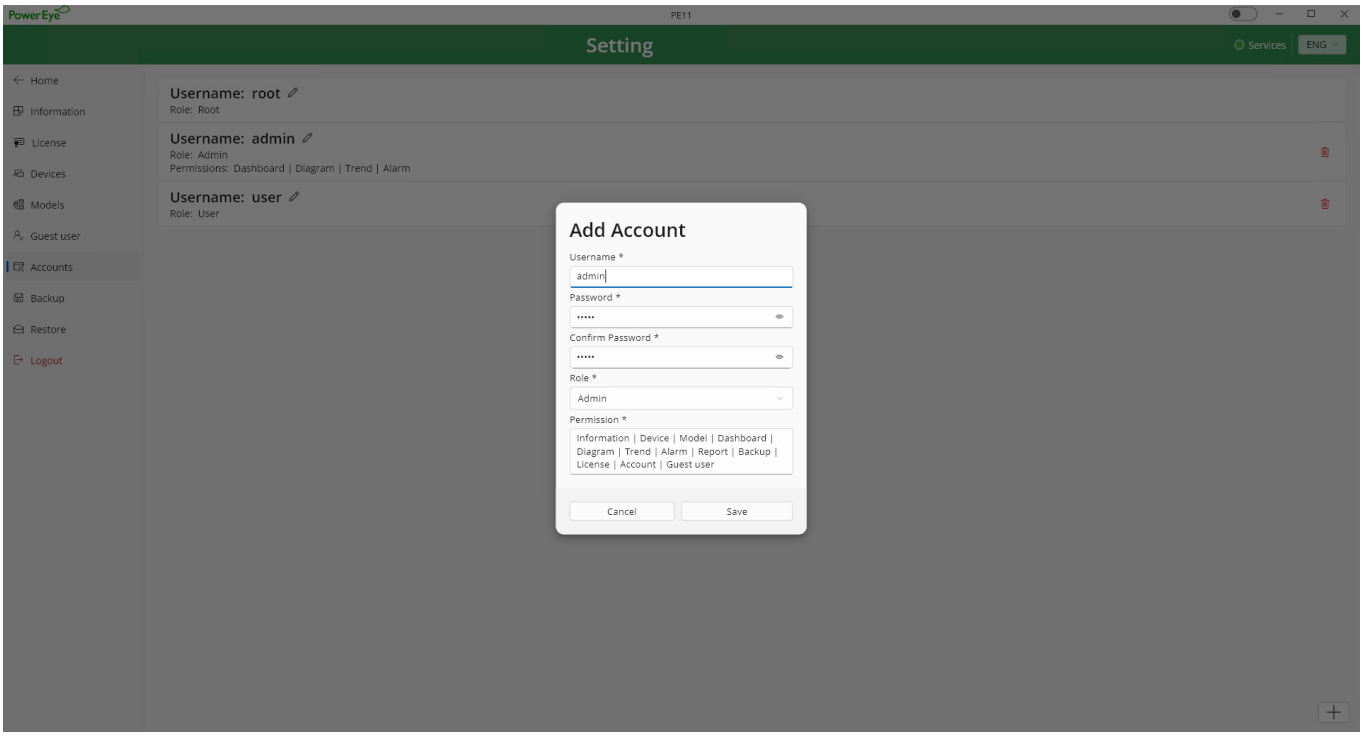
Note: The root account has full access to the application. Ensure these credentials are handled securely.

2. Account Setup

You can begin adding other accounts with varying levels of access. Here's how you can manage account setups:

1. Go to the **Setting** menu and click on the '**Account & User'** tab.
2. Within the '**Account & User'** tab, click on **Account**.
3. To add a new account, tap the **"+"** icon. To update an existing account, tap the **Pencil icon** next to the account you wish to modify.
4. **Administrator Account Setup**: To create an administrator account, you must be logged in as the root account. Administrator accounts have extensive permissions (accessing settings, configuring devices and models, customizing the dashboard …)
5. **User Account Setup**: If you need an account with view-only access, set up a user account. This account type is ideal for individuals who need to monitor but not alter configurations.

Remember, the root account is required to establish administrator accounts due to their elevated privileges. Ensure you're logged in with the correct credentials before proceeding.

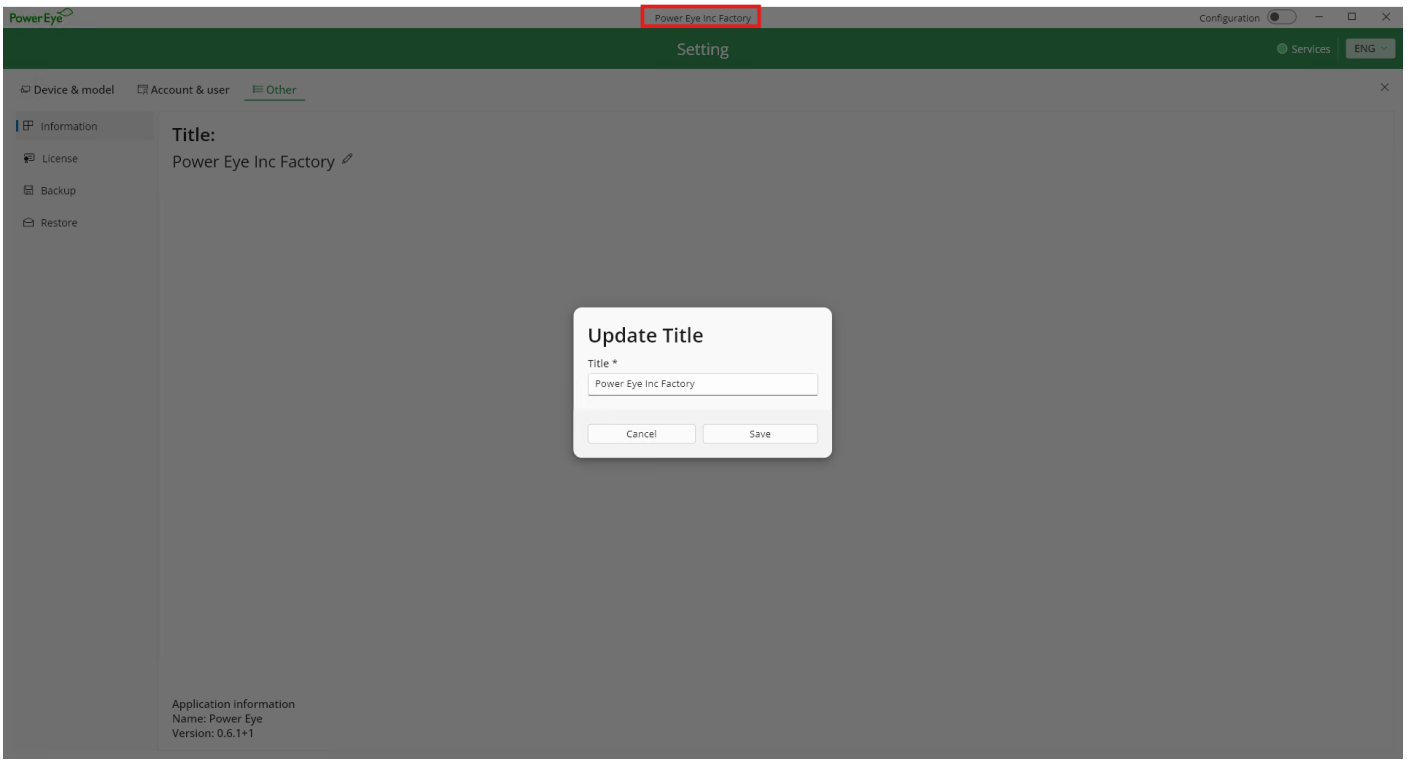


III. Customization

Personalize the **Application** by setting up a custom title, such as your factory name, to be displayed within the app. Here's how to do it:

1. Go to the **Setting** menu, select **Other** tab, then select the **Information** option.
2. Look for the title field and click on the **Pencil icon** to edit.
3. Type in your desired title, such as the name of your factory or facility.
4. Save changes to apply**.**

Now, your custom title will be prominently displayed in the application, providing a tailored experience.



IV. Device

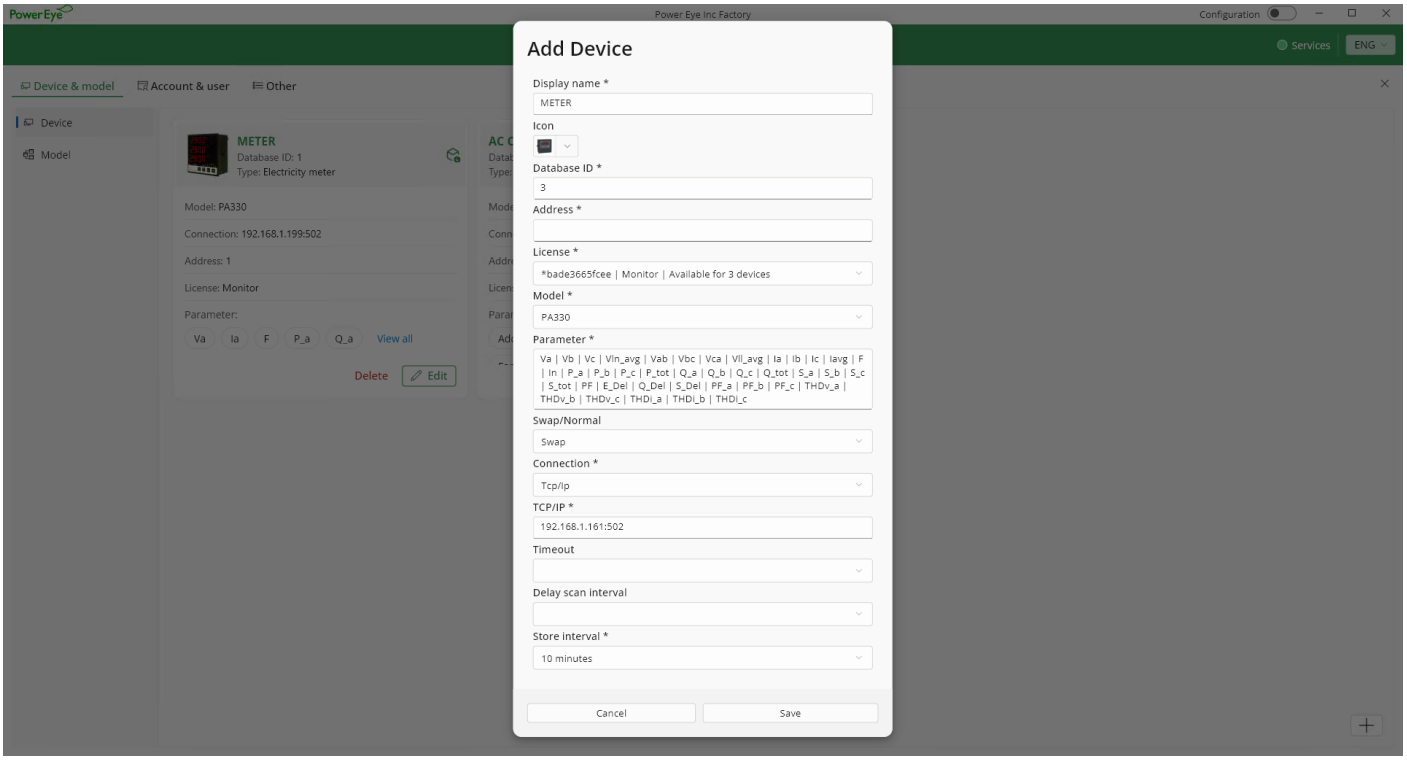
Before you can start using the dashboard or any other features of the **Power Eye**, you need to set up your measurement devices in the application (As of now, the application supports integration with **Modbus devices** exclusively). This includes setting up the model of the device if it is not supported by default by the software.

Here's a step-by-step guide on how to set up your device:

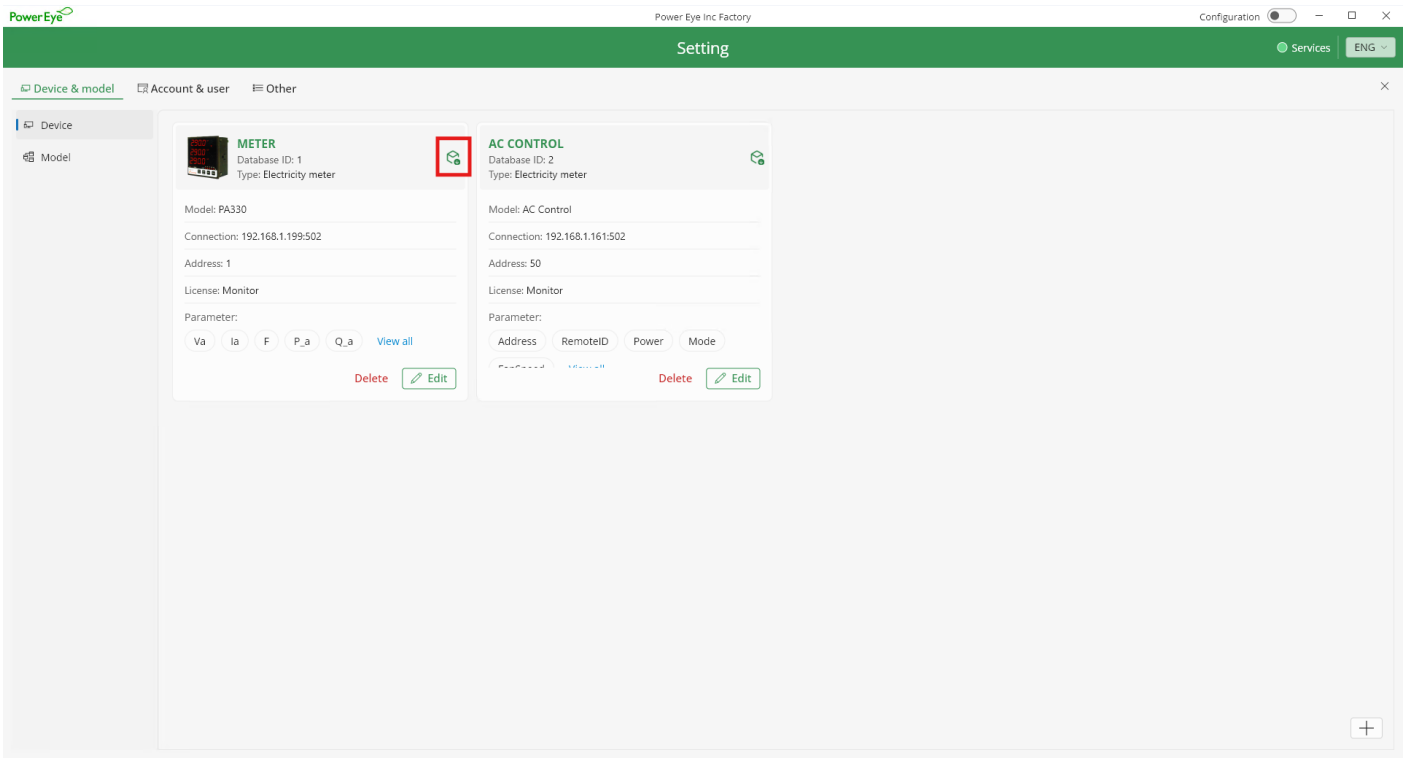
1. Go to the **Setting** menu, select the `**Device & model**` tab then select **Device** option.
2. Click on the '**+**' button to start setting up a new device.
3. Input Device Information:
    - **Display Name**: Enter a name for your device. This name will be used to identify the device in the application.
    - **Icon**: Choose an icon for your device. This helps to visually distinguish your device in the application.
    - **Database ID**: Enter a unique ID for your device. This ID will be used in the **Service** to identify the device.
    - **Address**: Enter the address of your Modbus device.
    - **License**: Choose the license that you have purchased for the device software.
    - **Model**: Choose the model of your device. If your device model is not supported by default, you can manually set it up in Model setup.
    - **Parameters**: Choose the data that you want to monitor from your device. This could be any data that your device is capable of providing.

- **Swap/Normal**: Choose the way the application parses the data.
- **Connection**: Set up the connection for your device. You can choose between Serial and TCP/IP connection.
- **Timeout**: Set the timeout duration when reading data from the device.
- **Delay scan interval:** Set the delay time between consecutive data reads.
- **Store Interval**: Set the duration for reading and storing data for visualization.

4. After entering all the necessary information, click on the **Save** button to add your device to the application.



5. **Test Configuration**: Verify the functionality of your device by clicking on the **Read Icon**. This will perform a test to ensure your device is operating correctly with the new settings.



Actions on existing Device

You can easily edit or delete devices within the application to keep your device list up-to-date. This ensures that you always have accurate and relevant information for your measurement devices.

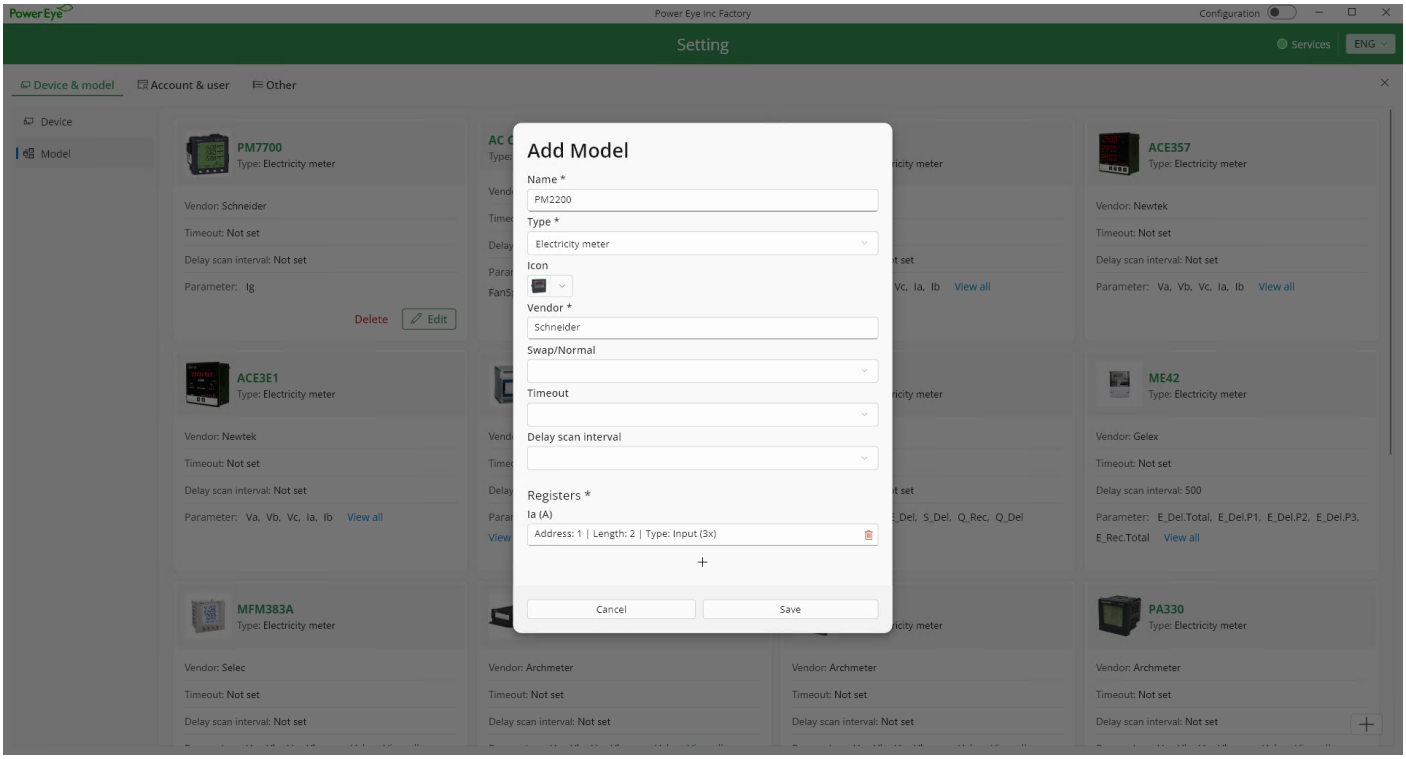
V. Model

In the **Power Eye**, while setting up a device, you need to select a model. The application comes with some default models, but if your device model is not supported by default, you can add a custom model in the application.

Here's a step-by-step guide on how to set up your device:

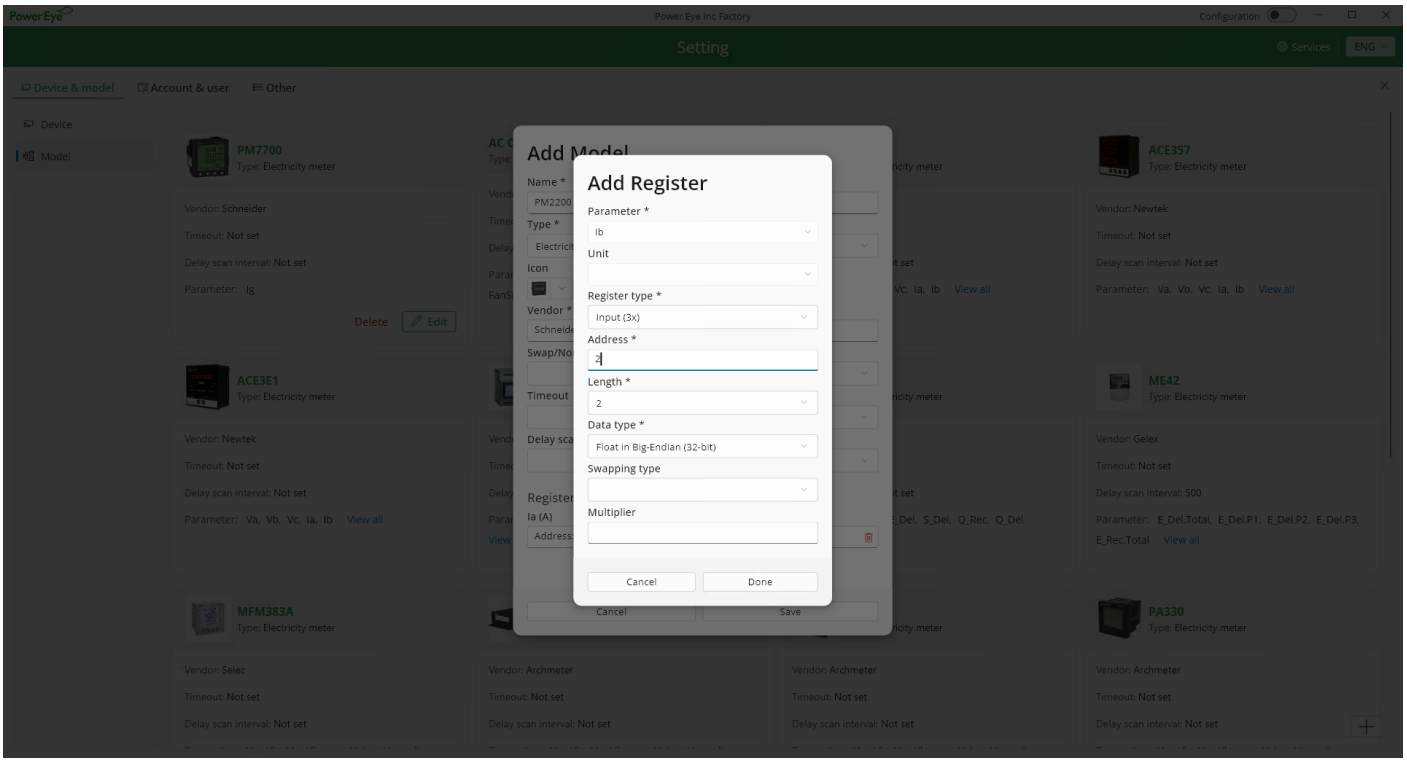
1. Go to the **Setting** menu, select the **`Device & model`** then select **Model** option.
2. Click on the '**+**' button to start setting up a new model.
3. Input Model Information**:**
   - **Name**: Enter a name for your model. This name will be used to identify the model in the application.
   - **Type**: Specify the type of your model. This could be based on the type of device or its functionality.
   - **Icon**: Choose an icon for your model. This helps to visually distinguish your model in the application.
   - **Vendor**: Enter the vendor or manufacturer of your model.
   - **Swap/Normal**: Choose the way the application parses the data.
   - **Timeout**: Set the timeout duration when reading data from the device.
   - **Delay scan interval:** Set the delay time between consecutive data reads.
   - **Register Information**: Input the register information for your Modbus device

4. After entering all the necessary information, click on the **Save** button to add your custom model to the application.



Here's how you can set up the register information for your Modbus device:

1. **Parameter**: Set up the parameters that you want to monitor from your device, such as IA, IB, etc.
2. **Unit**: Specify the unit of measurement for each parameter. This could be volts (V), amps (A), percentage (%), etc.
3. **Register Type**: Select the type of Modbus register that your device uses. This could be an Input Register or a Holding Register.
4. **Address**: Enter the Modbus register address for each parameter. This is where the device stores the data for that parameter.
5. **Length**: Specify the number of addresses that will be read for each parameter. This determines the amount of data that will be retrieved from the device.
6. **Data Type**: Choose the data type that matches how your device stores data. Typically, this might be a **32-bit float** using **big-endian** byte order. Adjust this setting to accurately reflect the data format used by your device.
7. **Swapping type**: Specify the way the application parses the data from the device.
8. **Multiplier**: If necessary, you can set up a multiplier to convert the units of your data. For example, you might want to convert watts (W) to kilowatts (KW).



5. **Test Configuration**: To confirm your model's functionality, establish a device profile utilizing the model in question. Proceed to execute a configuration test to ensure everything is working as intended

Actions on existing Model

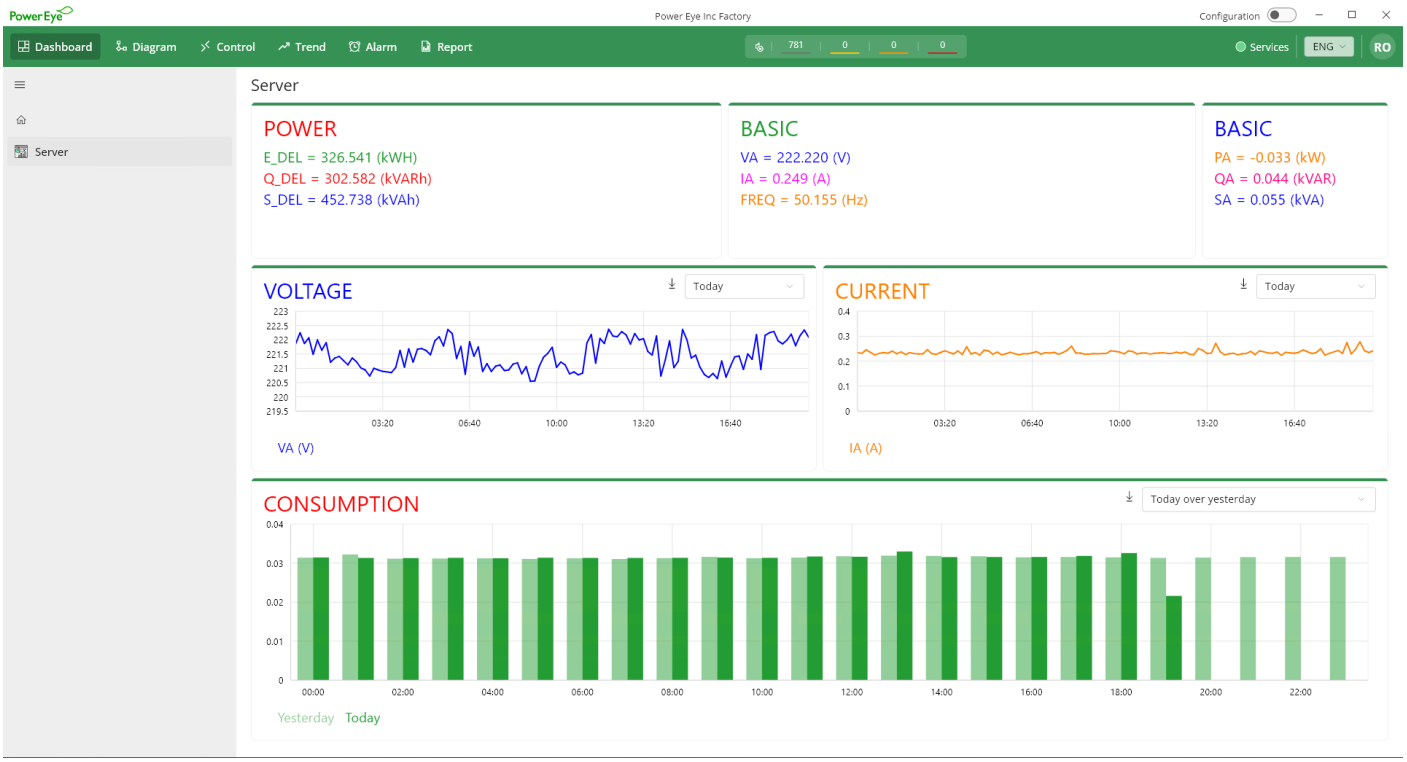
You can easily edit or delete models within the application to keep your model list up-to-date. This ensures that you always have accurate and relevant information for your models.

VI. Dashboard

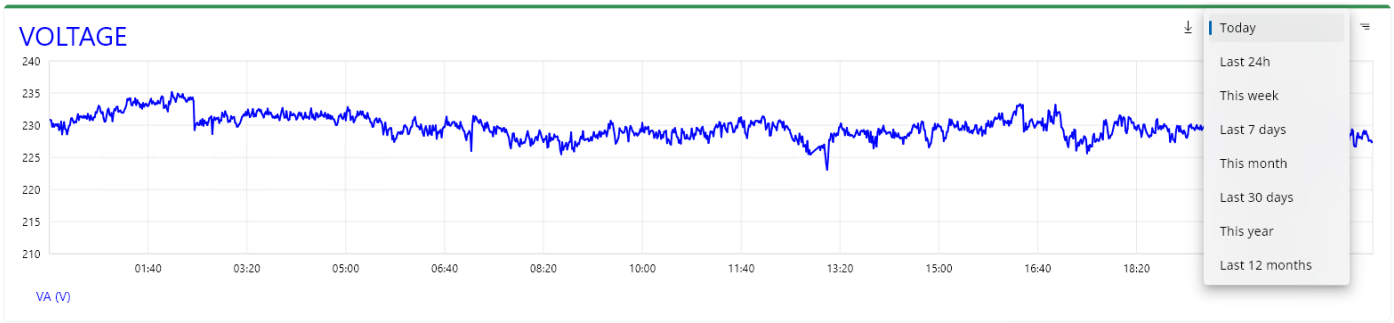
The Dashboard is the main interface of the Power Eye Application. It provides a comprehensive view of the data collected from your Modbus devices. The dashboard includes various elements such as text, line charts, and column charts to represent the data in an easily understandable format.

Here's how to navigate the dashboard:

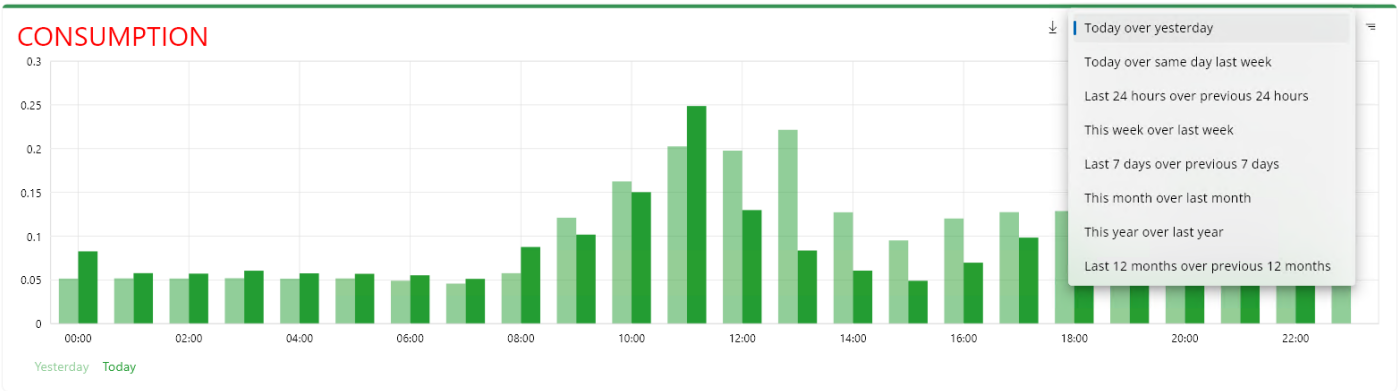
- **Data Visualization**: The dashboard displays data in various formats including text, line charts, and column charts. Each format provides a unique perspective on the data, helping you understand the data better.



- **Data Filtering**: The dashboard offers several options to filter the data. You can choose to view data for specific time periods such as 'Latest', 'Today', 'Last 24 hours', etc. This allows you to focus on the data that is most relevant to you.

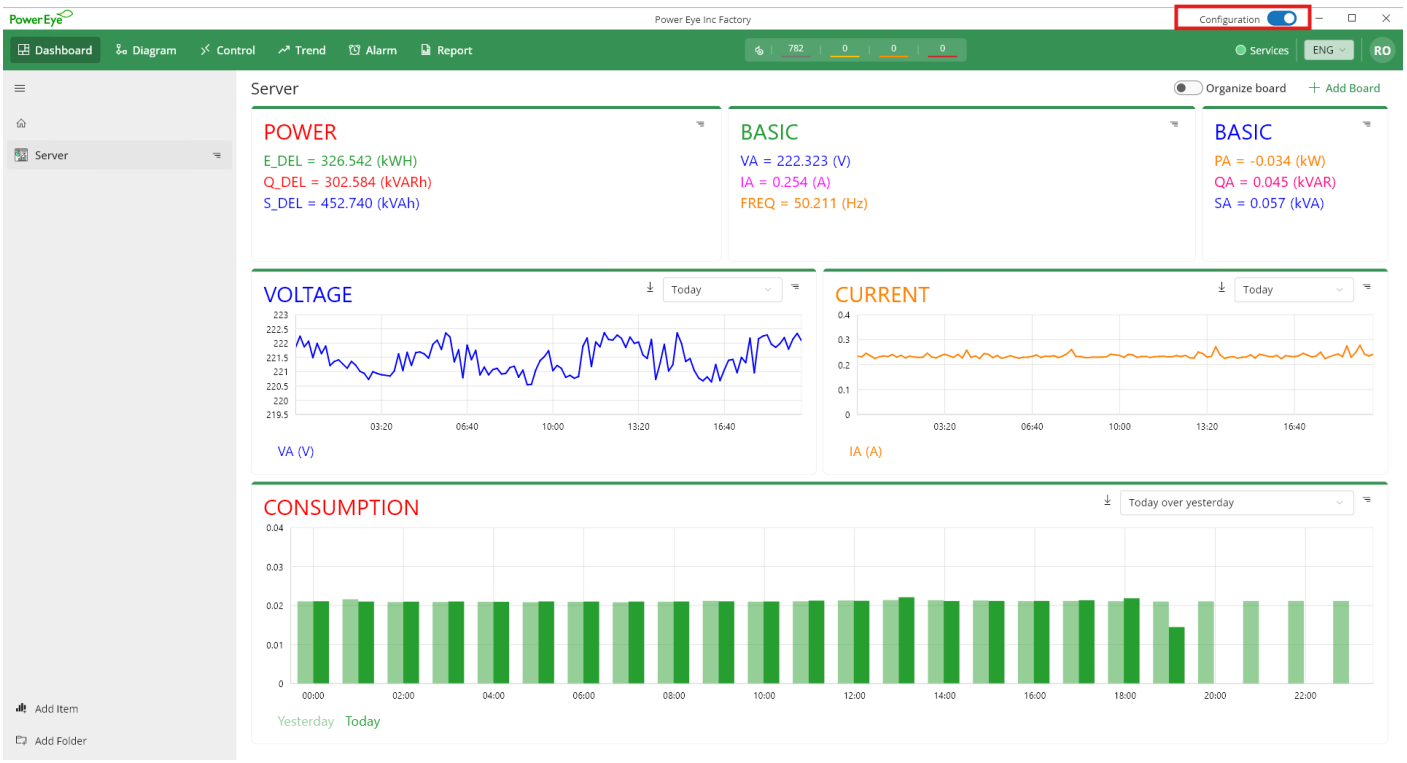


- **Comparative Analysis**: The dashboard includes features like 'Today over Yesterday' and 'This week over last week', enabling you to compare data from different periods. This can assist you in spotting trends or anomalies in your data.



- **Interactive Chart Exploration**: Navigate through your charts with ease:
  Use **Shift + Scroll** on your mouse to zoom in/out on details or pan across your line or column charts, giving you control over your data exploration.

Setup



1. Enable Configuration

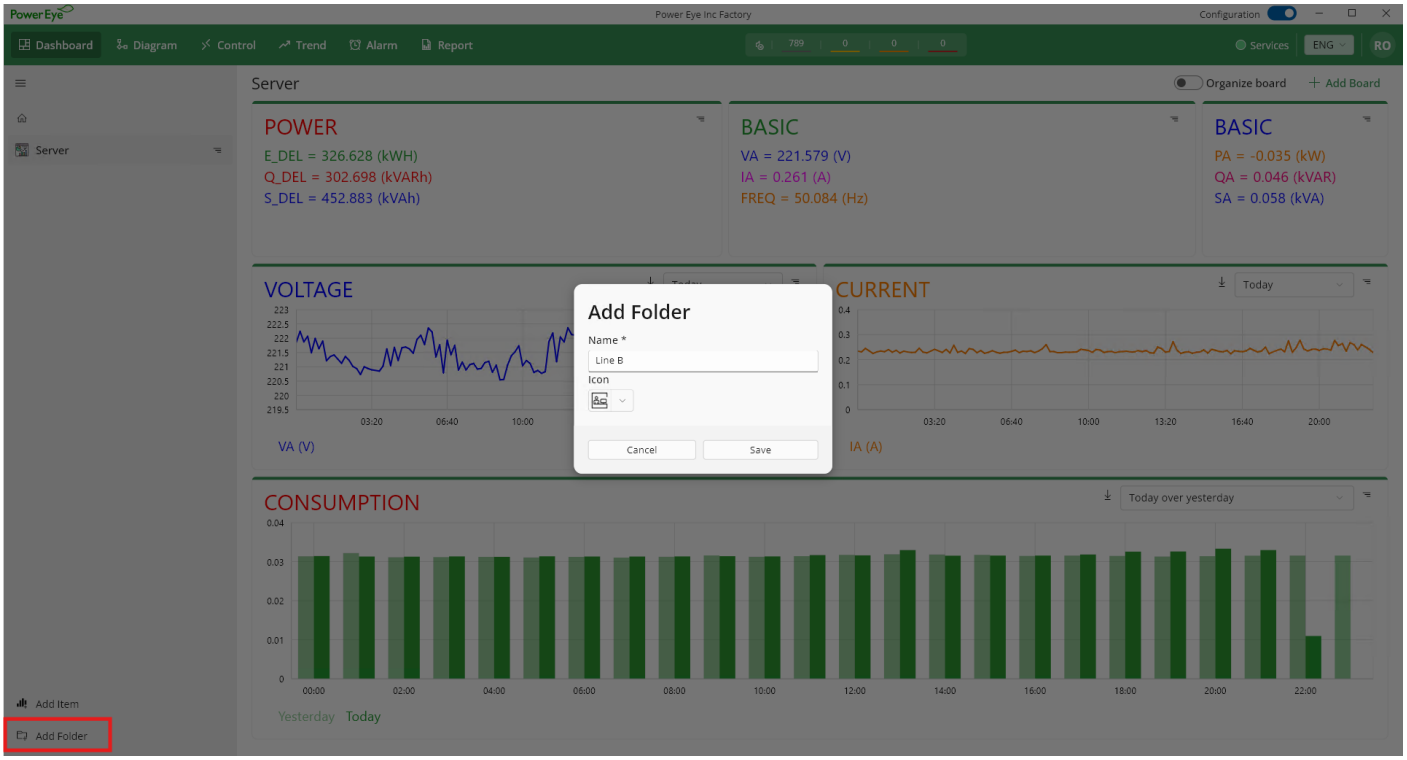
Before setting up the dashboard, **you must enable configuration** using the **switch on the window bar** and ensure that your account has **setup permissions**.

1. Locate the **Enable Configuration Switch** on the **window bar**.
2. Toggle the switch **ON** to activate customization features.

Once configuration is enabled and your account has the necessary permissions, you can begin setting up folders, dashboard, and boards.

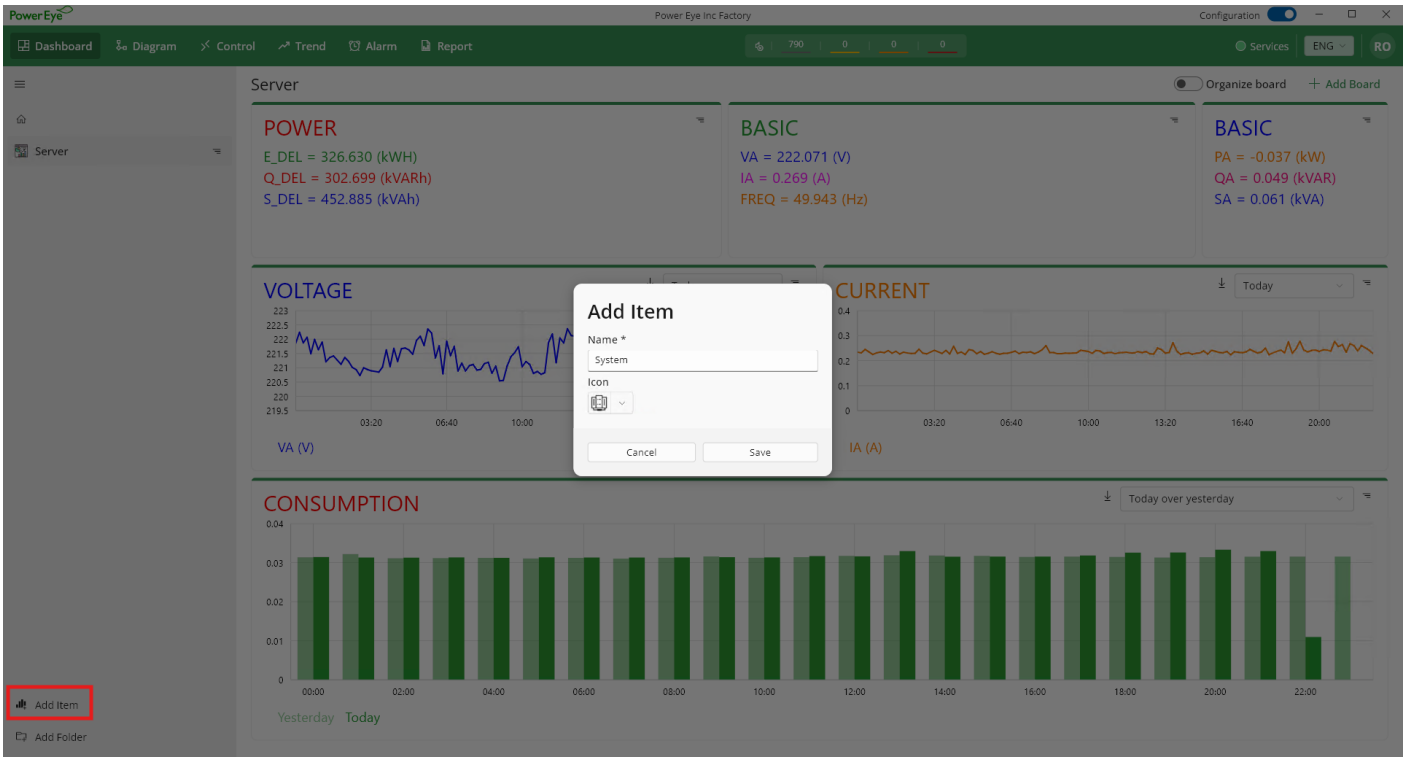
2. Create folders

1. Click on the **Add Folder** button on the left-bottom corner to setup new folder.
2. Input Folder Information**:**
   - **Name**: Enter a name for your folder.
   - **Icon**: Choose an icon for your folder.



3. Create Dashboard

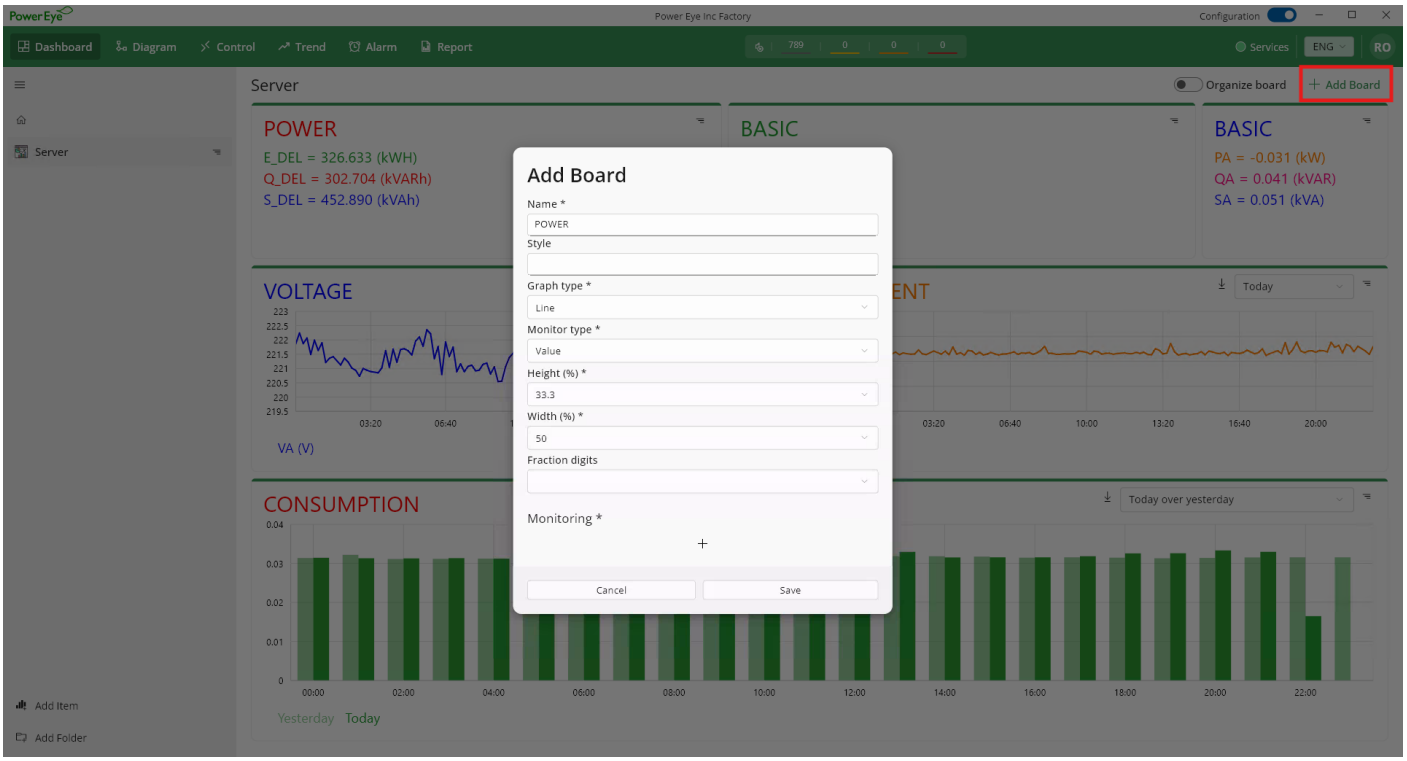
1. Inside a folder, click on the **Add Item** button to setup a dashboard.
2. Input Dashboard Information**:**
   - **Name**: Enter a name for your dashboard item.
   - **Icon**: Choose an icon for your dashboard item.



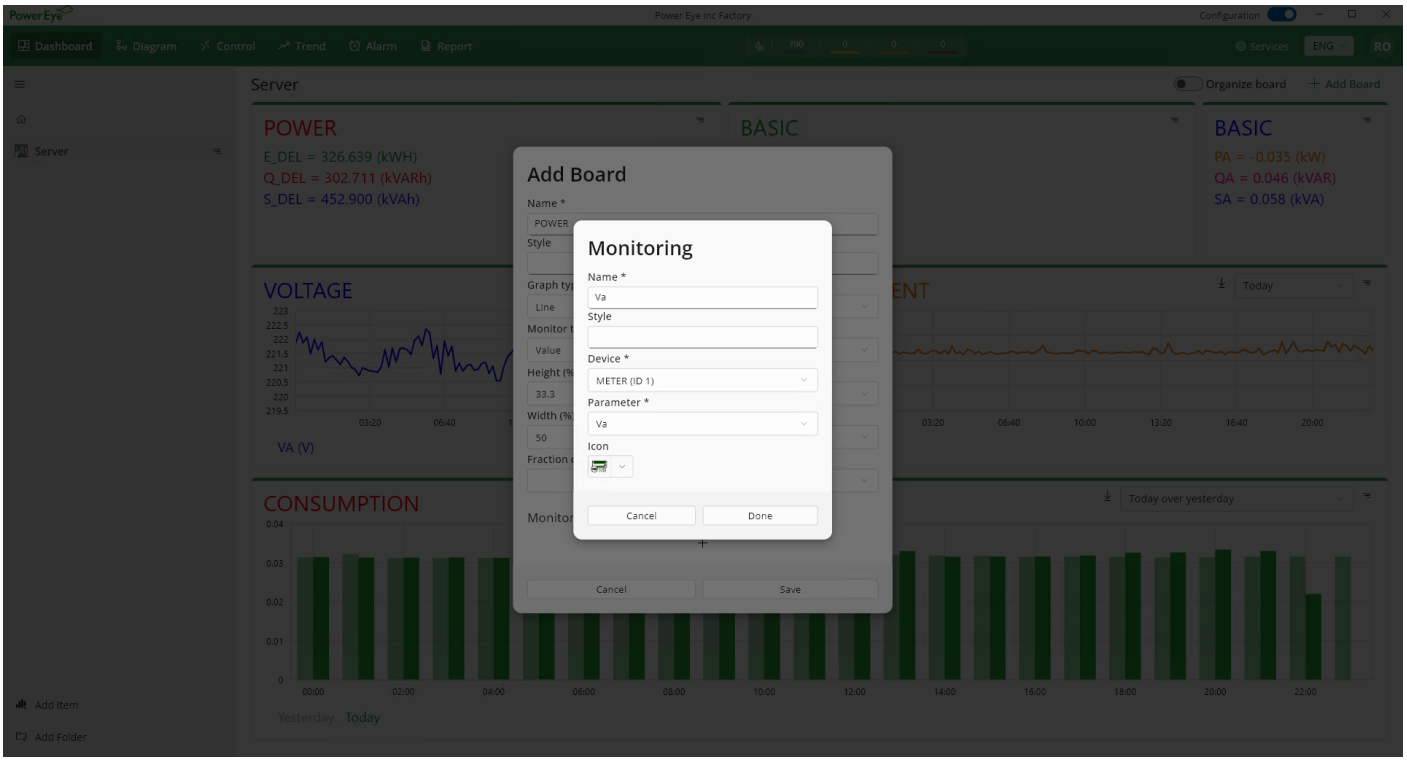
Remember, you can edit/delete and duplicate an existing folder and item after it's created.

4. Create Board

1. Inside a dashboard, click on the **Add Board** icon to start setting up a new board.
2. Input Board Information:
   - **Name**: Assign a distinctive name to your board. Customize its appearance with a choice of fonts and colors available in the app.
   - **Graph type**: Choose the type of graph for your board. This could be text, line, or column.
   - **Monitor type:** Select **Value** (displays real-time measurements) or **Consumption** (calculates usage over time).
   - **Height and Width**: Set the dimensions of your board as a percentage of the total dashboard size.
   - **Fraction Digits**: Set the number of fraction digits for the parameter value.



3. Setting up Monitoring: click on the `+` icon to start setting up a new monitoring parameter. Input monitoring information
    - **Name:** Assign a distinctive name to your parameter. Customize its appearance with a choice of fonts and colors available in the app.
    - **Device**: Choose the device you want to monitor.
    - **Parameter**: Select the parameter to track.
    - **Icon**: Choose an icon for your parameter.



Once a board is created, you have full control over its layout and configuration:

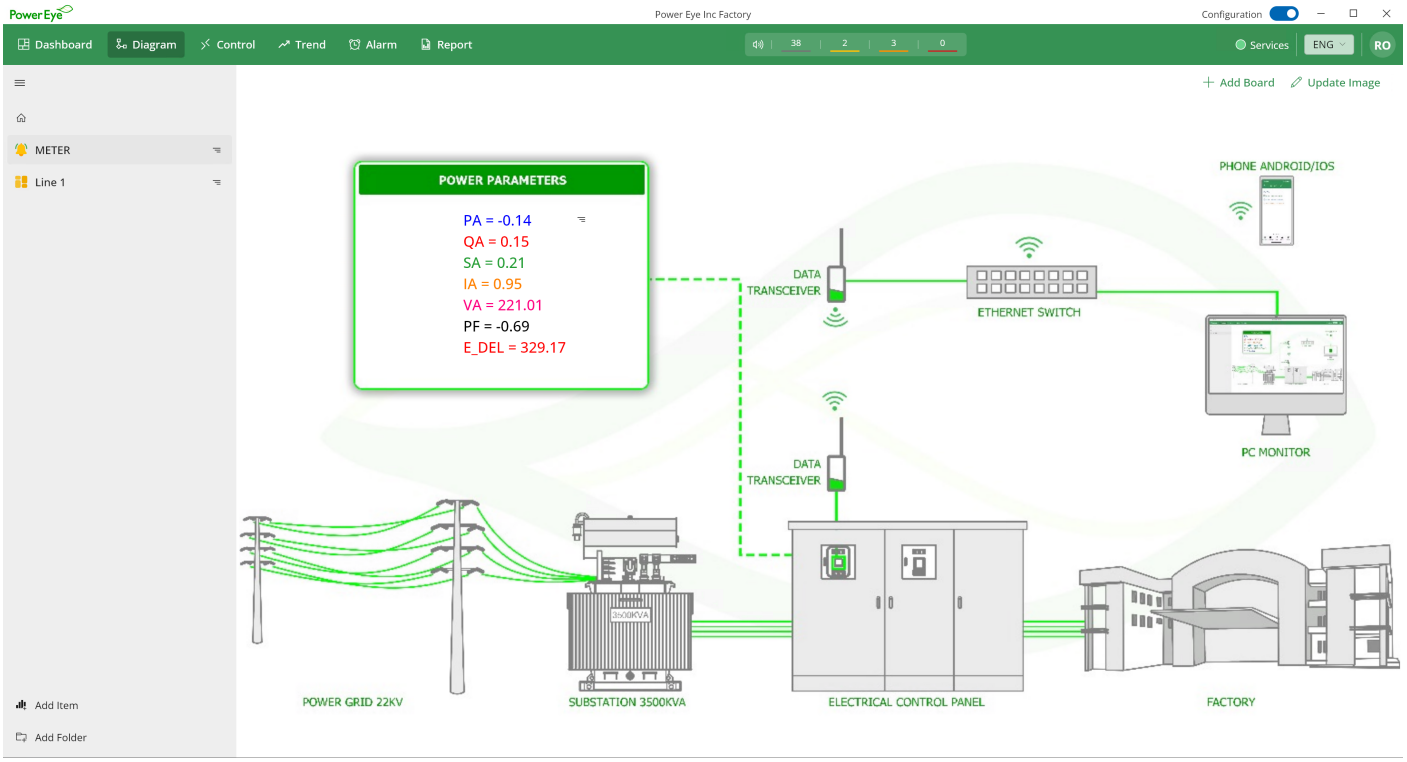
- Enable **Organize board** switch to begin resize and reposition board
- Click **Edit Icon** button to edit, duplicate or delete current board

VII. Diagram

The Diagrams function is a powerful feature of the Power Eye Application that allows you to visualize data in the context of a user-inputted diagram image. This feature enhances your understanding of the data by providing a visual representation of the device and its corresponding data.

Here's how to use the Diagrams function:

- **Input Diagram Image**: You can input a diagram image that represents your device setup. This could be a schematic, a floor plan, or any other image that helps you visualize your device's context.
- **Add Data Boards**: Once you have your diagram image set up, you can add data boards to the image. These boards display real-time data from your device. For example, if you have a device that measures IA, IB, and IC, you can add three separate boards near the device on the image to display these measurements.
- **Real-Time Data Display**: The data on these boards is updated in real-time, allowing you to monitor the device's measurements as they change. This can be particularly useful for tracking fluctuations and identifying anomalies.

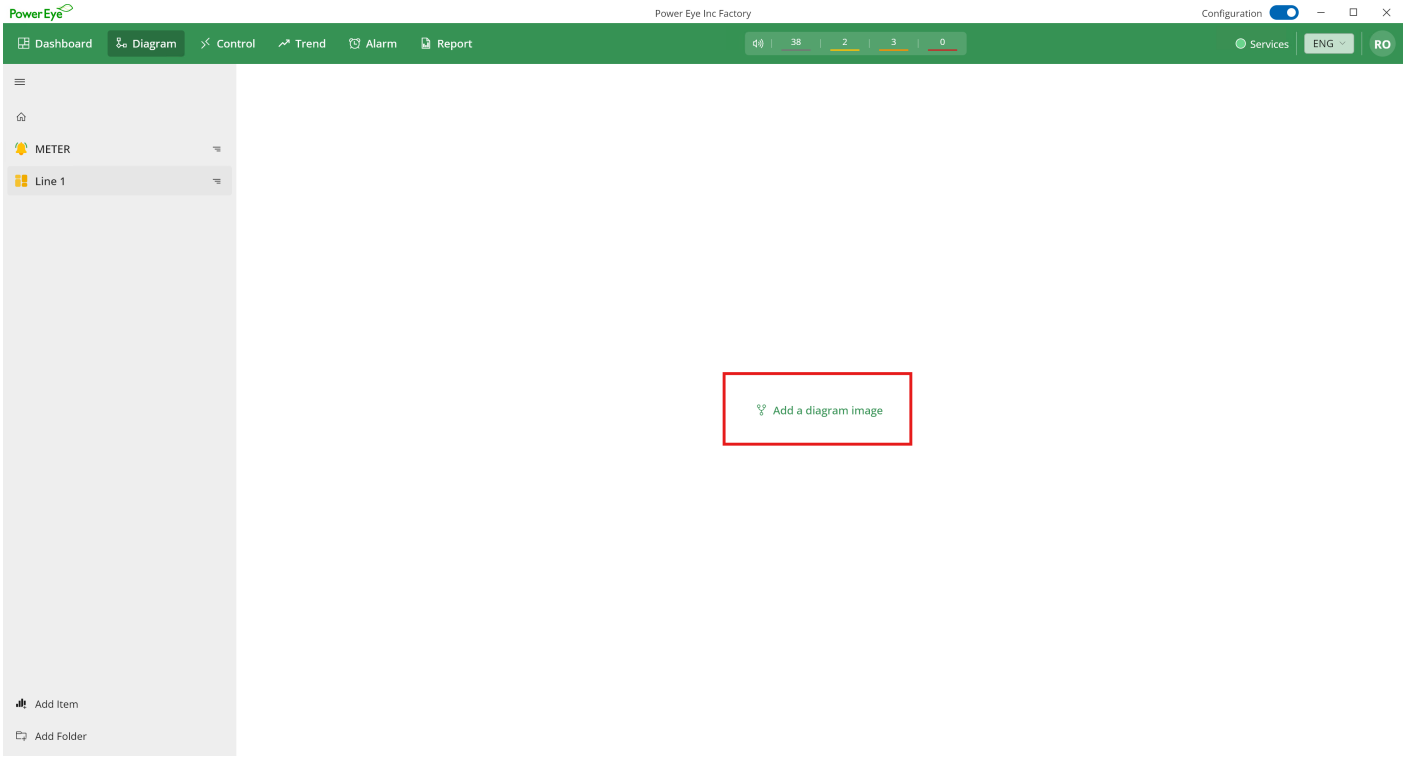


Setup

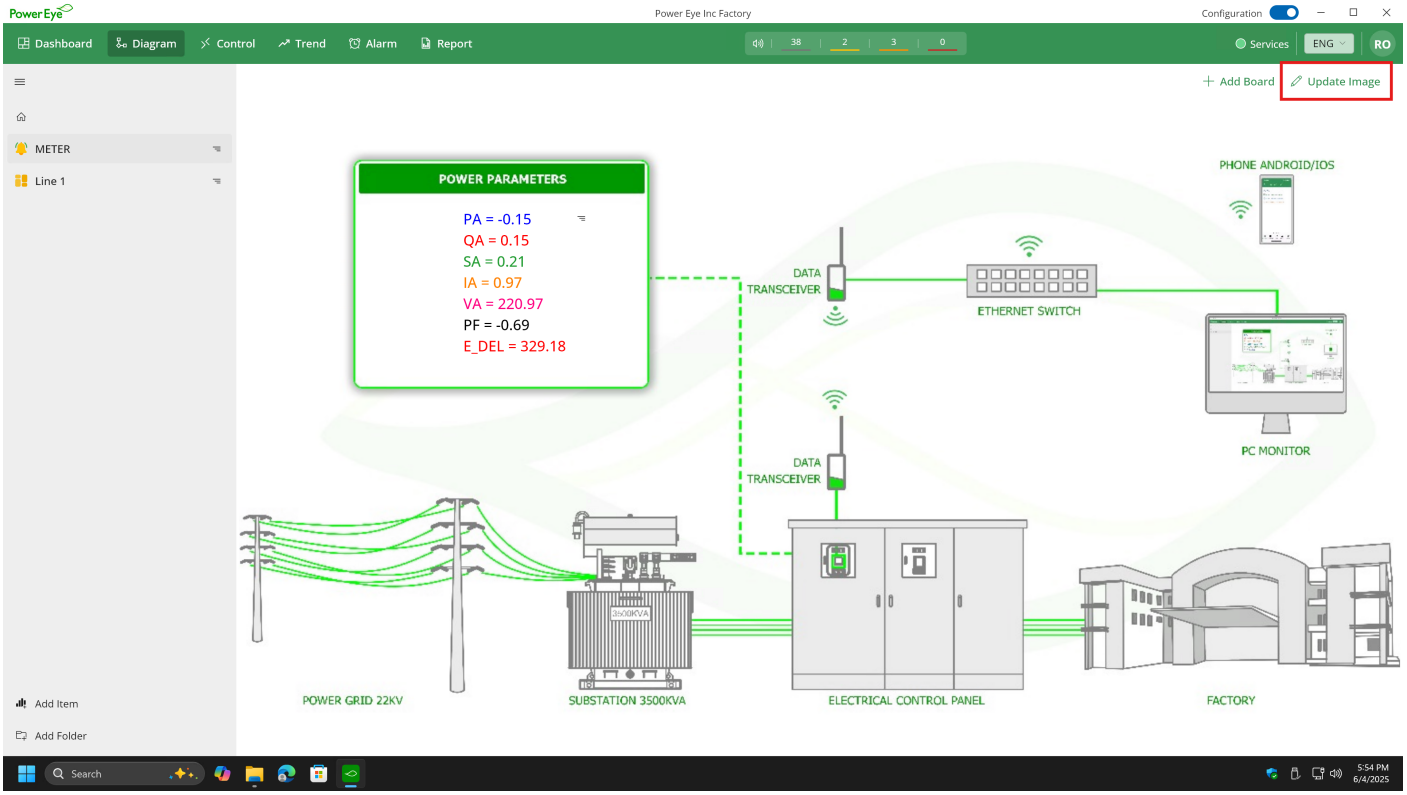
The **Diagram Setup** process follows a similar structure to the **Dashboard Setup**, requiring **Enable Configuration**, **Folder Creation**, and **Diagram Creation**. Ensure that **configuration is enabled** via the window bar switch, and that your account has the necessary **setup permissions** before proceeding.

1. Add Diagram Image

Click on the **Add Diagram Image** button and select a PNG or JPG image that represents your diagram. This could be a schematic, a floor plan, or any other image that helps you visualize your diagram's context.



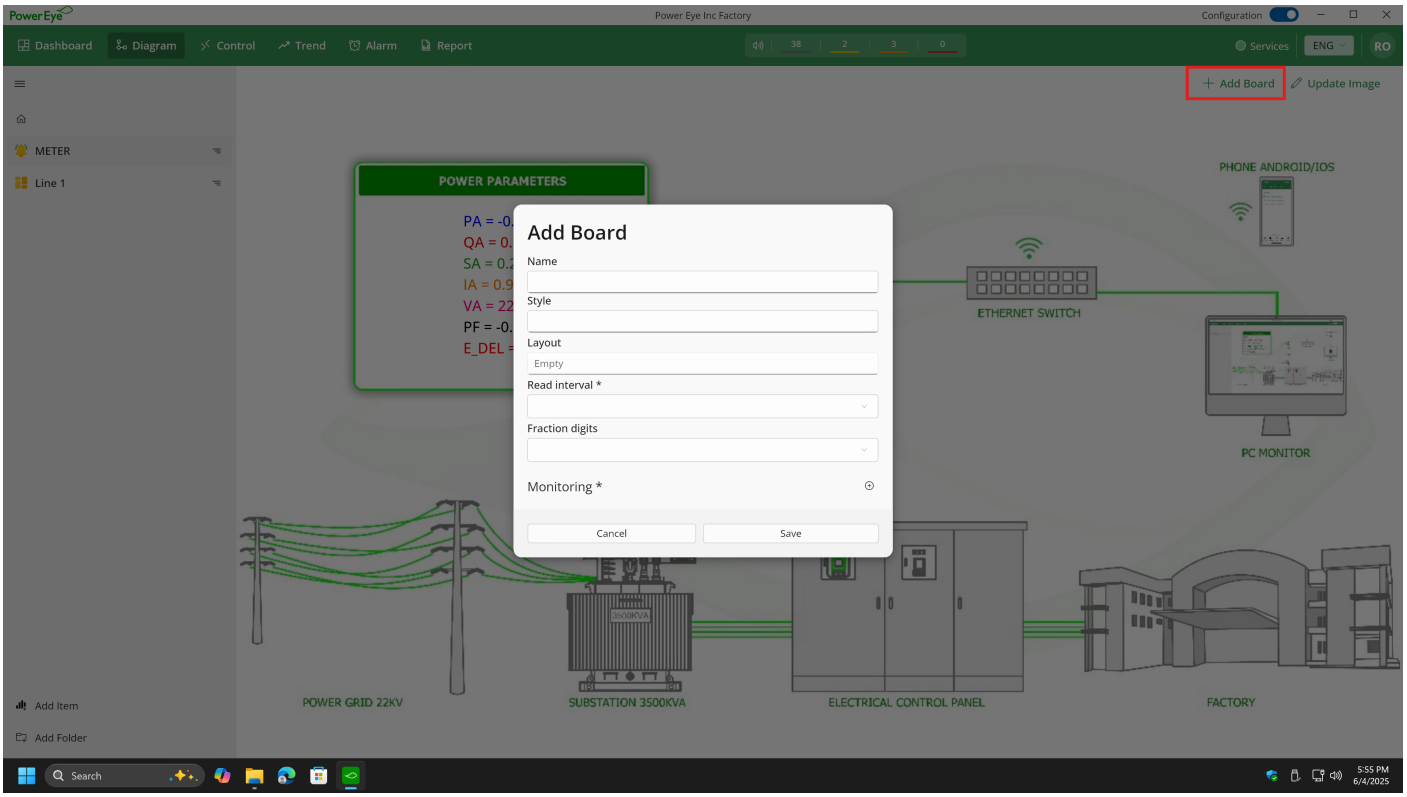
After adding an image, you can **update it with a new icon** by tapping the **Update Image** button located in the **top-right corner**. This allows you to refine your diagram as needed for more accurate visualization.



2. Add Monitoring Board

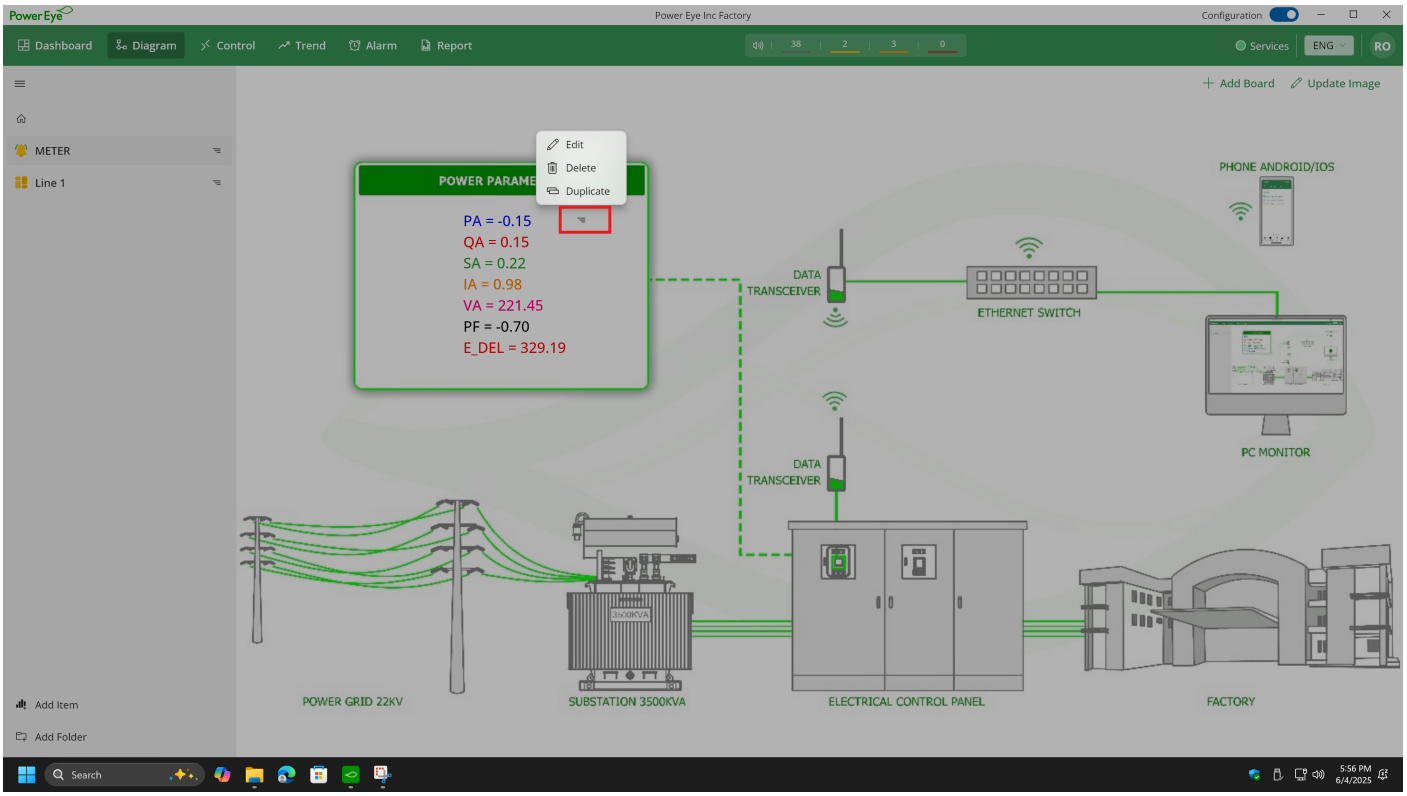
Double tap on the position in the diagram where you want to add a board and select **Add Board** or click on **Add Board** on top right corner. A form will appear for you to input the board details:

- **Name:** Assign a distinctive name to your parameter. Customize its appearance with a choice of fonts and colors available in the app.
- **Layout Information**: Set the background color and border information for your board.
- **Read Interval**: Set the time interval for refreshing the data.
- **Fraction Digits**: Set the number of fraction digits for the parameter value.
- **Monitoring**: Add the parameters that you want to monitor, similar to the dashboard setup.



Once a board has been set up in the diagram, its position can be modified at any time using a simple drag-and-drop motion.

Beyond repositioning, you can also perform the following actions to refine your board setup include edit, delete, duplicate.



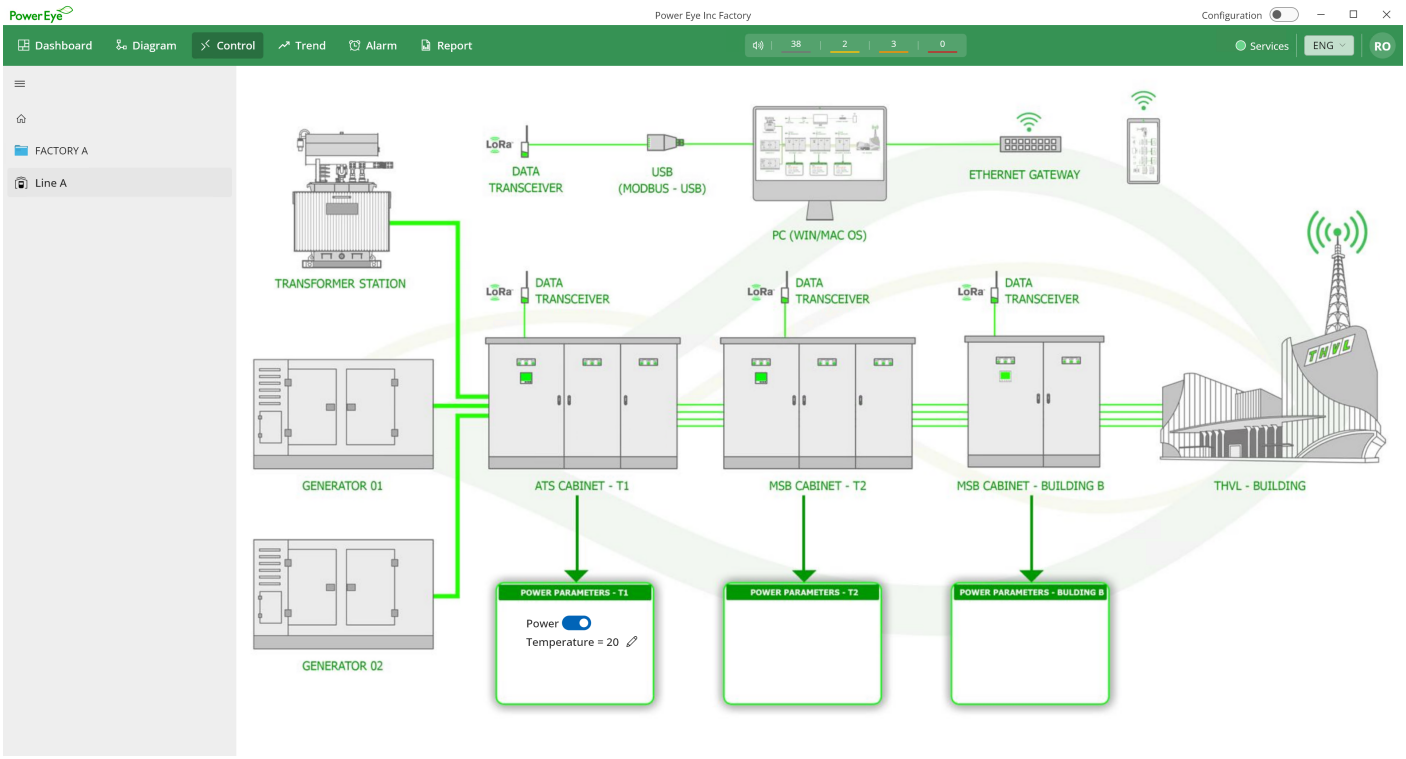
VIII. Control

The **Control** function in **Power Eye** extends beyond monitoring capabilities, allowing users to **remotely manage and interact** with connected devices. This feature enables direct control over various operational parameters, enhancing automation and efficiency.

Key Capabilities

- **Device Command Execution**: Users can send real-time commands to devices, such as turning equipment **On/Off**, adjusting settings, or switching between predefined modes.
- **Customizable Control Boards**: Control interfaces can be tailored for specific needs, ensuring a clear and structured view of controlled devices.
- **Flexible Action Types**: Support for different control actions, including **On/Off and Modify Value**, ensuring smooth operation adjustments.
- **Feedback Mechanism**: Provides confirmation of executed actions, allowing users to verify successful control operations.

The **Control** feature streamlines device management, reducing manual intervention while maintaining precision in operational adjustments.



Setup

- The **Control Setup** process closely follows the **Diagram Setup**, requiring steps such as **Enable Configuration**, **Folder Creation**, and **Adding Control Boards**. However, instead of configuring monitoring parameters, users will **set up control parameters** to define **ON/OFF functions or adjustable values** for device control.
- Since the **first three steps** (*Enable Configuration, Folder Creation, and Adding an Image*) are identical to **Diagram Setup**, refer to that section for details.

1. Add Control Boards

- Double tap on the position in the control image where you want to add a board and select **Add Board** or click on **Add Board** on top right corner. A form will appear.
- Configure the **board settings**, similar to **Diagram Setup**, but with **control parameters** instead of monitoring parameters.

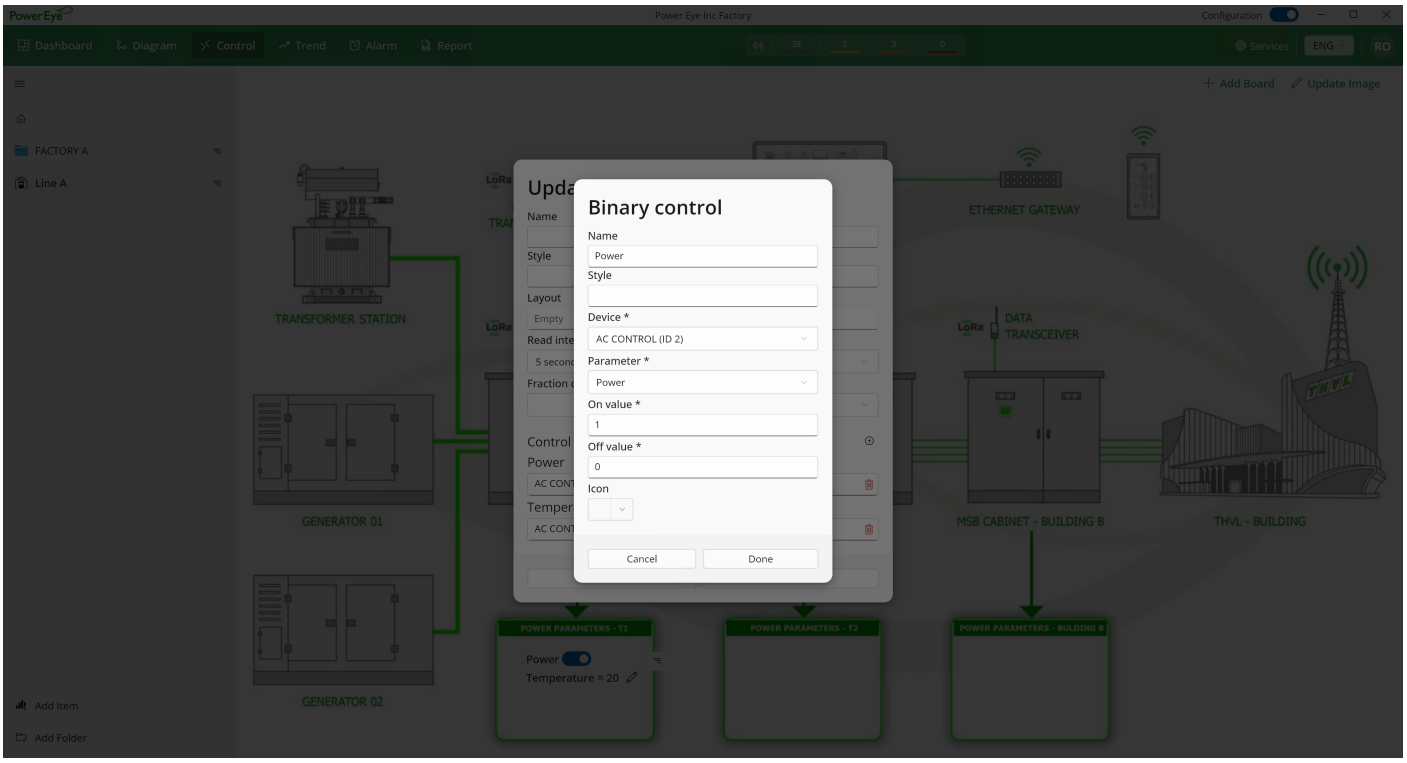
2. Setting up control parameters

Each **Control Board** allows users to configure device commands using **two control modes**:

1. Binary Control (On/Off)

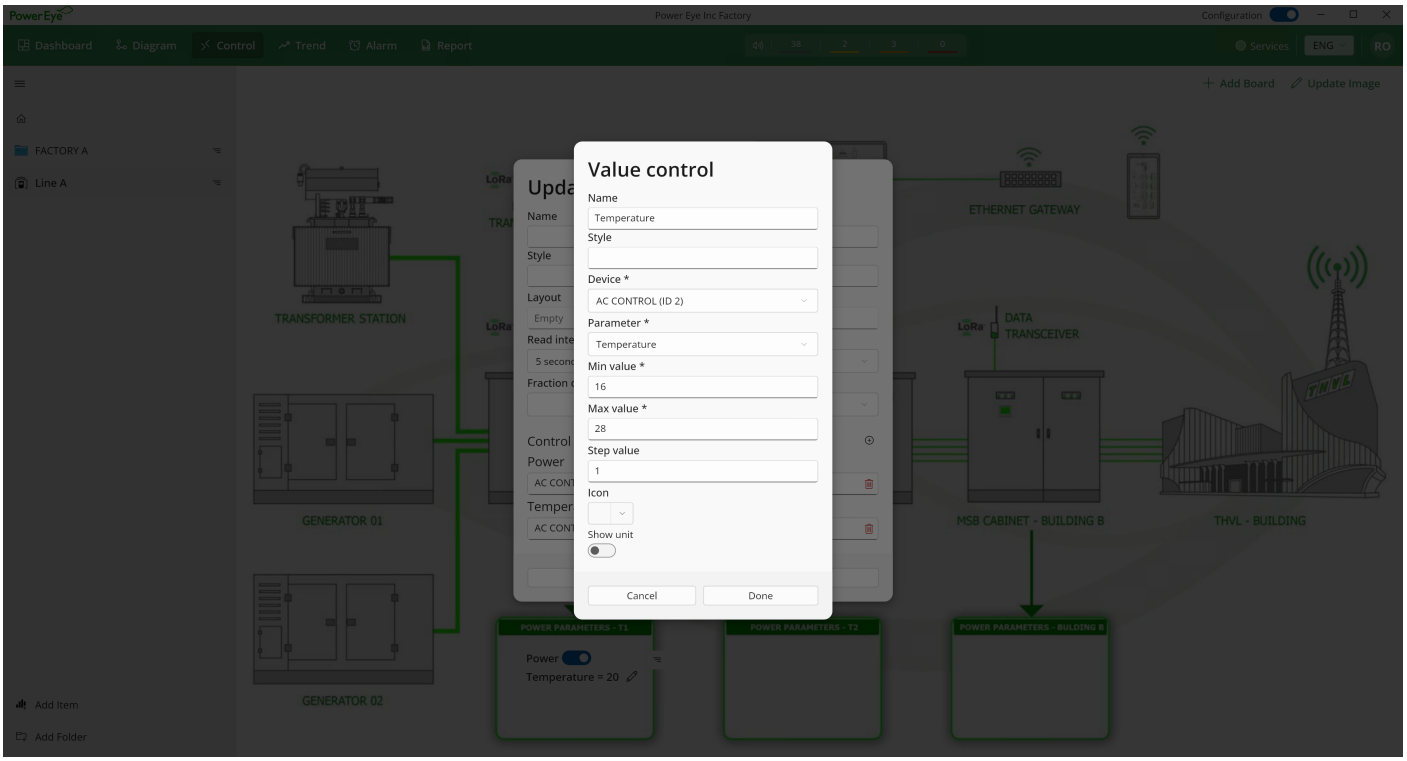
- Used for **toggle-based operations**, such as turning devices **on or off**.
- Includes the following parameters:

- **Name**: Label for the control function.
- **Style**: Defines interaction type (e.g., Single/Toggle).
- **Device Selection**: Choose which device the control applies to.
- **Parameter**: Select the control setting (e.g., Power).
- **On Value** & **Off Value**: Define numerical values for switching states (e.g., **On = 1, Off = 0**).
- **Icon**: Assign an icon for visual identification.



2. Adjustable Control (Value-Based)

- Used for **variable control**, allowing users to set specific values rather than just On/Off states.
- Includes additional parameters:
  - **Control Range**: Set minimum and maximum values.
  - **Step Value**: Define increment levels for adjustments.
  - **Input Mode**: Choose slider-based or manual input control.
  - **Device & Parameter Selection**: Select the device and the variable to control.



Once a board has been set up in **Control**, users can freely **drag and drop** to reposition it at any time. Additionally, the board can be **edited, deleted, or duplicated** to refine the setup—just like in **Diagram**.

IX. Trending

The Trending feature is a dynamic tool in the Power Eye Application that allows you to view real-time data trends using line charts. This feature can help you understand how your data changes over time, which is crucial for identifying patterns and making informed decisions.

Here's how to use the Trending feature:

- **Real-Time Line Chart**: The Trending feature displays a line chart that updates in real-time. This chart plots your data over time, allowing you to see how the data changes and identify any trends or patterns.
- **Customizable Trends**: You can set up the Trending feature to show trends for any data you choose. Whether you're interested in tracking a single measurement or comparing multiple data points, the Trending feature can be customized to suit your needs.
- **Data Analysis**: By observing the trends in your data, you can gain insights that might not be apparent from a single data point. This can help you identify issues early, predict future behavior, or simply understand your data better.
- **Selective Monitoring**:
    - **Chart Selection**: Activate monitoring by selecting the line charts you wish to track. Unselected charts will not gather data, ensuring only relevant information is displayed.

- **Multiple Charts**: Feel free to select multiple line charts for concurrent monitoring. Each chosen chart will be integrated into the board, providing a comprehensive view of all selected data streams.

- **Interactive Chart Exploration**: Navigate through your charts with ease:
  Use **Shift + Scroll** on your mouse to zoom in/out on details or pan across your line charts, giving you control over your data exploration.
- **Enable and disable recording**: The **Enable/Disable** Switch in each chart allows users to start or stop **data logging** for trending analysis.

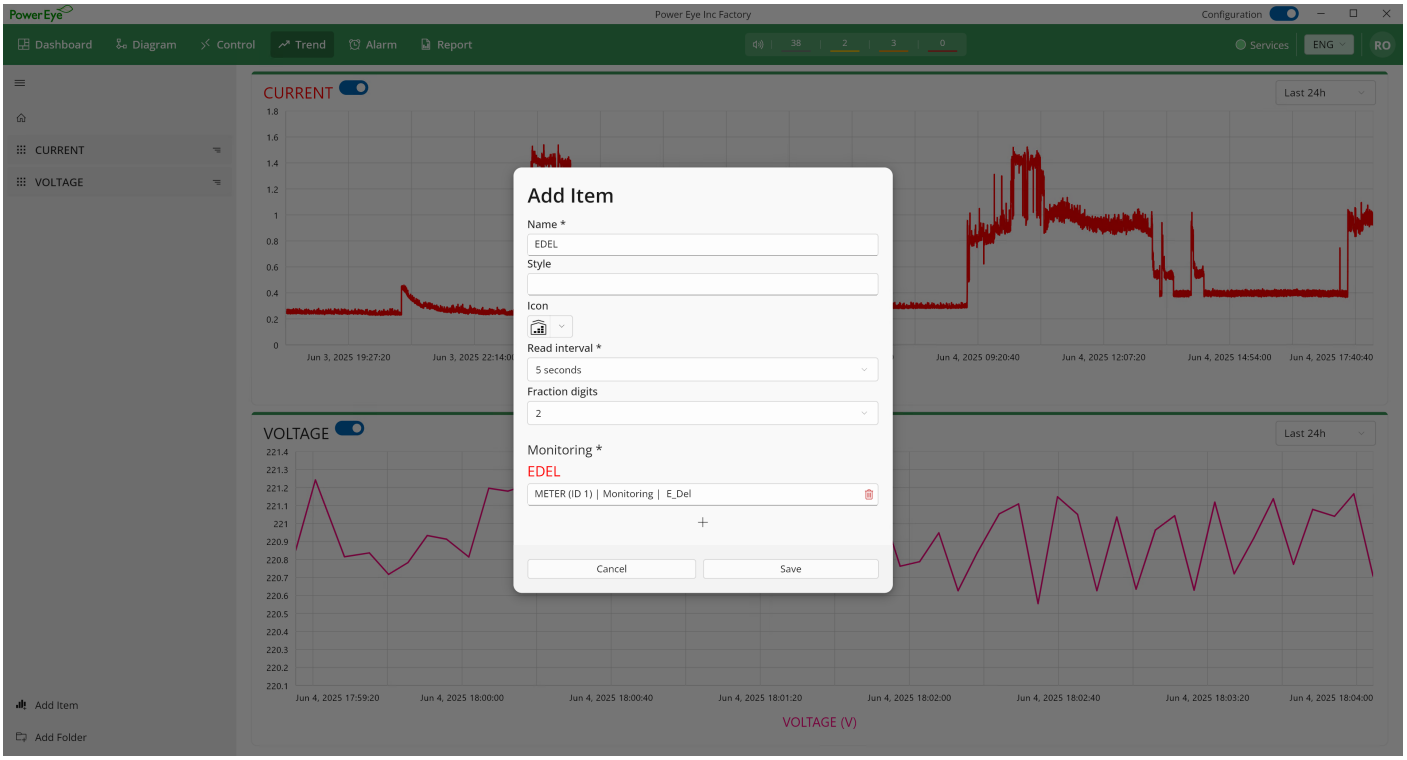
Setup

The **Trending Setup** process follows the same structure as **Dashboard, Diagram ... Setup**, including **Enable Configuration** and **Folder Creation**. Refer to those sections for details on enabling configuration and organizing folders. Below is the specific setup for **Trending Items**.

Creating Trending Items

1. Inside a folder, click on the **Add Item** button.
2. Input Trending Item Information**:**
   - **Name**: Assign a distinctive name to your parameter. Customize its appearance with a choice of fonts and colors available in the app.
   - **Icon**: Choose an icon for your trend item.
   - **Fraction Digits**: Set the number of fraction digits for the parameter value.
   - **Read interval**: Determine the **read interval** for how often the data should be updated

- **Monitoring Configuration**: To add a new monitoring parameter, click the **'+'** icon and follow the prompts to input the necessary details, similar to the dashboard setup.



Once a trending item has been set up, users can freely **edit, delete, or duplicate** to refine the setup—just like in **Dashboard**.

X. Alarm

The **Alarm** function in **Power Eye** enables users to monitor device status and system performance in real time. Alarms require **configuration**, allowing users to fine-tune notifications based on specific conditions.

Key Components of Alarm

- **Alarm Connection Device**: Automatically connects alarms to devices, ensuring real-time tracking without manual configuration.
- **Alarm Items**: Each item serves as a specific alarm point, tracking critical system metrics.

Alarm Configuration

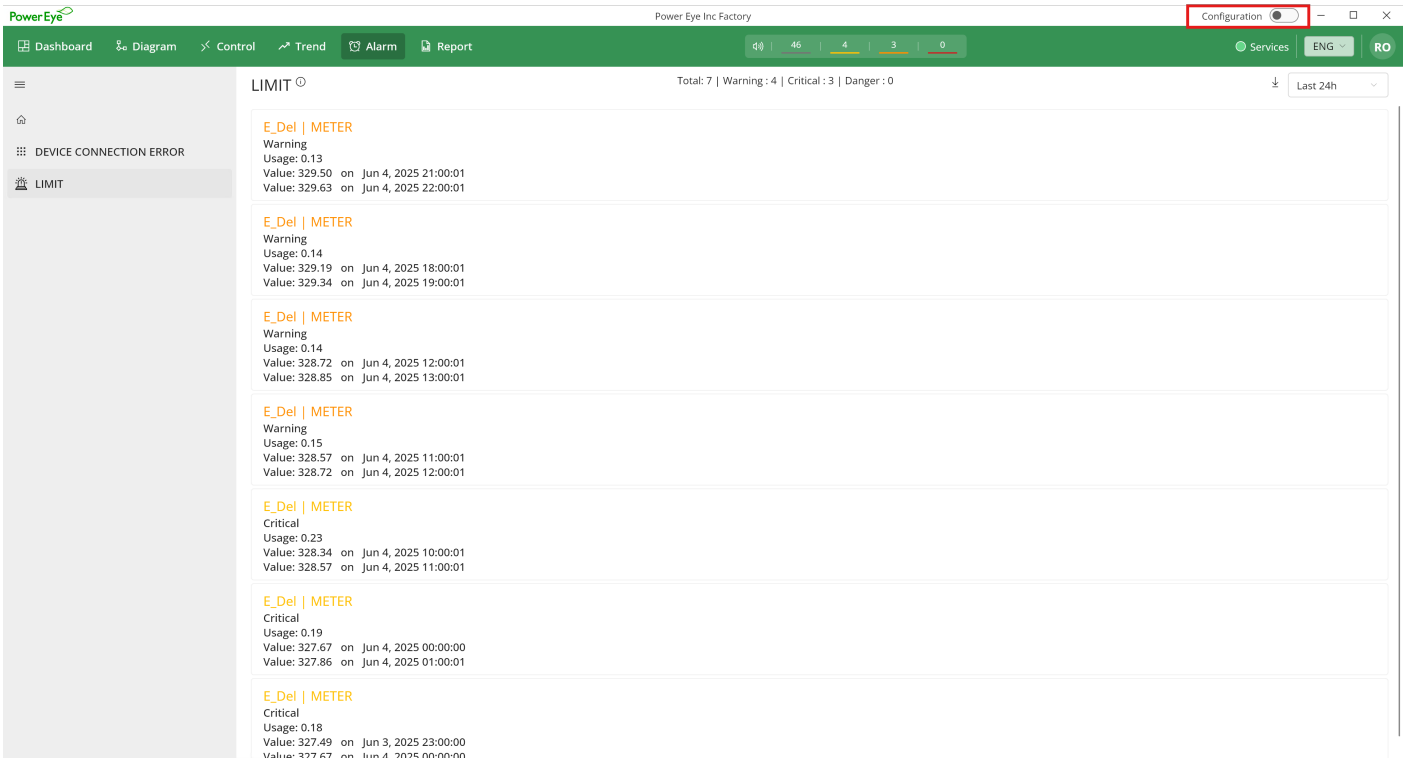
Every **Alarm Item** can be customized with multiple configurations, allowing users to set conditions based on their requirements. Each **configuration** consists of two main parameters:

- **Alarm Range Limit**: Defines threshold values to trigger an alarm (e.g., temperature exceeding a set limit).
- **Alarm Usage Limit**: Sets conditions based on system usage (e.g., power consumption surpassing a predefined level).

When an alarm item is configured, **alerts will trigger dynamically** based on the defined **Alarm Range Limit** and **Alarm Usage Limit**, ensuring users receive **real-time notifications** tailored to their monitoring needs.

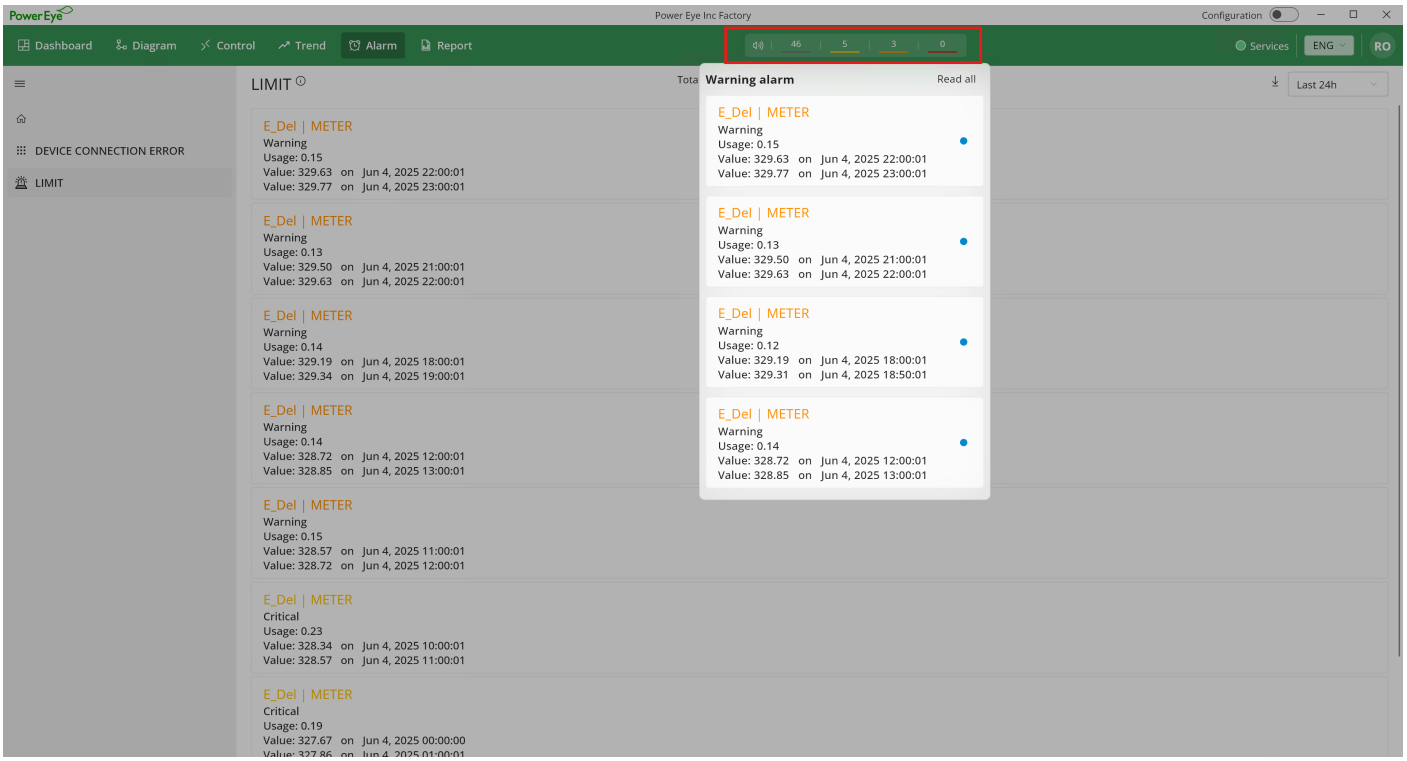
Alarm Monitoring and Notifications

- The application actively **monitors** the set conditions and collects all alarms that match your configurations.
- **Alarms are only displayed when the configuration is set to "Disable"**, ensuring users view finalized alarms without ongoing setup interference.
- Notifications provide **real-time alerts** within the app, immediately informing users of any detected issues.



Active Alarm Notifications Panel

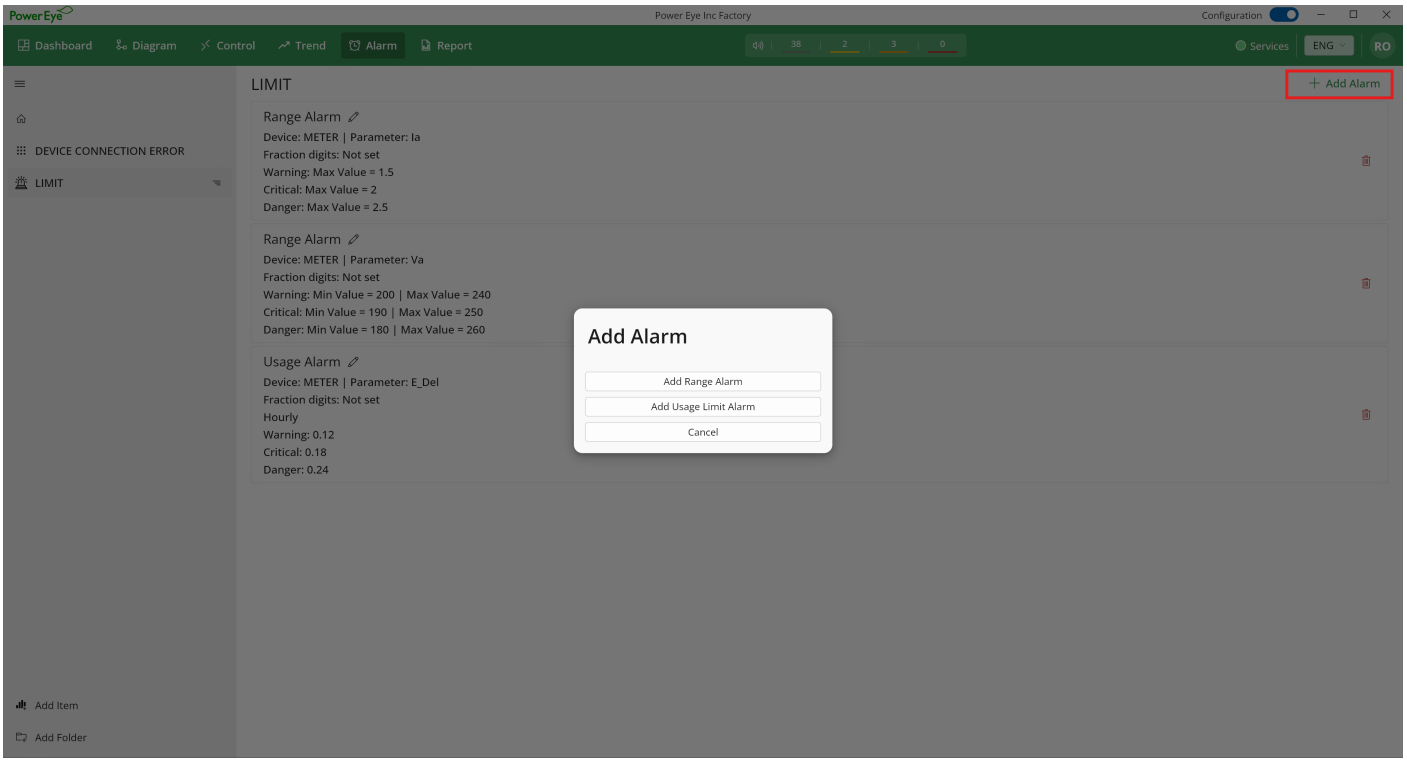
- The **Active Notifications** UI aggregates **all alarms from the last 24 hours**, providing a **real-time view** of critical events.
- Users can **interact** with notifications to reveal **detailed alarm information**.
- Each alarm has a **read status**, similar to an email system:
- When a user **clicks on an alarm**, it is marked as **Read** and will no longer be displayed in the active panel.
- A **"Read All"** option allows users to **clear all unread notifications**, treating them as reviewed.
- Users can **toggle sound alerts** for incoming alarms, ensuring audible notification for critical events. When enabled, a **distinct alarm sound** plays whenever an active alarm appears in the notification panel



Setup

The **Alarm Setup** process follows a similar structure to the **Dashboard Setup**, requiring **Enable Configuration**, **Folder Creation and Alarm Creation**. Ensure that **configuration is enabled** via the window bar switch, and that your account has the necessary **setup permissions** before proceeding.

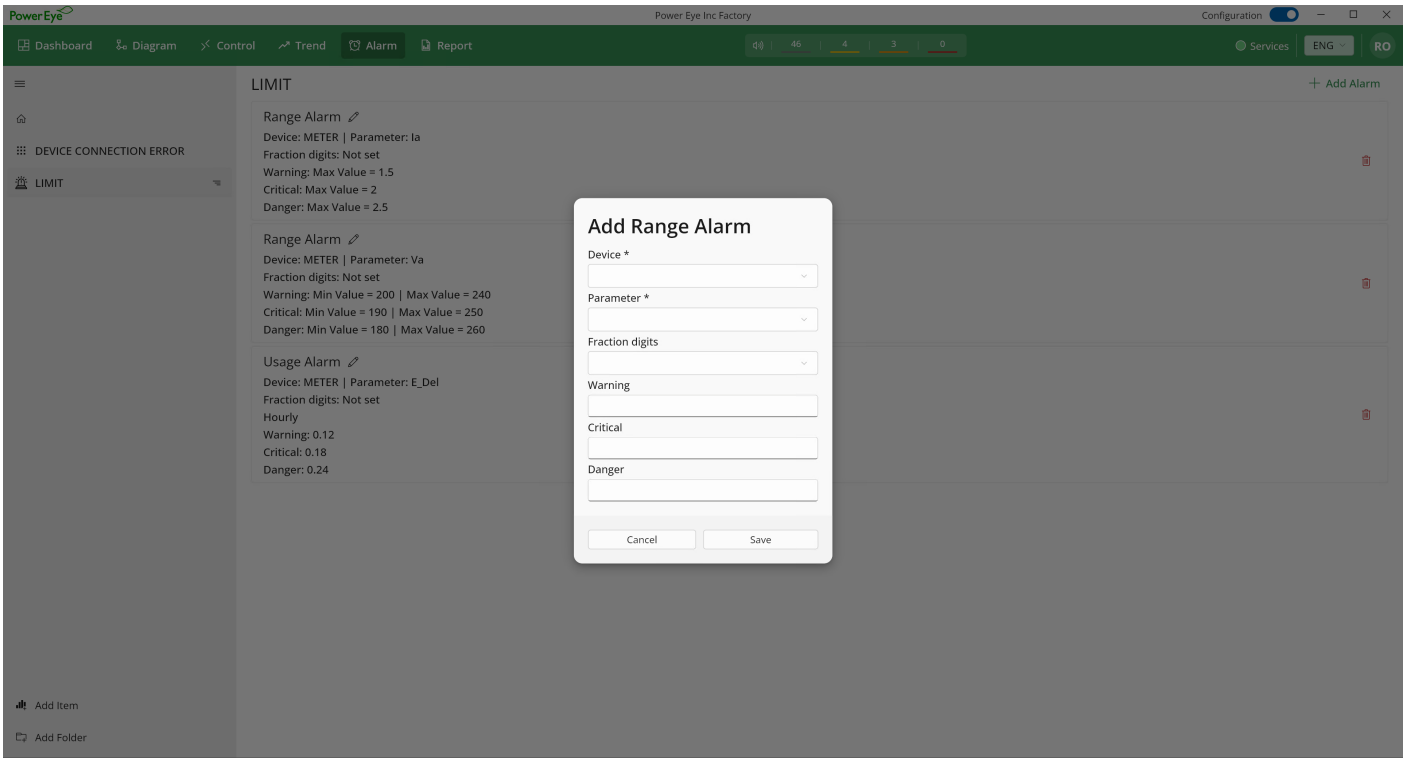
Setting up alarm configuration



Each alarm item can have multiple configurations, such as `Range Alarm` and `Usage Limit Alarm`.

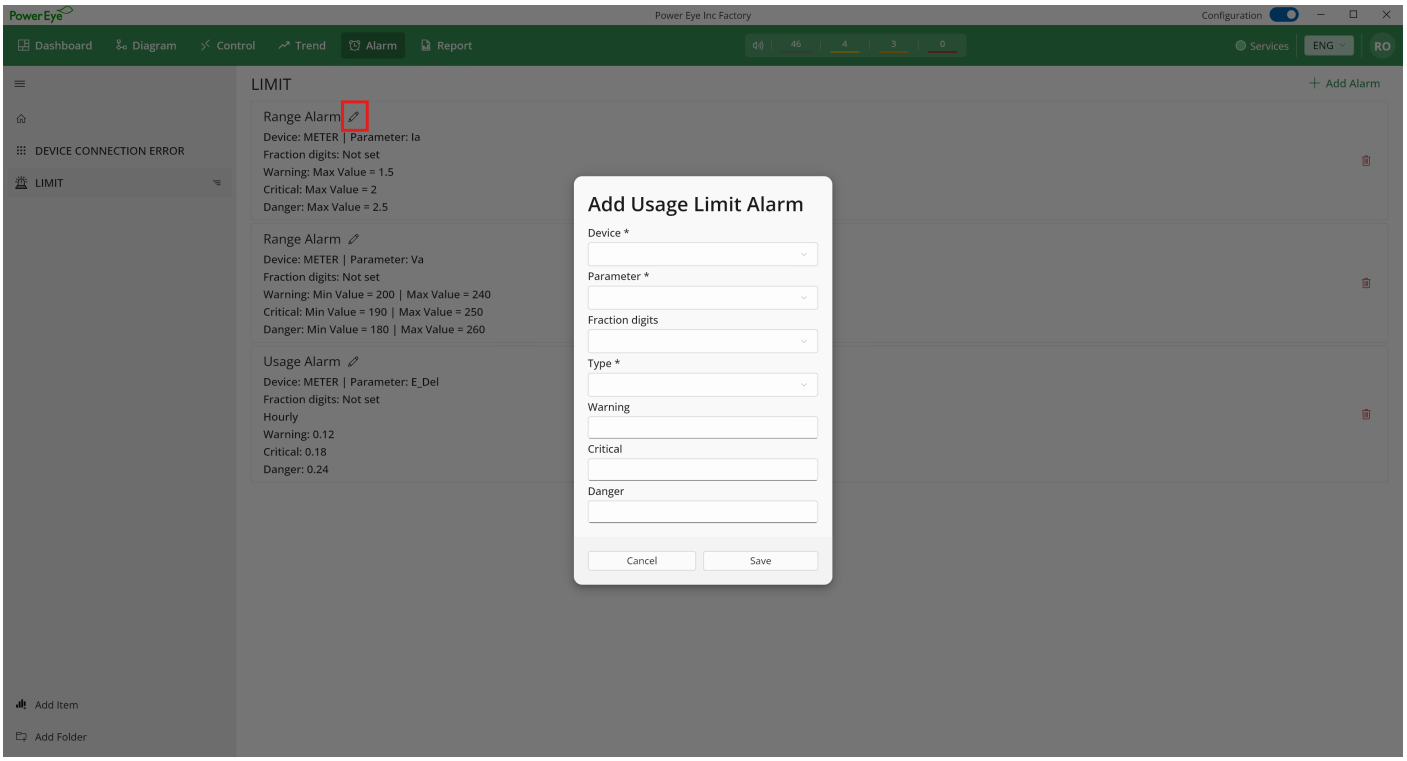
1. Range alarm configuration

- **Name**: Assign a label for the alarm range.
- **Device Selection**: Choose which device the alarm applies to.
- **Parameter Selection**: Select the specific data point to monitor.
- **Alarm Value Setup**: Define one or multiple threshold levels to track and trigger alarms accordingly.
- **Icon**: Select an icon for easy identification in the interface.



2. Usage limit alarm configuration

- Configure alarms based on usage limits for devices, selecting parameters like the device, the data point, fraction digits, and the type of limit (hourly, daily, weekly).
- For daily and weekly types, define the time range for consumption calculation.
- Set the warning, critical, and danger levels as specific values.



Once a configuration is created, you have full control over its configuration by click on **Pencil Icon** button

XI. Report

The **Report** function in **Power Eye** provides users with structured insights into system performance and resource utilization over a specified time frame. Reports help track trends, optimize usage, and manage costs effectively. The system offers **three main types of reports**:

1. Monitor Report

- Collects and presents **complete data** on monitored parameters (e.g., voltage, current, temperature) within a selected time range.
- Users can choose to view **detailed individual records** or a **summary** of aggregated data trends.

2. Usage Report

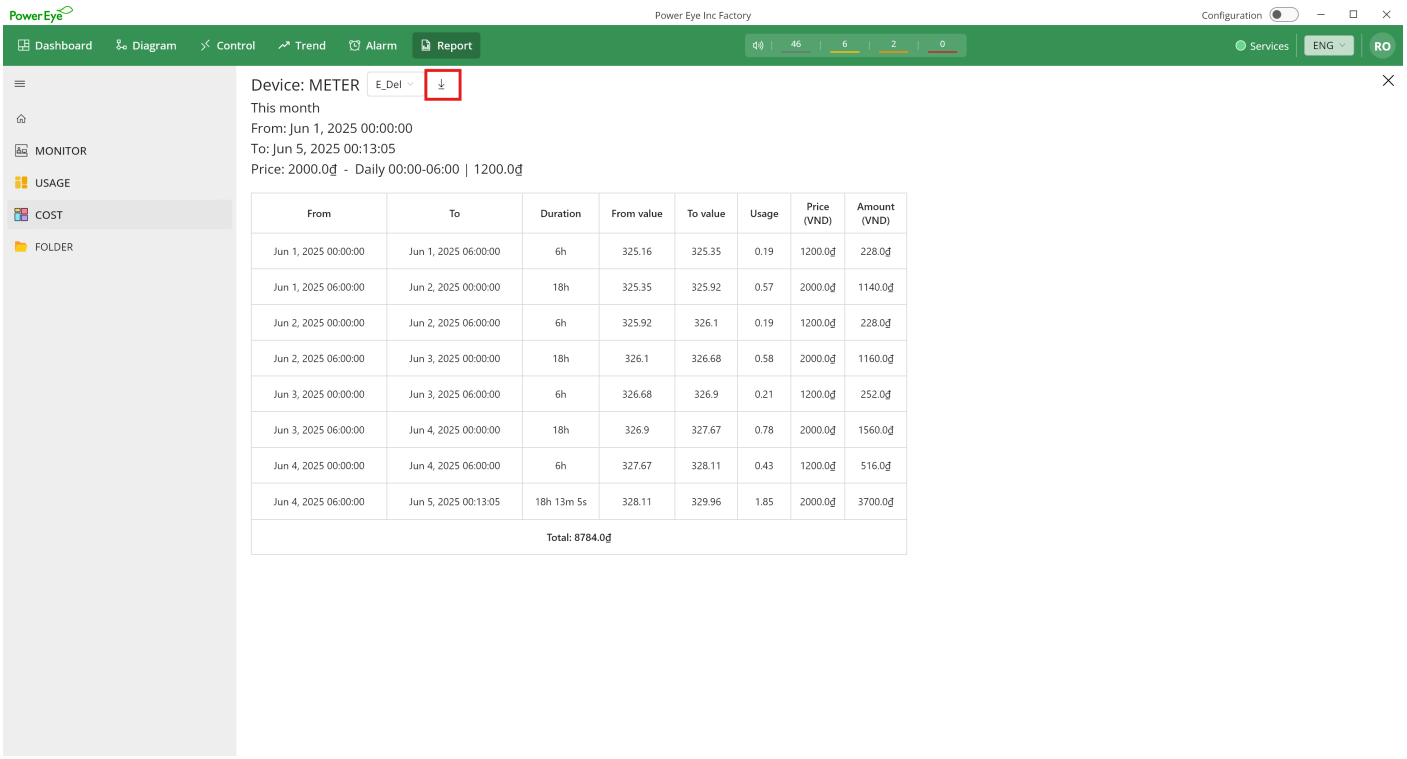
- Tracks the **consumption** of a specific monitored parameter (e.g., energy) over time.
- Helps identify usage patterns, detect anomalies, and optimize resource efficiency.

3. Cost Report

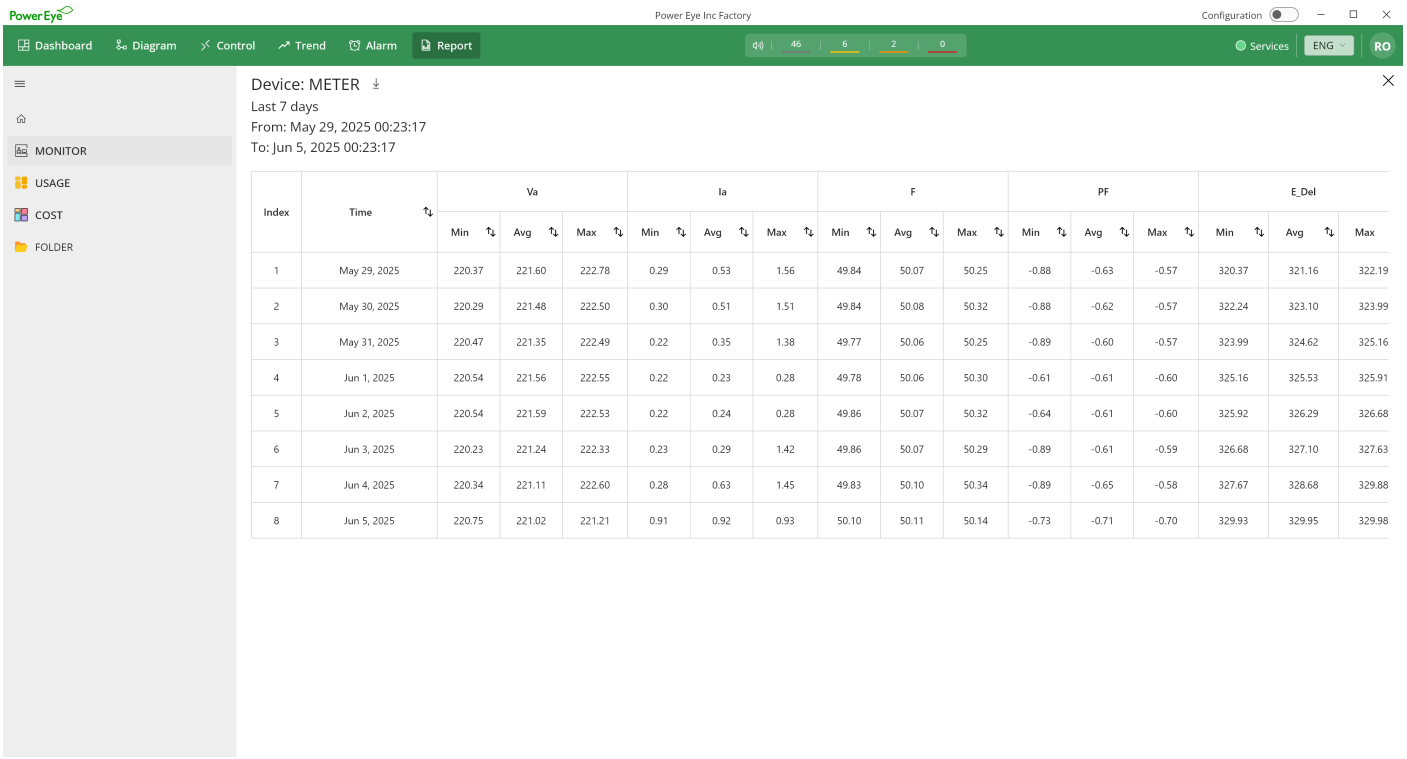
- Calculates the **cost associated with resource consumption** (e.g., energy) based on predefined price settings.
- Allows users to **configure pricing** at different time intervals, ensuring accurate cost assessment.

By leveraging these reports, users gain **clear visibility** into system operations, enabling informed decision-making for **optimization and cost control**.

Users can **export reports to Excel**, allowing for **further analysis, record-keeping, and data sharing**.



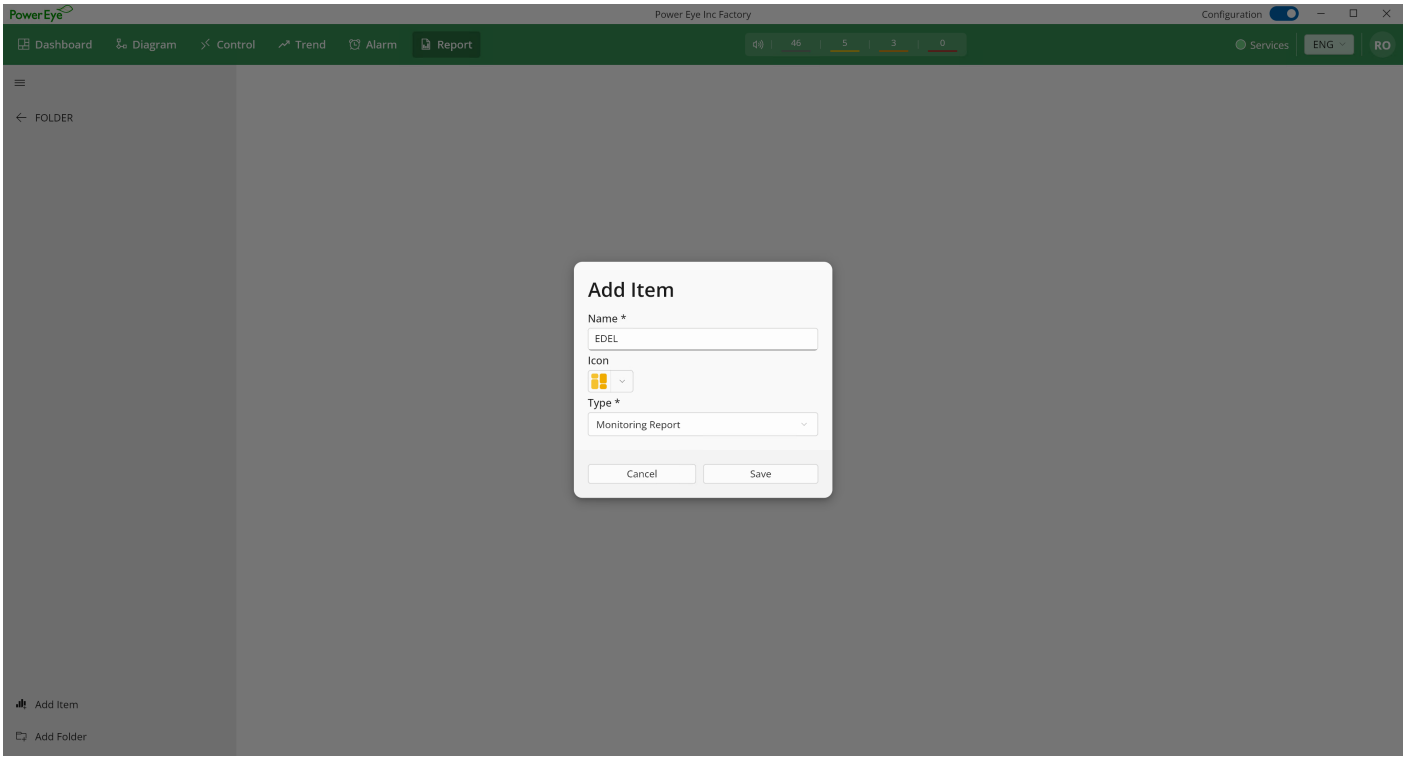
From	To	Duration	From value	To value	Usage	Price (VND)	Amount (VND)
Jun 1, 2025 00:00:00	Jun 1, 2025 06:00:00	6h	325.16	325.35	0.19	1200.0₫	228.0₫
Jun 1, 2025 06:00:00	Jun 2, 2025 00:00:00	18h	325.35	325.92	0.57	2000.0₫	1140.0₫
Jun 2, 2025 00:00:00	Jun 2, 2025 06:00:00	6h	325.92	326.1	0.19	1200.0₫	228.0₫
Jun 2, 2025 06:00:00	Jun 3, 2025 00:00:00	18h	326.1	326.68	0.58	2000.0₫	1160.0₫
Jun 3, 2025 00:00:00	Jun 3, 2025 06:00:00	6h	326.68	326.9	0.21	1200.0₫	252.0₫
Jun 3, 2025 06:00:00	Jun 4, 2025 00:00:00	18h	326.9	327.67	0.78	2000.0₫	1560.0₫
Jun 4, 2025 00:00:00	Jun 4, 2025 06:00:00	6h	327.67	328.11	0.43	1200.0₫	516.0₫
Jun 4, 2025 06:00:00	Jun 5, 2025 00:13:05	18h 13m 5s	328.11	329.96	1.85	2000.0₫	3700.0₫
Total: 8784.0₫							



Index	Time	Va			Ia			F			PF			E_Del		
		Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
1	May 29, 2025	220.37	221.60	222.78	0.29	0.53	1.56	49.84	50.07	50.25	-0.88	-0.63	-0.57	320.37	321.16	322.19
2	May 30, 2025	220.29	221.48	222.50	0.30	0.51	1.51	49.84	50.08	50.32	-0.88	-0.62	-0.57	322.24	323.10	323.99
3	May 31, 2025	220.47	221.35	222.49	0.22	0.35	1.38	49.77	50.06	50.25	-0.89	-0.60	-0.57	323.99	324.62	325.16
4	Jun 1, 2025	220.54	221.56	222.55	0.22	0.23	0.28	49.78	50.06	50.30	-0.61	-0.61	-0.60	325.16	325.53	325.91
5	Jun 2, 2025	220.54	221.59	222.53	0.22	0.24	0.28	49.86	50.07	50.32	-0.64	-0.61	-0.60	325.92	326.29	326.68
6	Jun 3, 2025	220.23	221.24	222.33	0.23	0.29	1.42	49.86	50.07	50.29	-0.89	-0.61	-0.59	326.68	327.10	327.63
7	Jun 4, 2025	220.34	221.11	222.60	0.28	0.63	1.45	49.83	50.10	50.34	-0.89	-0.65	-0.58	327.67	328.68	329.88
8	Jun 5, 2025	220.75	221.02	221.21	0.91	0.92	0.93	50.10	50.11	50.14	-0.73	-0.71	-0.70	329.93	329.95	329.98

Setup

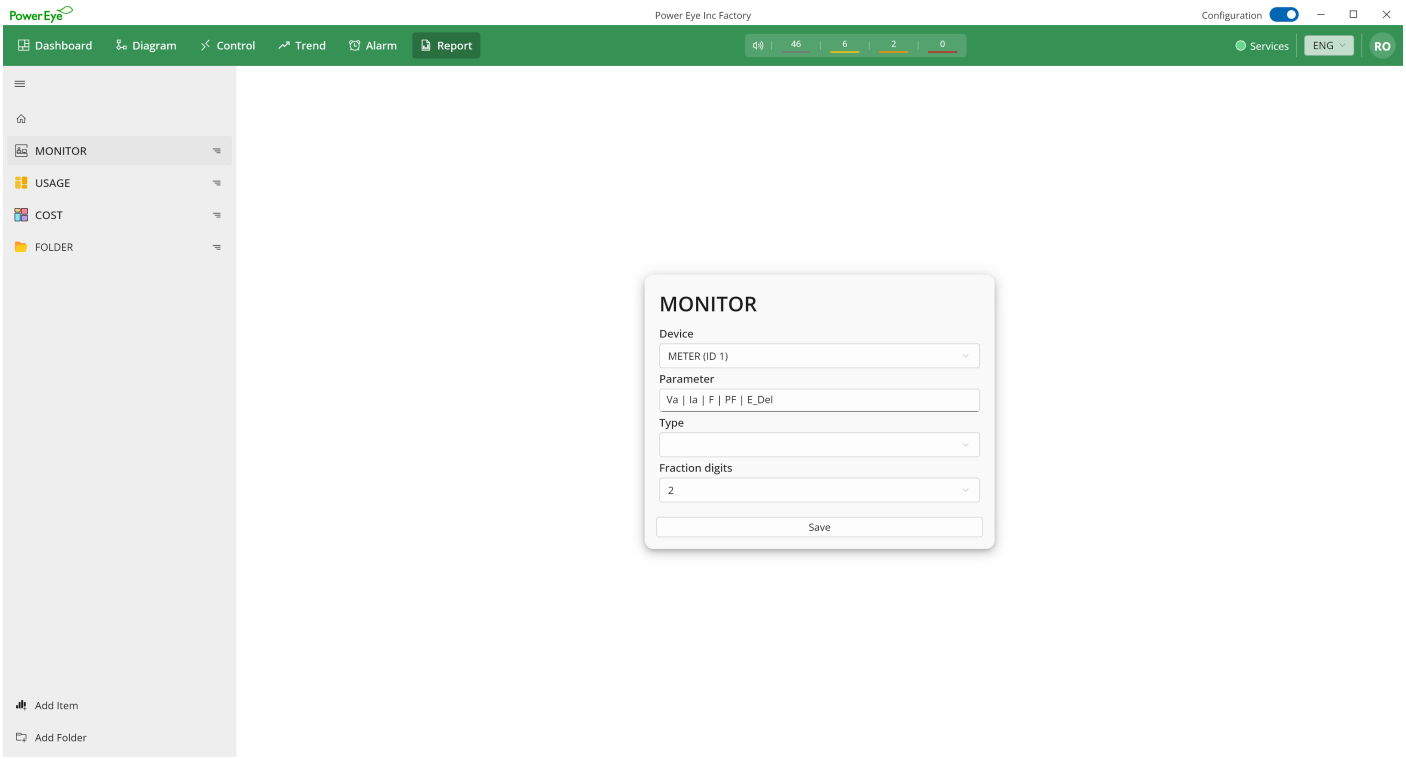
The **Report Setup** process follows a similar structure to the **Dashboard Setup**, requiring **Enable Configuration**, **Folder Creation and Report Creation**. When creating a Report, users must select the report type, choosing from Monitor Report, Usage Report, or Cost Report.



1. Monitoring report configuration

- **Device:** Select the device to include in the report.
- **Parameter:** Choose one or multiple parameters to track.
- **Type:** Select the report type—Summary (aggregated data) or Detail (full data history).
- **Fraction Digits:** Set the number of decimal places for parameter values.

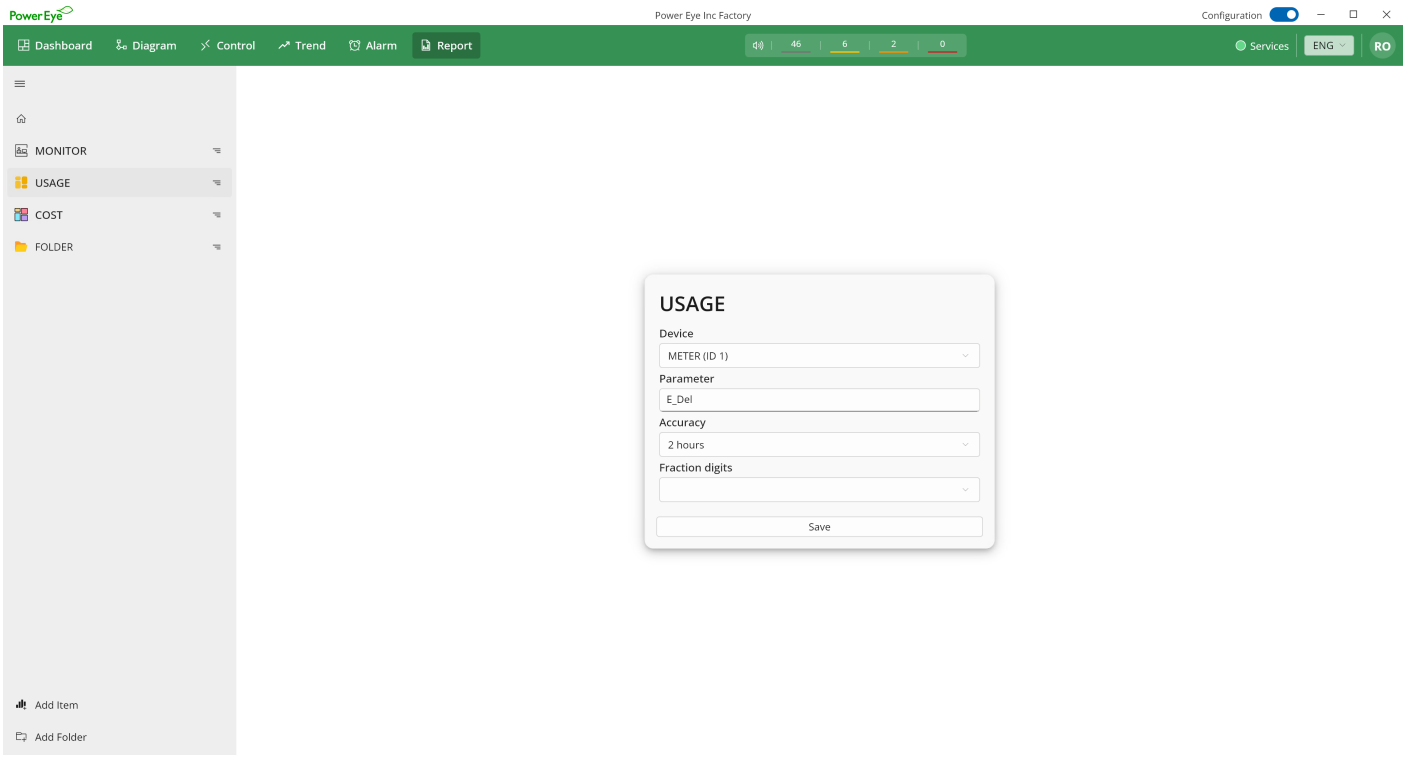
Users can configure any of the above fields during setup or leave them unselected, allowing them to specify these options at the time of generating the report.



2. Usage report configuration

- **Device:** Select the device to include in the report.
- **Parameter:** Choose one or multiple parameters to track.
- **Accuracy:** Define the acceptable margin of error for time measurements.
- **Fraction Digits:** Set the number of decimal places for parameter values.

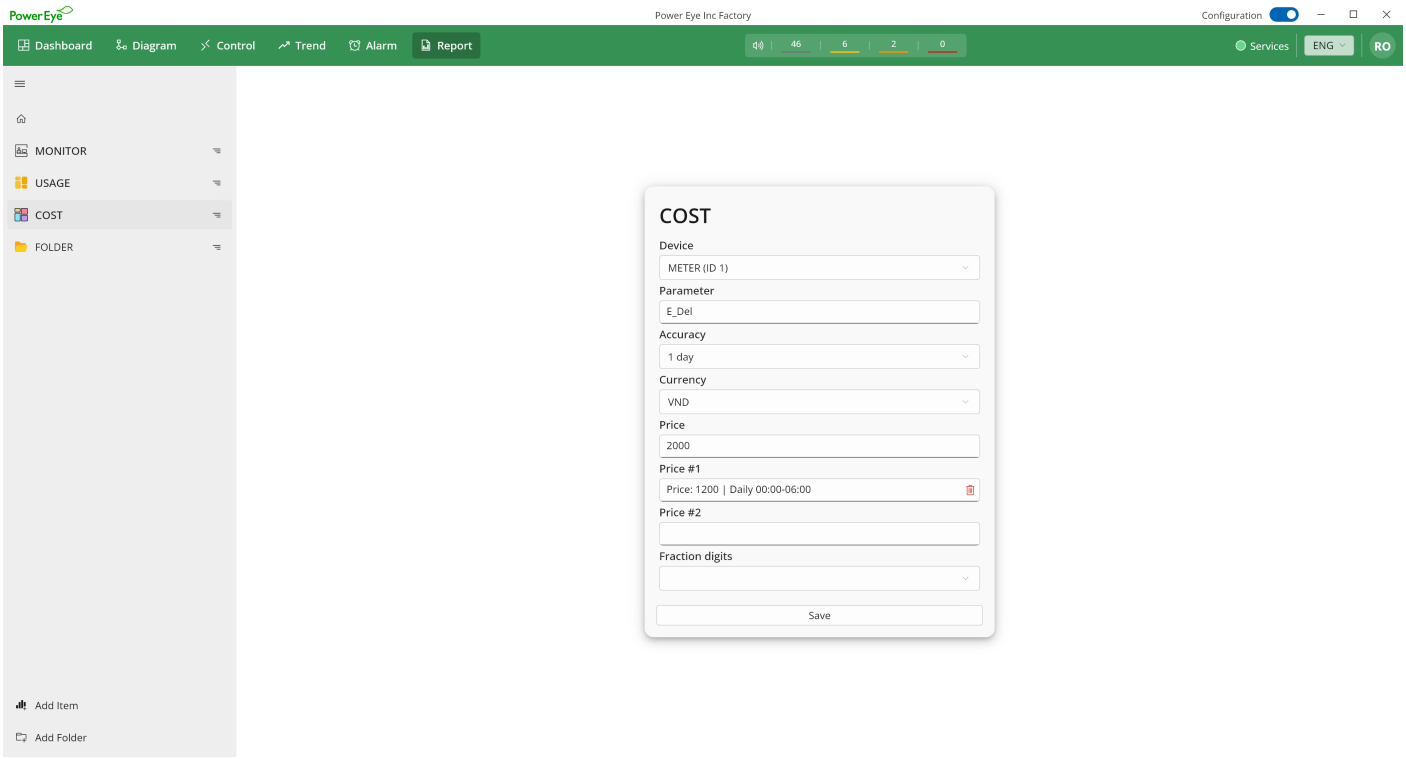
Users can configure any of the above fields during setup or leave them unselected, allowing them to specify these options at the time of generating the report.



3. Cost report configuration

- **Device:** Select the device to include in the report.
- **Parameter:** Choose one or multiple parameters to track.
- **Accuracy:** Define the acceptable margin of error for time measurements.
- **Price:** Set the **default unit price** for resource consumption.
- **Additional Price:** Configure time-based pricing, allowing different rates to apply at specific time periods (e.g., discounted rates during off-peak hours). Users can set **multiple special prices**, defining as many pricing variations as needed to match different time conditions.
- **Fraction Digits:** Set the number of decimal places for parameter values.

Users can configure any of the above fields during setup or leave them unselected, allowing them to specify these options at the time of generating the report.

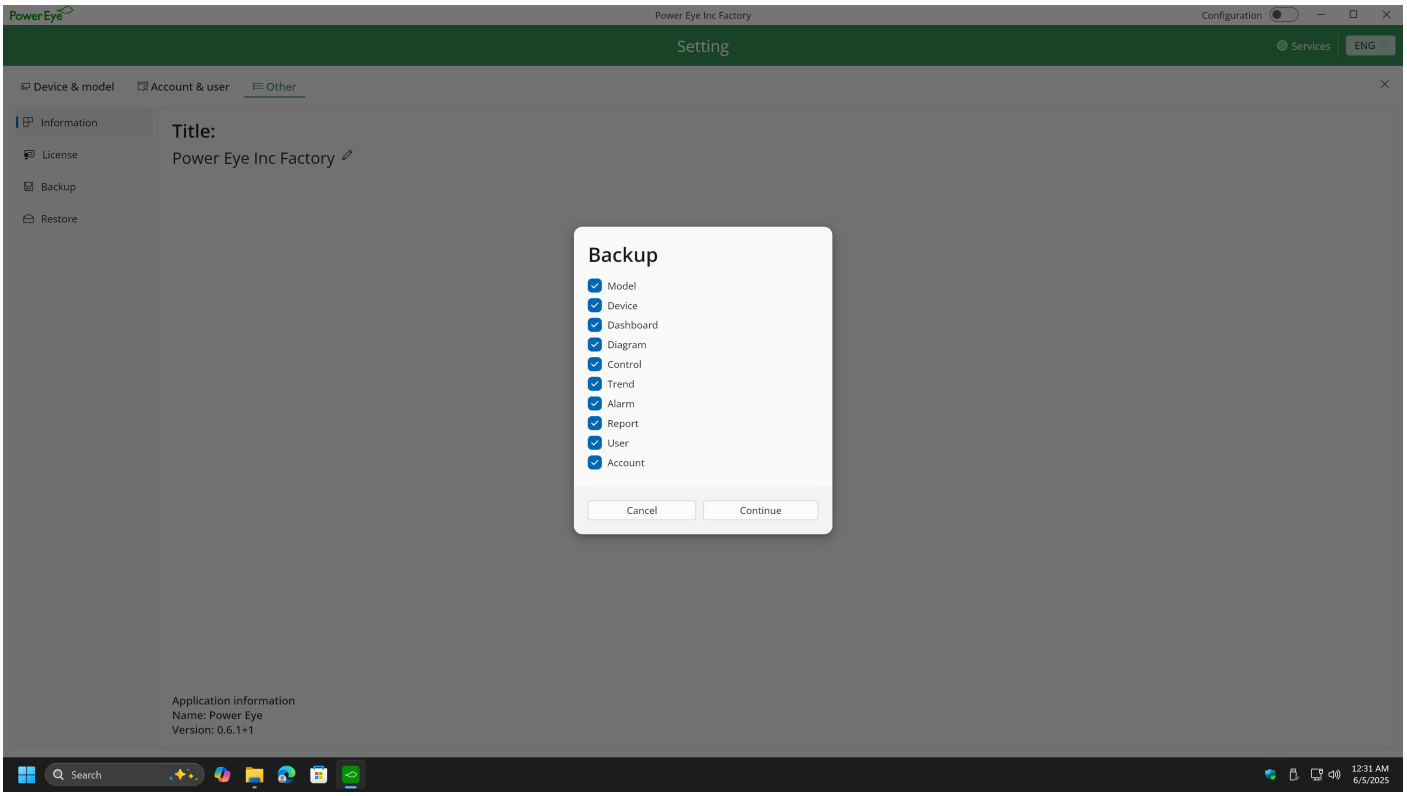


XII. Backup and Restore

The **Power Eye application** includes a Backup and Restore feature, ensuring that all settings and configurations are securely saved and can be restored when needed.

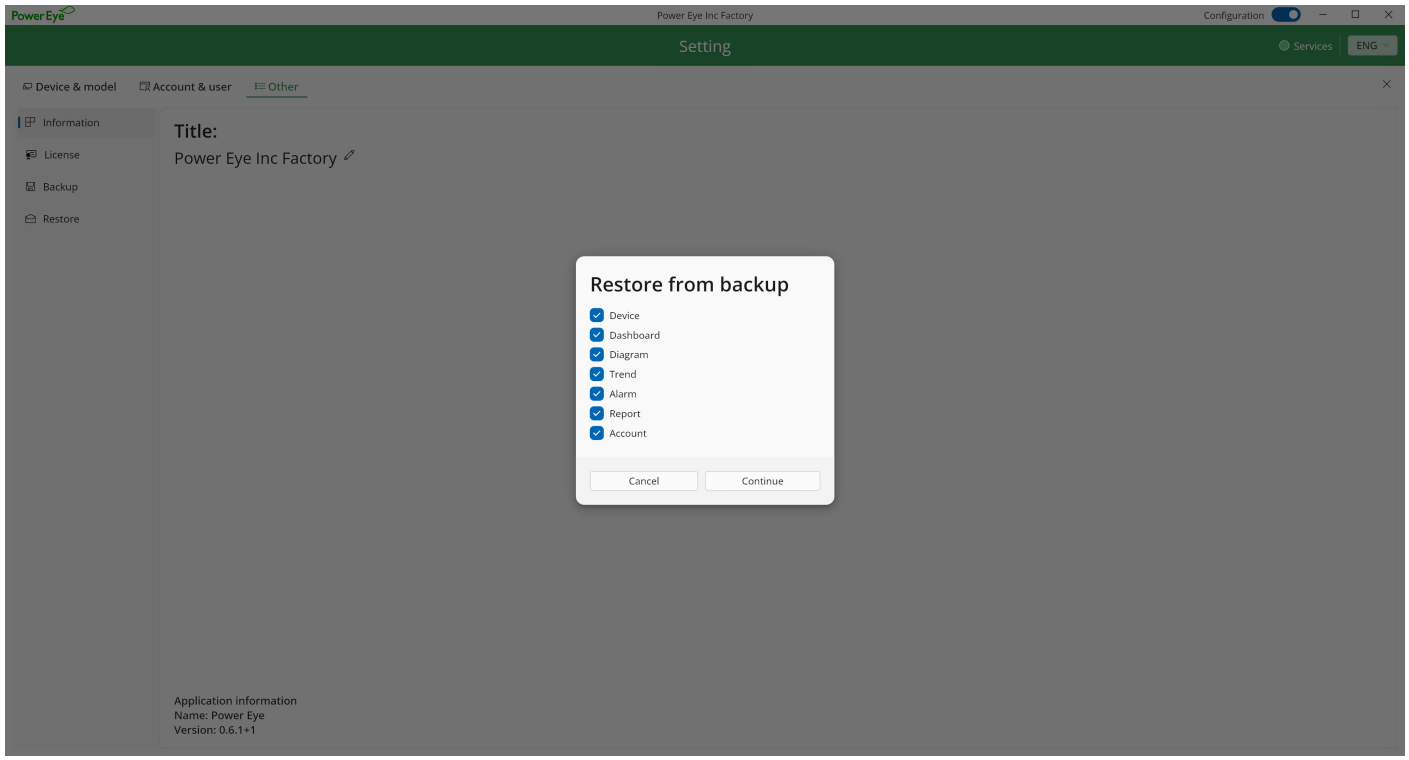
1. Backup

- Go to the **Setting** menu, select the **Other** tab.
- Click on **Backup** button.
- **Choose Items for Backup**: You can select which items you want to include in the backup, such as Licenses, Devices, Dashboards, etc.
- **Save Backup File**: Decide where you want to store the backup file on your PC and confirm the save location.



2. Restore

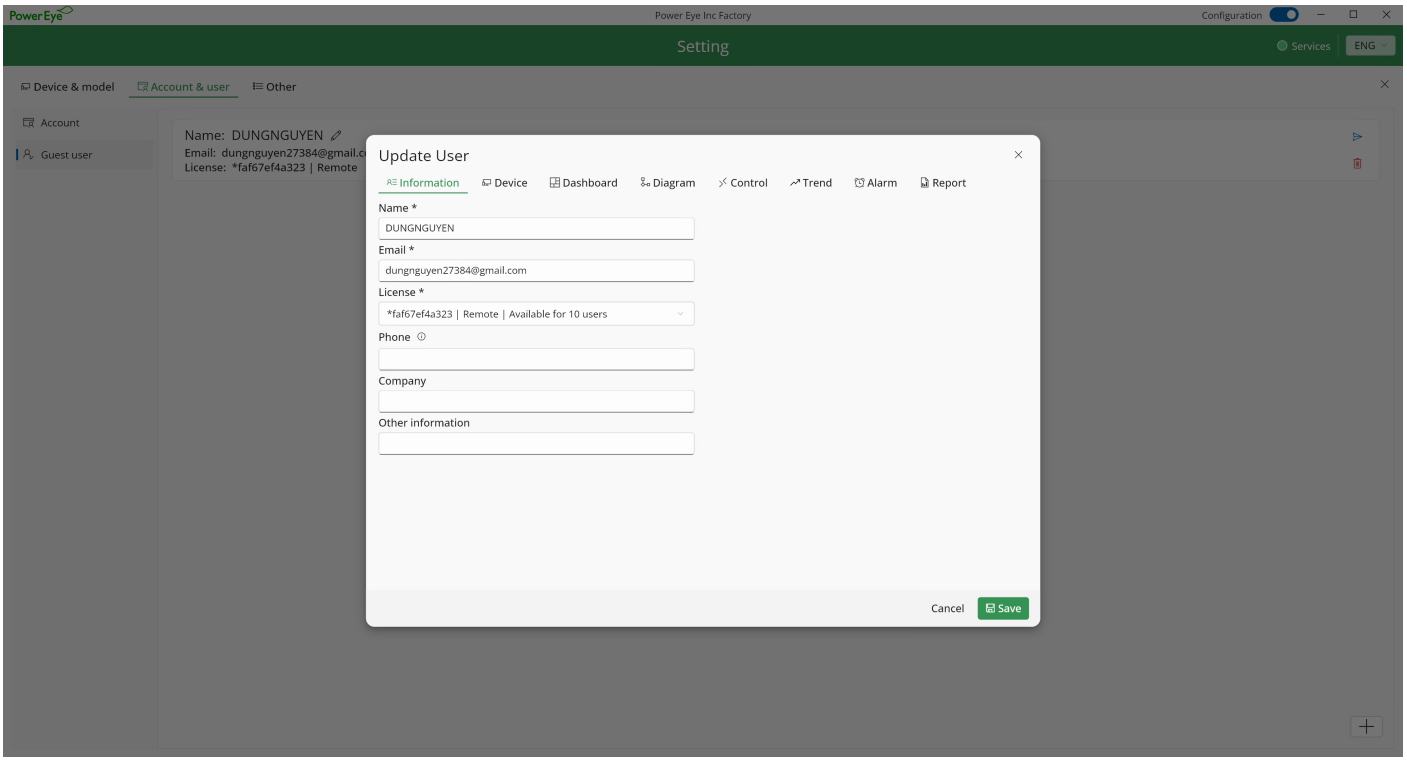
- Go to the **Setting** menu, select the **Other** tab.
- Click on **Restore** button.
- **Choose Items to Restore**: From the backup file, select the specific items you wish to restore.
- **Execute Restore**: Proceed with the restoration process to recover your selected data.



XIII. Guest user (mobile user) setup

Here's a step-by-step guide on how to set up your device

1. Go to the **Setting** menu, select the **`Account & user`** then select **Guest user** option.
2. Click on the `+` button to start setting up a new Guest user.
3. Input basic information**:**
   - **Name**: Assign a name to the guest user.
   - **Email**: Provide an email address for the guest user.
   - **License Type**: Select the appropriate license type for access permissions.
   - **Phone**: Input the guest user's contact number (if required).
   - **Company**: Enter the company name associated with the user.
   - **Other Information**: Add any additional details needed for user identification.
4. Configure Access Settings: Modify permissions under available tabs such as Device, Dashboard, Diagrams, Control, Trend, Alarm, and Report to define access levels.
5. Save the Setup: Click Save to complete the Guest User creation.


Power Eye
Power Eye Inc Factory
Configuration
Setting
Services
ENG
Device & model
Account & user
Other
Account
Guest user
Name: DUNGNGUYEN
Email: dungnguyen27384@gmail.c
License: *faf67ef4a323 | Remote
Update User
Information
Device
Dashboard
Diagram
Control
Trend
Alarm
Report
Name *
DUNGNGUYEN
Email *
dungnguyen27384@gmail.com
License *
*faf67ef4a323 | Remote | Available for 10 users
Phone
Company
Other information
Cancel
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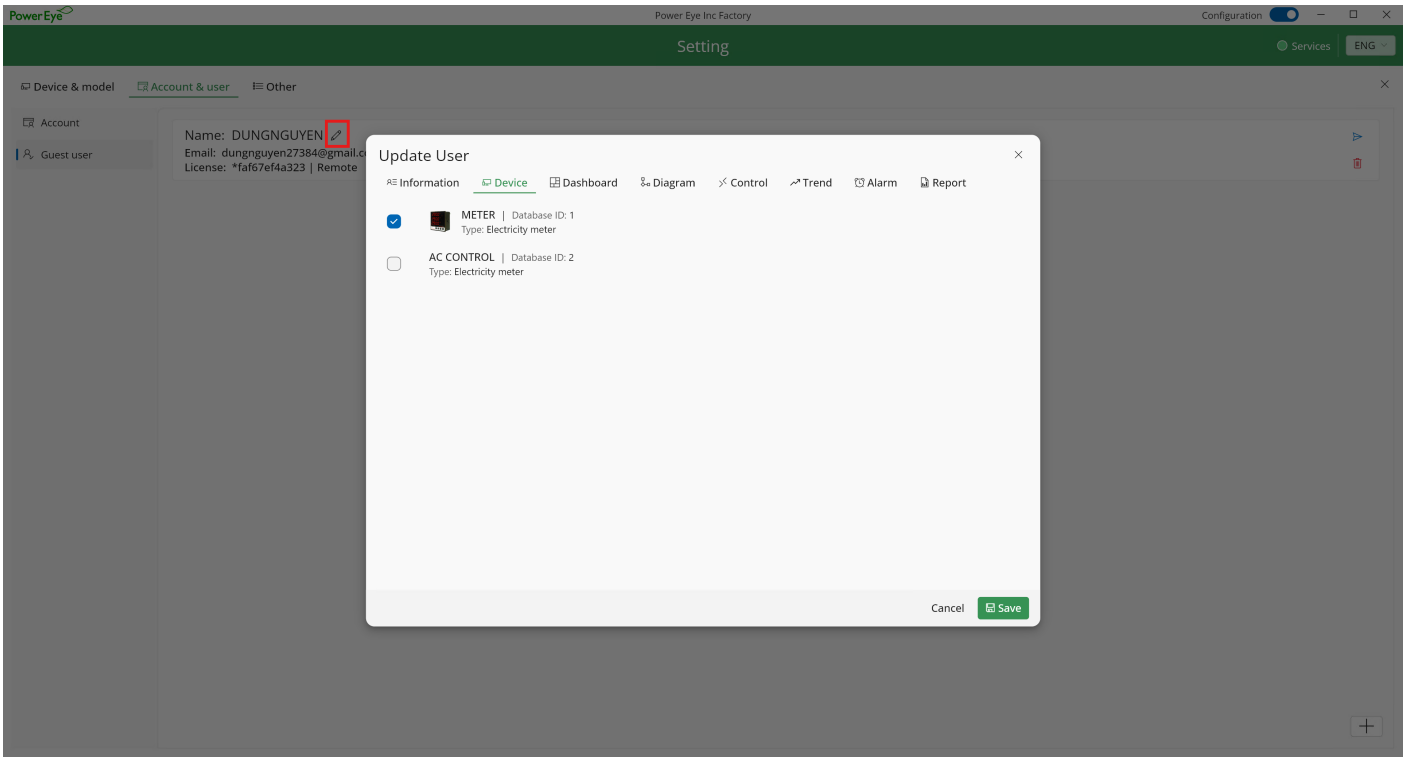
Power Eye
Power Eye Inc Factory
Configuration
Setting
Services
ENG
Device & model
Account & user
Other
Account
Guest user
Name: DUNGNGUYEN
Email: dungnguyen27384@gmail.c
License: *faf67ef4a323 | Remote
Update User
Information
Device
Dashboard
Diagram
Control
Trend
Alarm
Report
METER | Database ID: 1
Type: Electricity meter
AC CONTROL | Database ID: 2
Type: Electricity meter
Cancel
Save