

KSTAR Sync WEB

Household Storage

End User Operation

Manual

(Oversea web : <https://sync.ksdatacloud.com>)

File Version : 04

Release Date : 2026-04-10

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Revision History

Version	Date	Description
4	2026-04-10	Enable operation strategies for dynamic electricity price
3	2026-01-23	Added Section 4 Binding End User - Operator User Account.
2	2026-01-09	Refresh 5 Create Power Station
1	2025-12-01	Initial release.

1 About this manual

1.1 User

This manual is intended for end users of the KSTAR Sync Web interface (hereinafter referred to as the system).

1.2 Copyright Notice

Copyright © 2025 Shenzhen Kstar Science & Technology Co.,Ltd.

Without authorization, no organization or individual may copy part or all of the content of this manual without permission. KSTAR reserves the right to modify this manual at any time without notifying users one by one. If users have objections to this manual, they can contact KSTAR. KSTAR has the final interpretation right.

2 Registration and Login

2.1 Register

- Click the [Sign up] button on the login page to enter the registration page.
- Enter your login account, password, and verification email as required by the platform. Click the [Sign up] button to complete the registration.

Sign Up

Create your account to get real-time insights into PV, battery, and grid performance.

End User | Installer

Login Account
Used to log into the KSTAR Sync

Nickname / Name
Please enter

Password
Please enter

Confirm Password
Please enter

Email
name@example.com

Verification Code
Please enter the 6-digit verification [Get Code](#)

Continent
Europe

Country
Please select

Contact Information(Optional)
Please enter

Register Account

2.2 Login

Enter the system URL in the browser address bar:

<https://sync.ksdatacloud.com/>;

Enter your username and password in the login box, then click [Login Now].

To make it easier for users to log in again, click [Remember password].

Note: This system does not support IE browser. We recommend using Chrome 58, Firefox 49, or IE9 or later.

3 Binding End User - Operator User Account

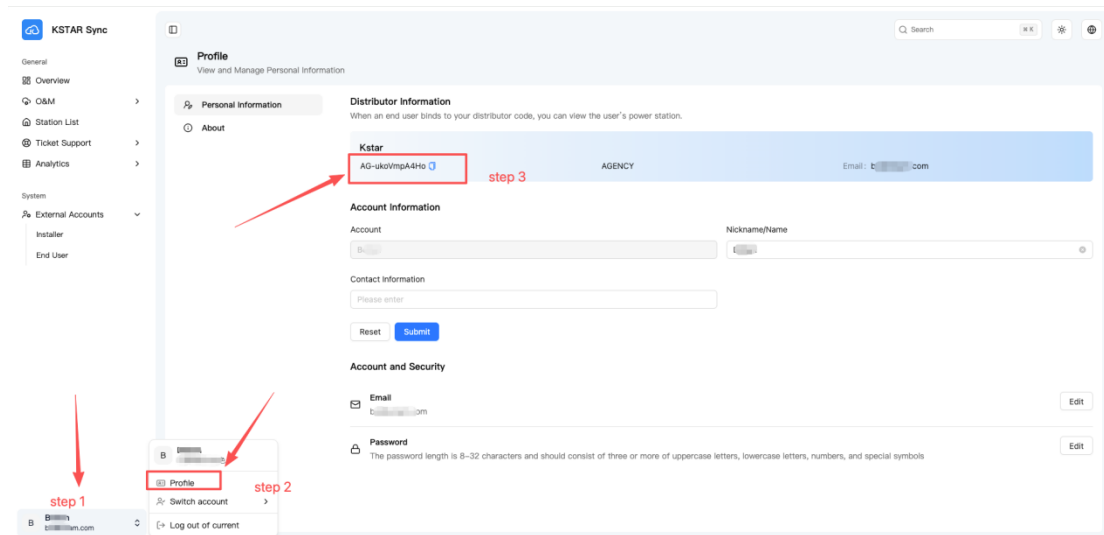
3.1 Precautions Before Binding Account

The account registered by the end user independently is an independent account and is not supervised by the operator. If the operator needs to view the end user's power station, the end user needs to bind the operator.

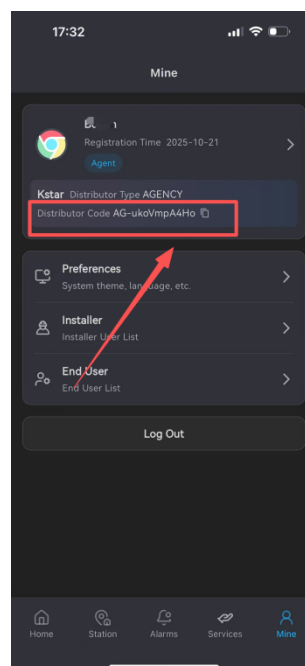
The account opened by the operator for the end user after logging into KSTAR Sync already has a binding relationship and does not require additional operations to bind the operator function.

3.2 Finding Operator Code

After the operator logs into KSTAR Sync WEB end, click [Account Name] at the bottom of the left navigation bar, and find [Profile] in the expanded secondary navigation bar. After clicking the navigation bar to enter the interface, the string of codes at the top of the page is the operator code, and the operator can copy the code.

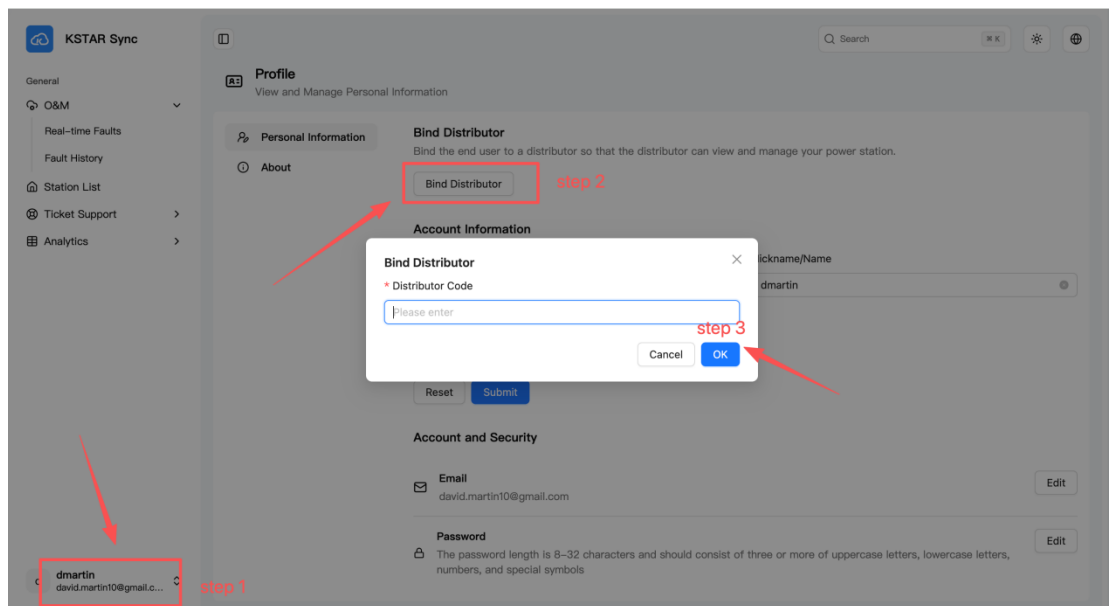


After the operator logs into KSTAR Sync APP, enter the [My] page, the code displayed in the upper left corner of the page is the operator code, and the operator can copy the code.

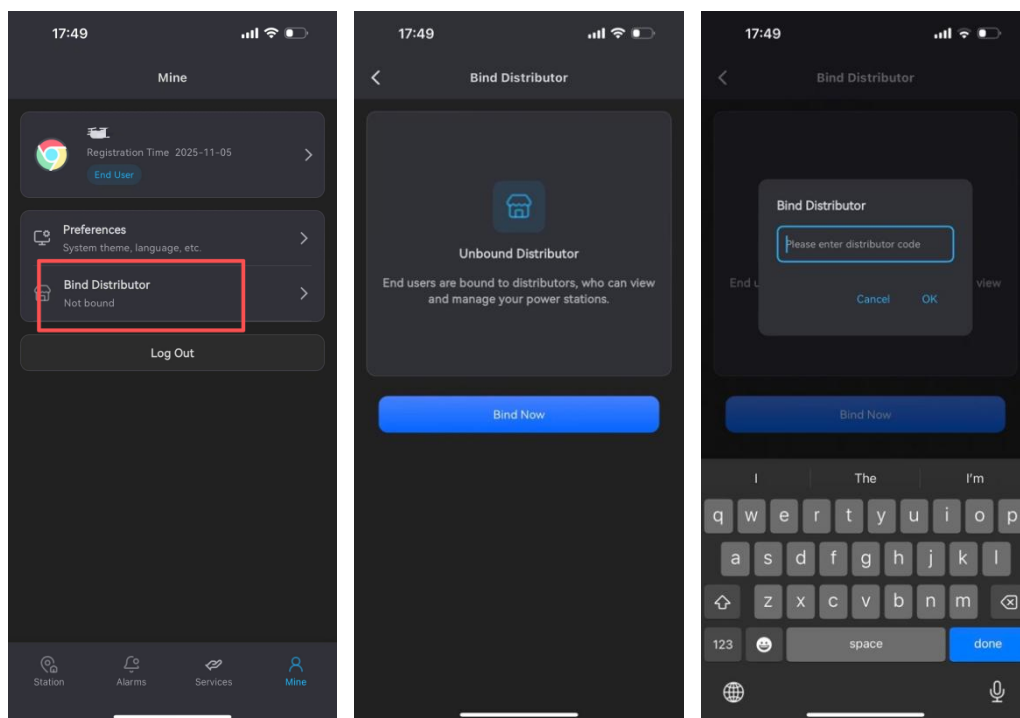


3.3 End User Binding Operator Code

After the end user logs into KSTAR Sync WEB end, click [Account Name] at the bottom of the left navigation bar, and find [Profile] in the expanded secondary navigation bar. After clicking the navigation bar to enter the interface, click the [Bind Operator] button, then enter the operator code, and click the [OK] button to successfully bind the operator account.



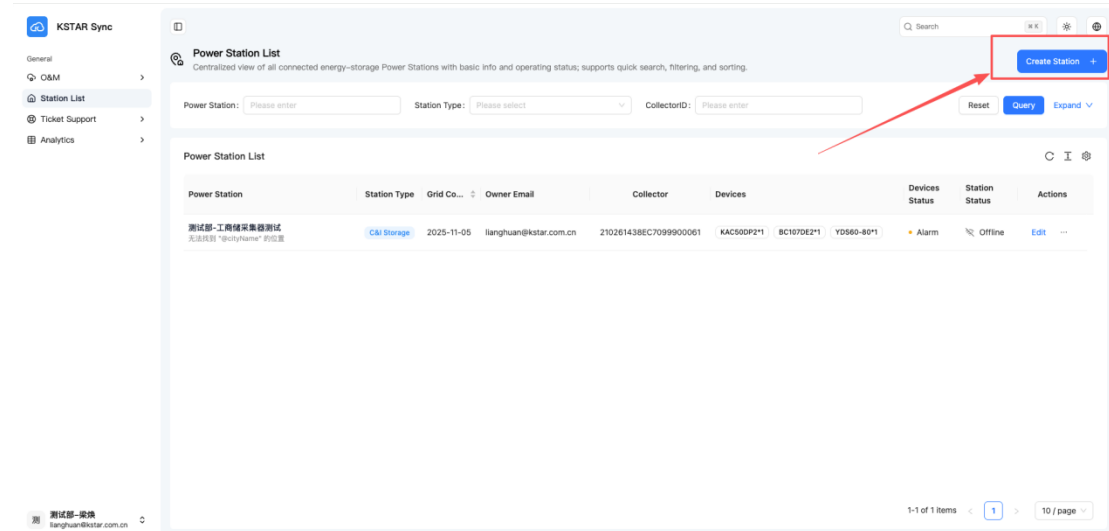
After the end user logs into KSTAR Sync APP, enter the [My] page, click [Bind Operator] - [Bind Now], enter the operator code, and click the [OK] button to successfully bind the operator account.



4 Create a power station

4.1 Configure the power station

After logging in, go to the Power Station List page and click the Create Power Station+ button in the upper right corner to enter the power station creation details page. Complete the power station information according to the system prompts to successfully create a new power station.



- 1、 Basic information: Power station name, construction time, time zone, region/country, location, address, latitude and longitude (select from Google Maps or enter manually). Items marked with an asterisk are required. The more complete the information, the better it will be for your power station management.

× Create Station

✓ Basic Information — ✓ System Information — ✓ Third-party Controller Info **4** Revenue Information — 5 Owner Information

Electricity Price Unit

Please select

Previous Next

- 5、 Owner information: owner name, owner contact phone number, owner email.

× Create Station

✓ Basic Information — ✓ System Information — ✓ Third-party Controller Info ✓ Revenue Information — **5** Owner Information

Owner Name

Please enter

Owner Phone

Please enter

Owner Email

Please enter

Previous Finish

- 6、 After completing the information, click the [Submit] button to create the power station successfully.

4.2 Add device configuration navigation

After adding the power station, you need to add a collector. On the [Power Station List] page, click [Add Collector] and enter the collector ID and name to add the device.

KSTAR Sync

General

OBM

Station List

Ticket Support

Analytics

Power Station List

Centralized view of all connected energy-storage Power Stations with basic info and operating status; supports quick search, filtering, and sorting.

Create Station

Power Station: Please enter Station Type: Please select CollectorID: Please enter Reset Query Expand

Power Station	Station Type	Grid Co...	Owner Email	Collector	Devices	Devices Status	Station Status	Actions
测试	Not Connected	2025-11-27	-	Add Collector	-	Not Connected	Offline	Edit
测试部-工业储能设备测试	Can Storage	2025-11-05	lianghuan@kstar.com.cn	210261438EC7099900061	KAC50DP2*1 BC1070E2*1 YD560-80*1	Alarm	Offline	Edit

1-2 of 2 items 1 10 / page

- Enter the collector name.
- Enter the collector ID.

×

Add Collector

magnum

Collector Name

Please enter

★ Collector ID

Please enter Collector ID0 / 21

Cancel

OK

5 operation

5.1 Real-time alarms

The real-time alarm module displays all unrecovered alarm data from power stations in a centralized manner and provides query, filtering, and classification functions.

KSTAR Sync

General

Real-time Faults

Fault History

Station List

Ticket Support

Analytics

Real-time Alarm

Monitor live device alarms as they occur

Alarm Event: Please enter

Device Type: Please select device type

Alarm Level: Please select

Reset

Query

Expand

Alarm List

Alarm Event	Alarm Level	Occurrence Time	Continent & Country	Device Type & Model	SN	Collector	Power Station
Cluster 1: Air conditioner ...	D	2025-11-26 17:55:42	Asia China	BMS BC107DE2	-	210261438EC7099900061	测试部-工商储采集器测试
Bus Voltage Abnormal Fault	C	2025-11-26 17:55:37	Asia China	KAC KAC300DP2	123456789012345678901	210261438EC7099900061	测试部-工商储采集器测试
PV1 Under Voltage Alarm	D	2025-11-26 17:38:26	Asia China	KAC KAC300DP2	123456789012345678901	210261438EC7099900061	测试部-工商储采集器测试
Grid U-V Under Voltage F...	D	2025-11-26 17:38:26	Asia China	KAC KAC300DP2	123456789012345678901	210261438EC7099900061	测试部-工商储采集器测试
Grid V-W Under Voltage F...	D	2025-11-26 17:38:26	Asia China	KAC KAC300DP2	123456789012345678901	210261438EC7099900061	测试部-工商储采集器测试
Grid W-U Under Voltage F...	D	2025-11-26 17:38:26	Asia China	KAC KAC300DP2	123456789012345678901	210261438EC7099900061	测试部-工商储采集器测试
ID1 Grid Meter Comm Fail...	C	2025-11-26 17:38:26	Asia China	EMS	-	210261438EC7099900061	测试部-工商储采集器测试

1-7 of 7 items

Alarm level description:

- Level A alarm: An emergency alarm that may involve security risks
- Level B alarm: indicates a machine failure requiring replacement.
- Class C alarm: An alarm indicating that certain failures or restarts require manual intervention to restore machine operation.
- Level D alarm: a minor alarm that does not affect system operation

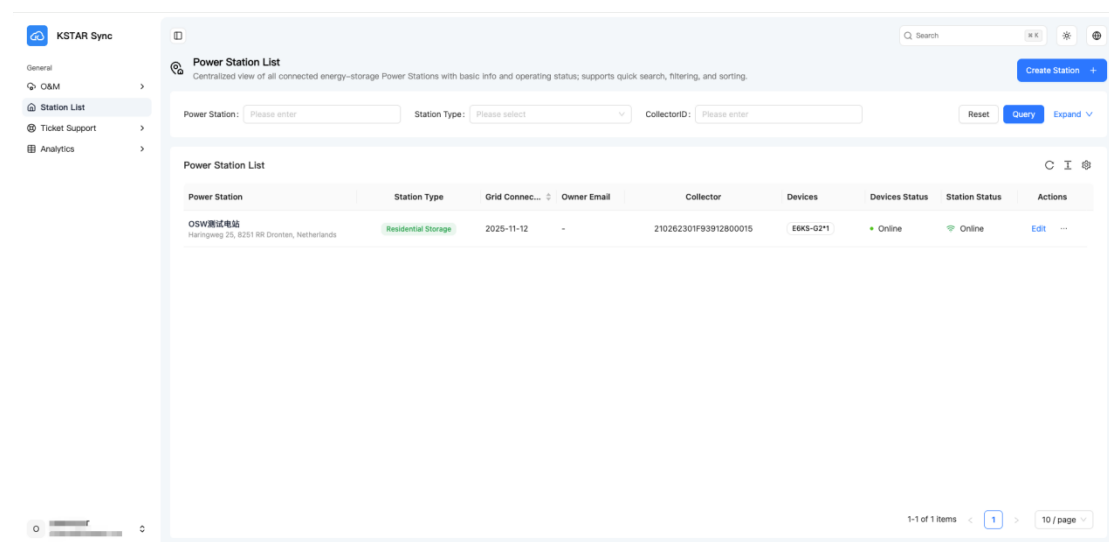
Alarm query: Enter conditions such as power station name, alarm event, or device type to search alarm data. The system performs fuzzy matching based on the entered power station name and alarm name to retrieve corresponding alarm information.

5.2 Historical alarm

The historical alarm module displays all restored alarm data from the Device of all power stations and provides query, filter, and classification functions.

6 Power Station List

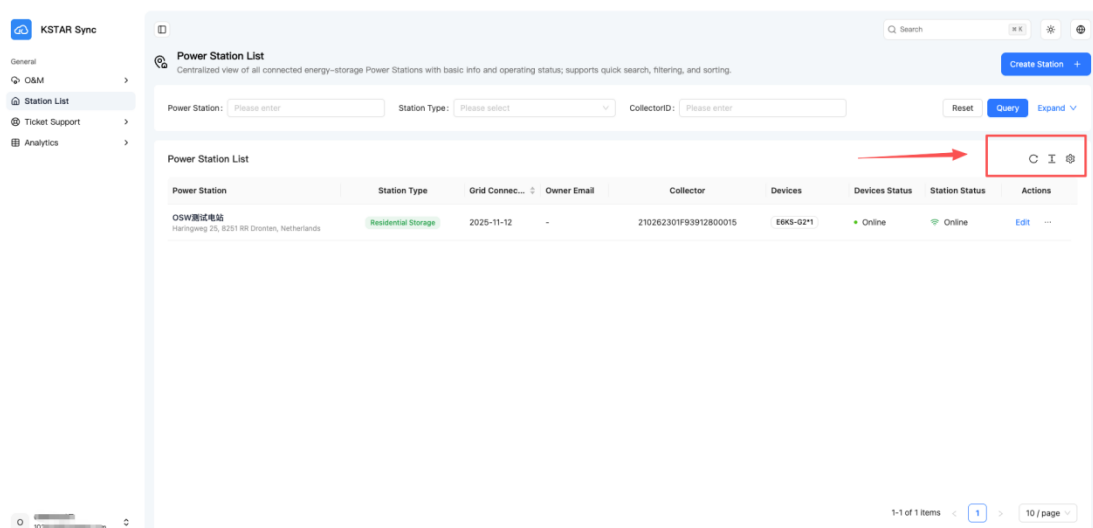
The power station list module displays and manages all your power station data in a centralized manner. It supports the entire lifecycle operations, from adding, querying, and viewing details to editing and deleting, to meet one-stop management needs.



6.1 Overview of the power station list

- Power station query: Enter the power station name, type, status, or communication status to retrieve data. The system performs fuzzy search based on the entered name to quickly find the corresponding power station information.
- Add a power station: Click the [Create Power Station] button on the right side of the page to go to the corresponding page. Complete the power station information according to the prompts to finish the operation.
- Edit power station: In the "Operation" column of the power station list, each added power station has an [Edit] button. If your account has the corresponding permissions, click the button to modify the power station information, which facilitates timely updates and maintenance of power station data.

- Delete power station: In the "Operation" column of the power station list, each added power station has a [Delete] button. If your account has the corresponding permissions, click the button to delete all data of the power station. This is suitable for scenarios such as archiving power stations or data cleanup.
- Refresh function: Click the refresh icon to update the current power station data list immediately. This ensures you see the latest system status and effectively solves display lag caused by data delays or cache.
- Adjust list width: Click the layout density icon to choose "Loose", "Medium", or "Compact" mode. This allows you to flexibly adjust the row height and spacing of columns in the list, optimizing the visual presentation and browsing efficiency of information.
- Custom list field: Click the custom list field icon. In the pop-up window, you can check or uncheck fields as needed to flexibly control the information displayed in the list.
- Power station details: Click the power station name in the list to open a new page and access the corresponding power station interface.

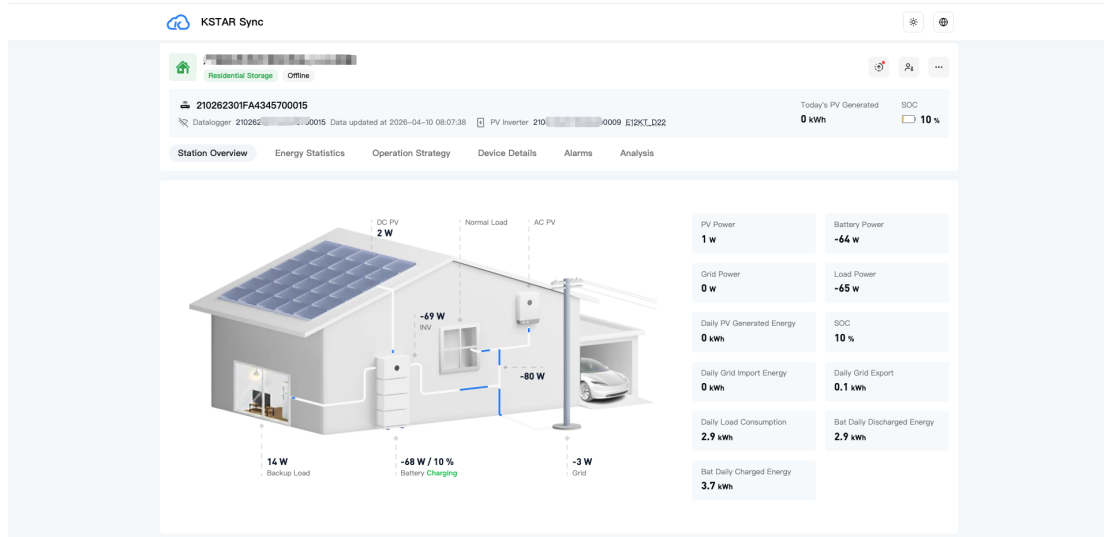


6.2 Station Details

6.2.1 Power Station Overview

The Power Station Overview module provides users with a centralized monitoring view of household energy storage stations. Its core displays the real-time operating status of the power station in the form of a system diagram. Key functions include:

- Current path visualization: dynamically display the energy flow between photovoltaic, energy storage, power load and grid.
- Real-time presentation of key data: accurate display of key parameters such as instantaneous power of core Device such as inverter and battery.



6.2.2 Energy statistics

Energy statistics is divided into two parts: electricity analysis and energy trends for the week.

- Power analysis: The multi-curve comparison chart displays the power changes of PV, grid, load, and battery, along with the battery SOC curve. Users can flexibly query detailed data for any historical date through the date selector.
- Weekly Energy Trends: A bar chart or data table that shows the cumulative energy data of the last 7 days. Key indicators include photovoltaic power generation, grid purchase power, load power consumption, and battery charge/discharge power, helping you understand the weekly energy consumption pattern.

6.2.3 Operation Strategy

The operational strategy module serves as the intelligent control core of the system, offering four operational modes: Self-consumption, Peak Shaving, Battery Priority and Dynamic Tariff. This enables automated management of power station charging and discharging operations. Users can flexibly select the optimal strategy based on actual electricity demand, pricing policies, and grid

requirements, achieving the comprehensive goals of improving economic efficiency, ensuring power supply security, and participating in grid dispatching.

6.2.3.1 Self-consumption

1. Charging Period Operation Strategy

During the charging period, the system executes the "PV Priority Charging" strategy. PV generation is prioritized for battery charging. When the available PV power is lower than the preset charging power limit, the system automatically supplements power from the grid to ensure charging.

When the demand control function is enabled, the system will supplement power from the grid under the constraint that the sum of load power consumption and battery charging power from the grid does not exceed the demand current setpoint. Meanwhile, the actual battery charging power remains no higher than the preset charging power limit.

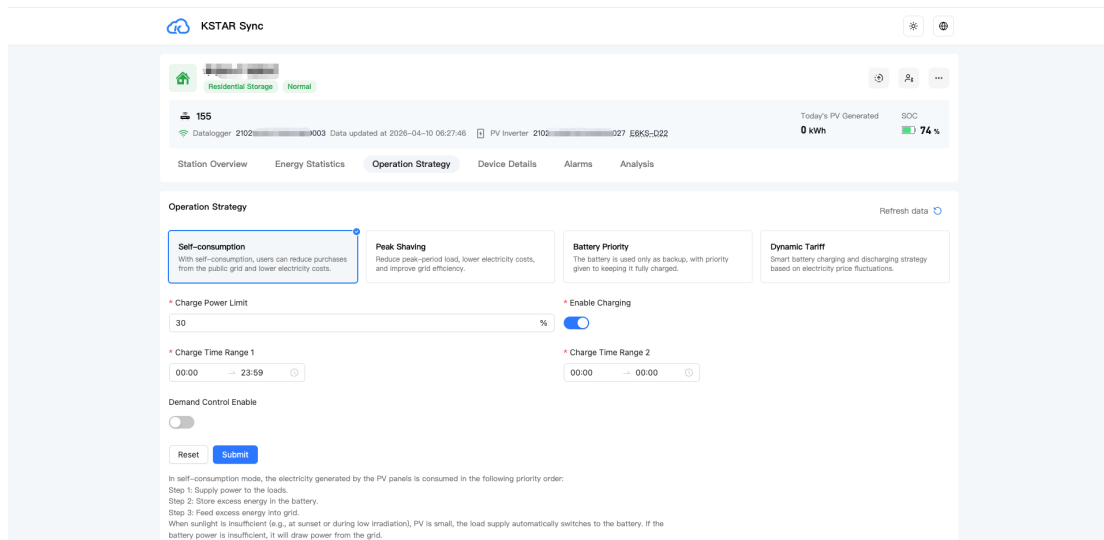
2. Non-Charging Period Operation Strategy

During the non-charging period, the system executes the "PV Priority for Load" strategy. PV generation is prioritized for powering loads. When PV power is insufficient to meet load demand, the energy storage system discharges to compensate. When the combined power of PV and storage is still lower than the load demand, the grid supplies the remaining shortfall.

When there is surplus PV power after meeting load demand, the surplus power is prioritized for battery charging. After the battery is fully charged, the system handles the situation according to the anti-reverse power flow function status:

Anti-reverse power flow function enabled: Limit excess PV output (PV curtailment).

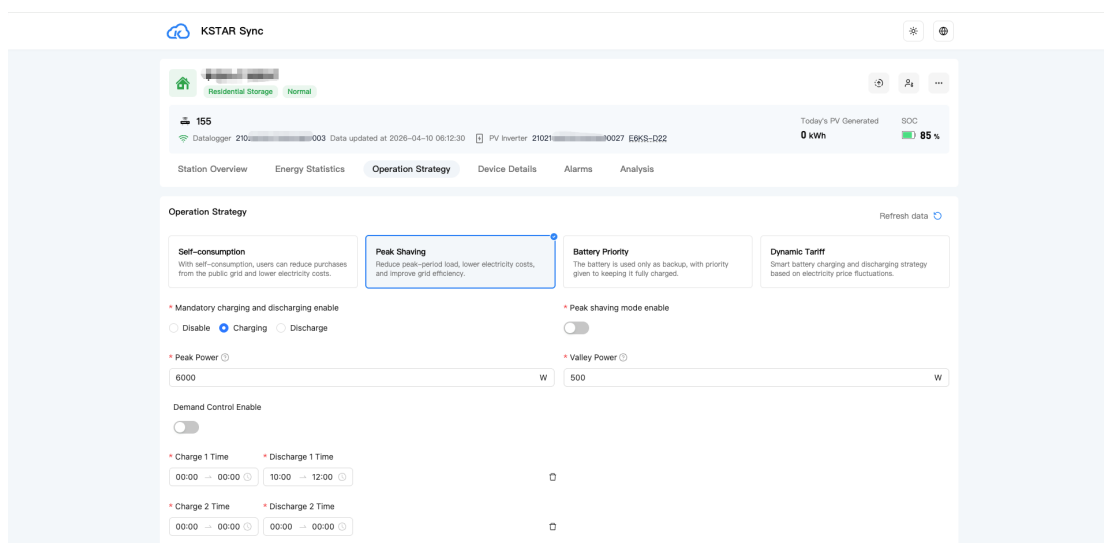
Anti-reverse power flow function disabled: Allow excess PV power to be exported to the grid.



6.2.3.1 Peak Shaving

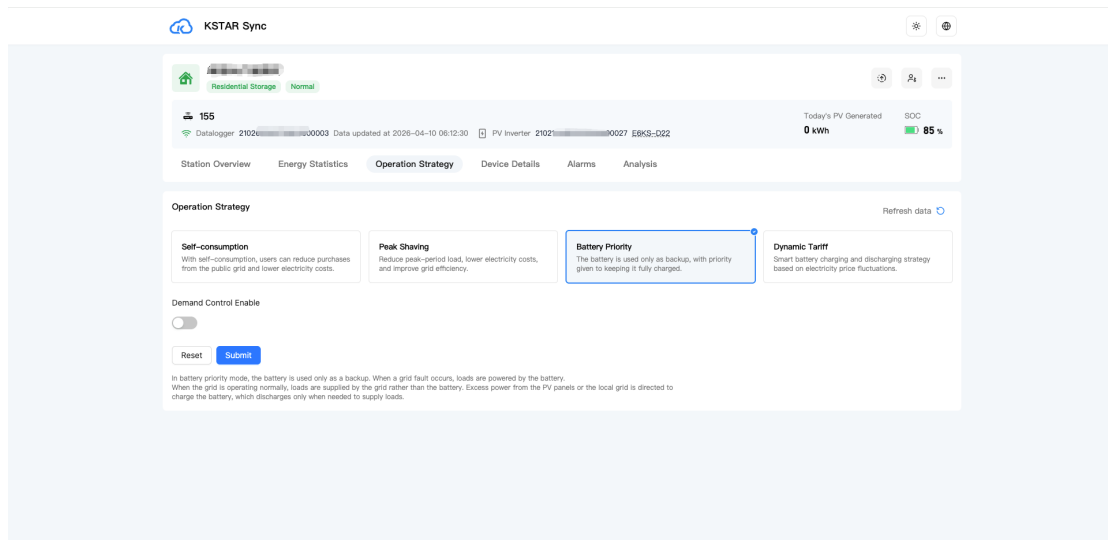
Time-of-Use Control: The battery charges and discharges according to the set time period. If the current time is outside the set period, the battery neither charges nor discharges, and PV power is exported to the grid.

Peak-Valley Power Control: When the grid power is between the peak and valley values, the load draws power from the grid, PV is used only for battery charging, excess PV power is curtailed, and the battery is charged to full while PV is curtailed. When the grid power is below the valley value, the battery actively draws power from the grid to maintain the grid power until the grid power reaches the valley value. When the grid power exceeds the peak value, the battery actively discharges to maintain the grid power at the peak value.



6.2.3.1 Battery Priority

PV power is prioritized for battery charging. Any remaining energy is then supplied to the load. When PV power is insufficient, power is drawn from the grid to charge the battery.



6.2.3.2 Dynamic Tariff

The energy storage system will automatically sort all electricity prices for the day based on the high electricity price range and low electricity price range you have set, distinguishing between the high electricity price interval (red interval), low electricity price interval (green interval), and normal electricity price interval (intervals other than red and green). The system will automatically identify whether the current time falls within your preset intervals and operate according to the charge, discharge, or standby strategies you have configured for each interval.

1. High Electricity Price Interval Strategy

- If you have set a discharge strategy:

The energy storage system will discharge to the grid at maximum power while ensuring that the discharge power does not exceed the Maximum Discharging Power limit you have set, and taking into account anti-reverse power flow conditions. The system will stop discharging and switch to standby when the SOC discharges to the Maximum Discharging Power SOC you have set.

- If you have set a charge strategy:

The energy storage system will charge from the grid at maximum power while

ensuring that the charge power does not exceed the Maximum Charging Power limit you have set, and taking into account demand limits. The system will stop charging and switch to standby when the SOC reaches the Charging SOC Upper Limit you have set.

- If you have set a standby strategy:

The energy storage system will remain in standby mode.

2. Normal Electricity Price Interval Strategy

- If you have set a discharge strategy:

The energy storage system will discharge to the grid at maximum power while ensuring that the discharge power does not exceed the Maximum Discharging Power limit you have set, and taking into account anti-reverse power flow conditions. The system will stop discharging and switch to standby when the SOC discharges to the Maximum Discharging Power SOC you have set.

- If you have set a charge strategy:

The energy storage system will charge from the grid at maximum power while ensuring that the charge power does not exceed the Maximum Charging Power limit you have set, and taking into account demand limits. The system will stop charging and switch to standby when the SOC reaches the Charging SOC Upper Limit you have set.

- If you have set a standby strategy:

The energy storage system will remain in standby mode.

3. Low Electricity Price Interval Strategy

- If you have set a charge strategy:

The energy storage system will charge from the grid at maximum power while ensuring that the charge power does not exceed the Maximum Charging Power limit you have set, and taking into account demand limits. The system will stop charging and switch to standby when the SOC reaches the Charging SOC Upper Limit you have set.

- If you have set a discharge strategy:

The energy storage system will discharge to the grid at maximum power while ensuring that the discharge power does not exceed the Maximum Discharging Power limit you have set, and taking into account anti-reverse power flow conditions. The system will stop discharging and switch to standby when the

SOC discharges to the Maximum Discharging Power SOC you have set.

- If you have set a standby strategy:

The energy storage system will remain in standby mode.

4. Negative Electricity Price Interval Strategy

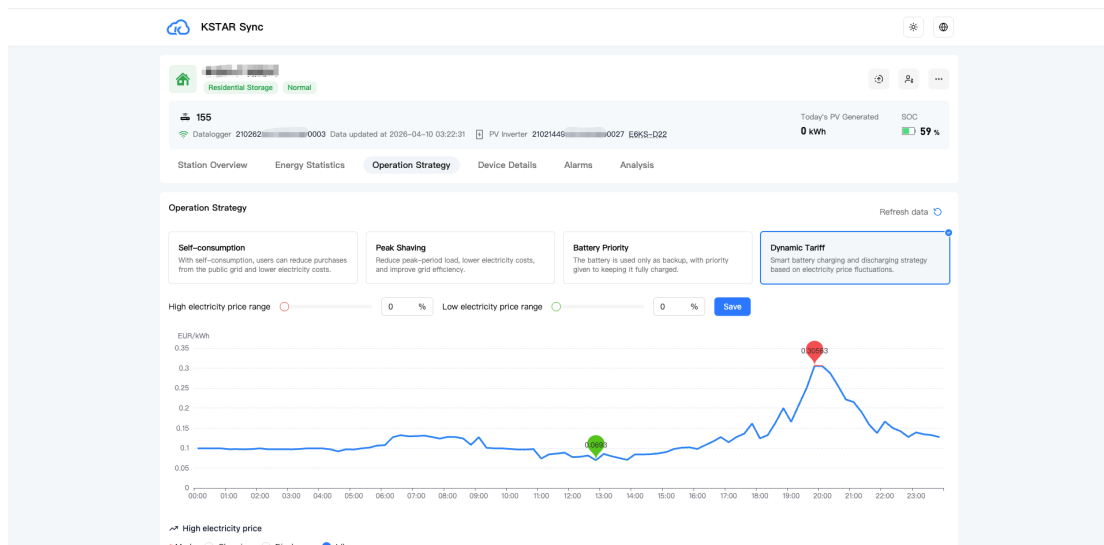
When the electricity price is negative, the energy storage system will control the equipment to charge (with charging power not exceeding the customer-set Maximum Allowed Charging Power) while taking into account demand limits, and will suppress PV generation according to the customer-set PV Generation Inhibition Rate. The system will stop charging when the SOC reaches the customer-preset Charging SOC Upper Limit.

Dynamic Tariff Activation: Automatically sets the price threshold based on electricity prices in ascending order (user-defined range).

Customizable charge/discharge strategies for high, medium, and low electricity price tiers.

Set Dynamic Electricity Price Strategy :

- Enable the Dynamic Tariff module , Operation Steps: Go to the "Operation Strategy" → "Dynamic Tariff" module.

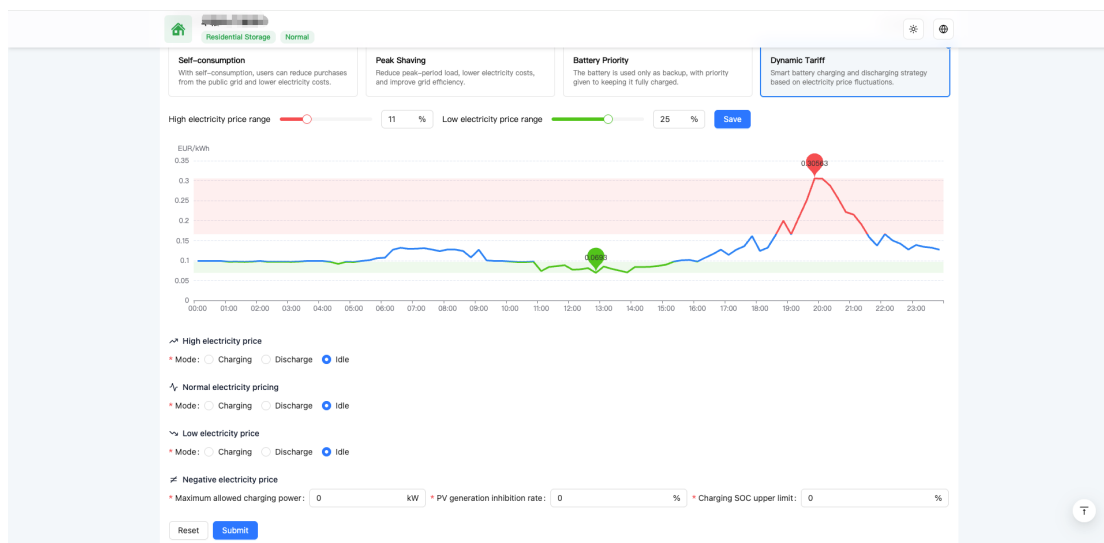


- Electricity Price Settings are used to define the high electricity price range and the low electricity price range. When the electricity price falls within the red interval (high electricity price), the system will execute the high-electricity-price strategy; when the electricity price falls within the green interval (low electricity price), the system will execute the low-electricity-price strategy. The system automatically sorts the daily electricity prices

in ascending order, with the high-electricity-price interval defaulting to the top 30%, the low-electricity-price interval defaulting to the bottom 30%, and the middle 40% serving as the normal electricity price interval. Users can customize the electricity price thresholds, which will take effect automatically in the future.

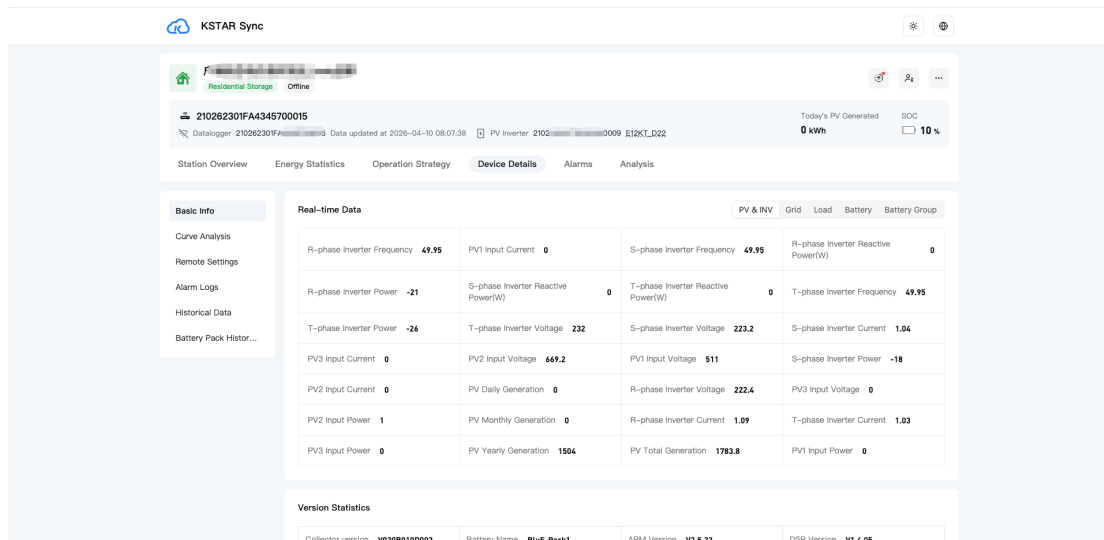
We provide configurable parameters for complex electricity pricing. The parameters you can set include: maximum allowable charging power, PV generation percentage limit required for the energy storage system, and battery SOC upper limit for charging during negative electricity price periods.

- You can set the actions the system should take when the electricity price falls into the high, medium, or low intervals: charge, discharge, or standby. For charge and discharge actions, you need to set the maximum power threshold and the stop SOC threshold.
- If you need to suspend dynamic electricity price operation, you can switch to one of the following operating modes: "Self-Consumption", "Peak Shaving", or "Battery Priority".



6.2.4 Device

- Basic information: Displays real-time parameters such as power, photovoltaic generation, battery charge/discharge, and electricity consumption. Presents data changes through a power statistics bar chart and supports multi-dimensional filtering by day, month, and year, enabling users to fully understand the Device's operational status.



- Curve analysis: Parameters are grouped by device type. Users can freely select different parameters for multi-curve comparison and analysis to achieve accurate Device performance tracking and fault location.
- Remote Configuration: The cloud-based platform provides authorized users with cross-regional, efficient device management capabilities. This feature enables maintenance personnel or system administrators to perform parameter configuration, system soft reset, and security threshold adjustments for power station Device remotely, eliminating the need for on-site visits. Through this functionality, users can centrally manage distributed energy storage units across multiple locations, achieving centralized remote monitoring and control from individual devices to entire power station clusters. This significantly enhances system operation response speed and management precision.
- Alarm records: The alarm module displays all alarm data for a single device and provides query, filter, and classification functions.
- Historical data: Device data is automatically saved to the system at 5-minute intervals. Query and trend analysis are supported to provide complete and traceable data for operations optimization and decision-making.
- Battery pack historical data: Provides a separate historical data recording module for the battery pack. The data is automatically saved to the system at 5-minute intervals. Query and export are supported.

6.2.5 Alarm

The alarm module consists of two components: real-time and historical alarms. It displays all alarm data from a single power station and provides functions such as query, filtering, and categorization.

7 Dynamic Electricity Price

Dynamic electricity pricing provides guidance for household storage power stations. Users first select a power supplier and then choose the corresponding power market area where the power station is located. After setting the price, they can obtain the corresponding purchase and sale data. Users can set different operation strategies according to the daily price trend.

The dynamic electricity pricing feature provides essential market price guidance for household energy storage systems. After users select a power supplier and the corresponding electricity market region, the system automatically generates the associated purchase and sale data.

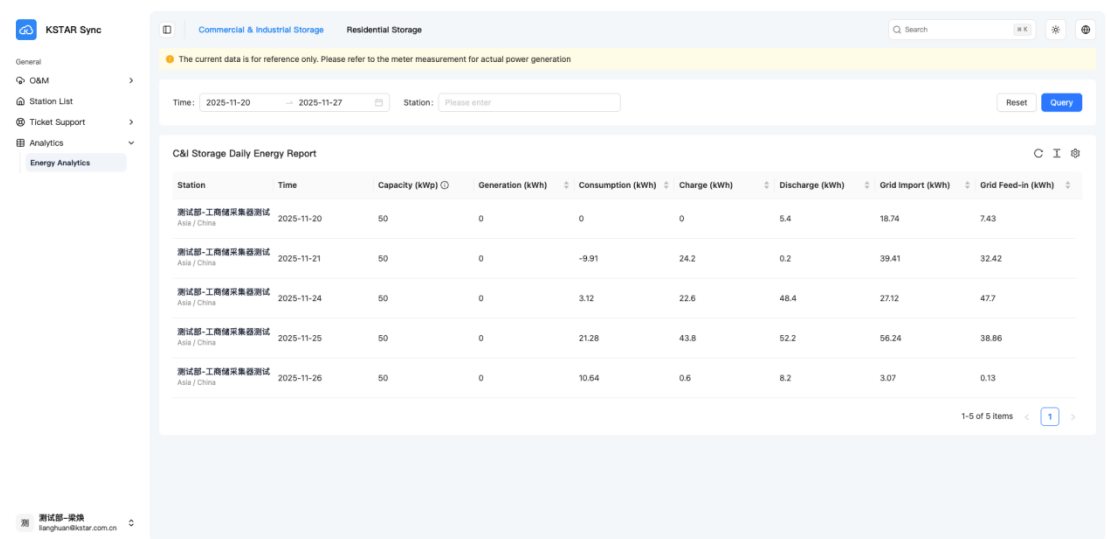
After obtaining the electricity price data, the user can issue the optimal strategy for the energy storage system according to the price fluctuation in the future day (such as the peak-valley price difference), so that the power station can charge when the price is low and discharge when the price is high, so as to realize the optimal cost of energy use.



8 Analytics

8.1 Energy Analytics

The energy statistics module conducts statistical analysis of the whole-link power data of the power station, covering the core links such as photovoltaic power generation, battery charging and discharging, power grid feeding and load power consumption. It supports data query and report export according to multiple cycles such as month and year, providing accurate data support for energy management and benefit analysis.

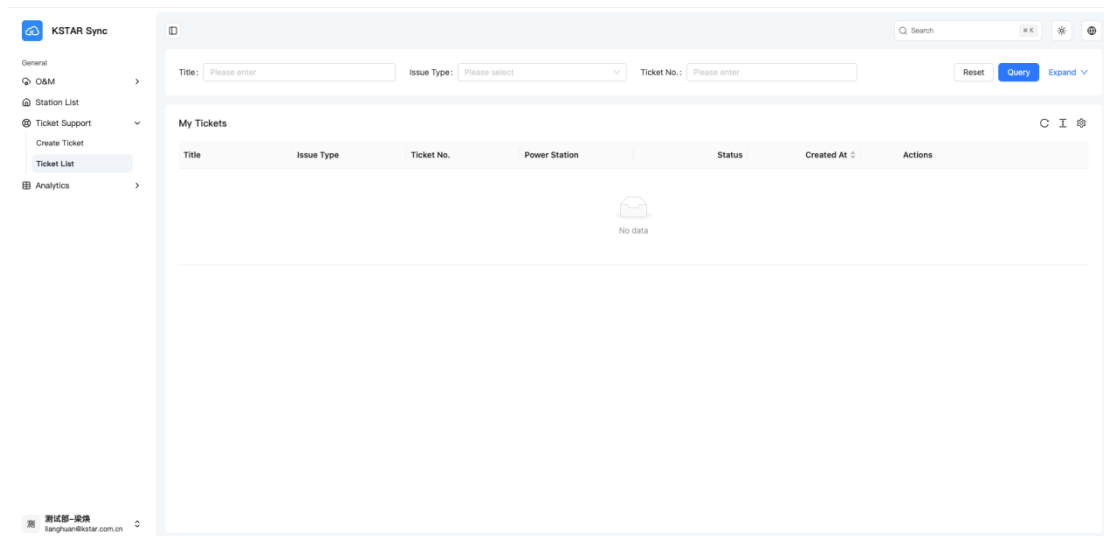


9 Ticket support

9.1 Create ticket

Users can submit tickets to the Kstar technical support team to report problems.

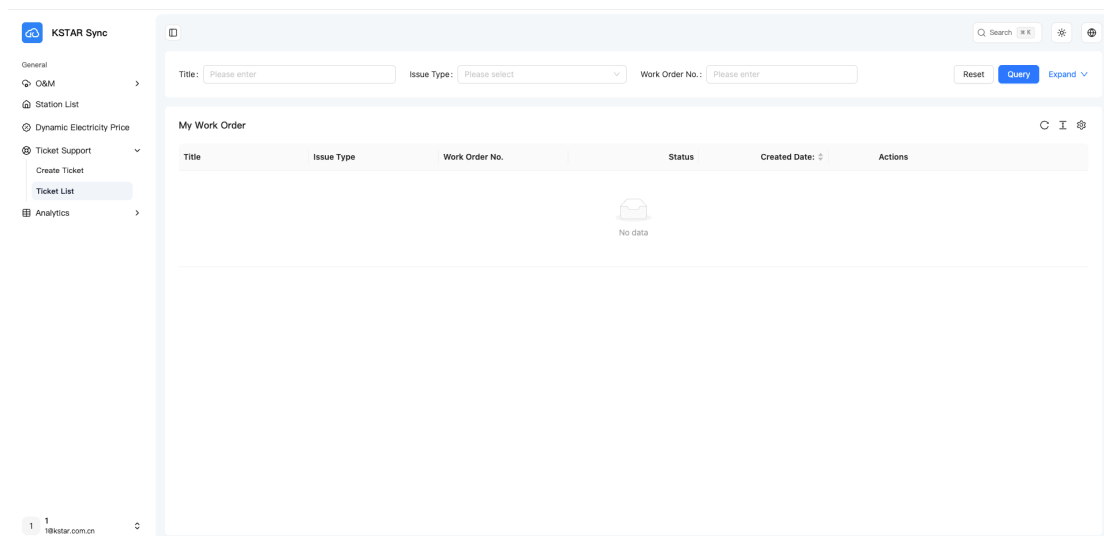
1. Select problem type (machine problem, cloud platform problem, installation and commissioning, or suggestion).
2. Specify associated power station and Device (supports multiple selection).
3. Fill in problem title, severity level, detailed problem description, and can upload attachments in formats such as images, videos, Word, Excel, etc., to facilitate precise positioning and efficient problem handling.
4. Click the [Submit] button to successfully submit the ticket to Kstar.



9.2 Ticket List

After submitting a ticket, users can track the progress and final outcome of the issue in real time through the ticket list. This feature provides a complete visual representation of the after-sales support process.

- Real-time status updates: Work order statuses are dynamically displayed, clearly indicating "Pending", "In Progress", "Resolved", and "Closed"
- Complete record: fully preserve the technical support personnel's handling records, solutions, and related communication content
- Multi-dimensional query: Filter by ticket status, time range, problem type, and other conditions

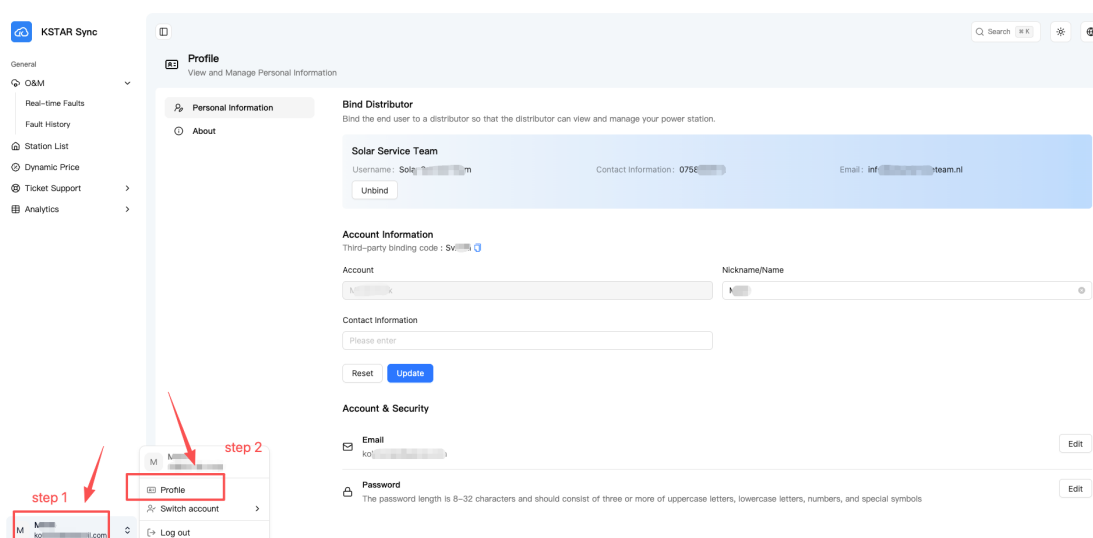


10 Profile

Click the account name in the lower-left corner of the page, then click the

[Profile] button to enter the Profile interface. This interface displays core information and management functions related to your account, including the following three sections:

- Dealer information: Displays the superior dealer code to help users verify their dealer identity and contact details.
- Account information: Clearly list the currently logged-in account and its associated contact information, and provide a modification function to allow users to update their information promptly.
- Account and Security: Modify email, change account password, and log out.

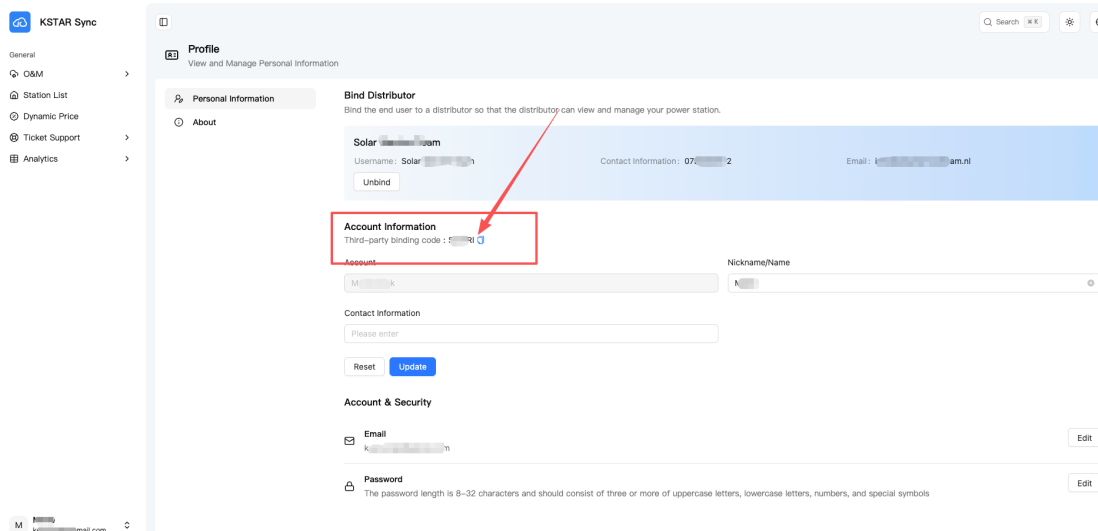


10.1 Finding Third-party binding code

Power stations created in KSTAR Sync can be linked to the Third-party platform.

Users can bind their stations and associated devices to Third-party platform by Third-party binding code

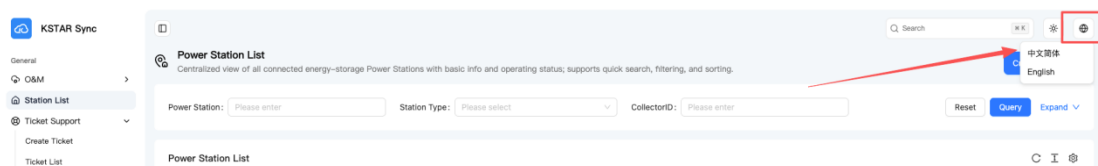
Copy Code: On the **【 Profile 】** page, the string of code displayed at the top is your Third-Party Binding Code. You may copy it from here.



11 system configuration

11.1 Language Settings

The system supports Chinese and English. Click the language icon in the upper right corner of the page to switch the system language.



11.2 Switch system theme

The system offers two theme skins: white and black. Click the theme icon in the upper right corner of the page to switch between them based on ambient lighting or personal preference. Light mode is bright and refreshing, while dark mode is eye-friendly and energy-efficient.

