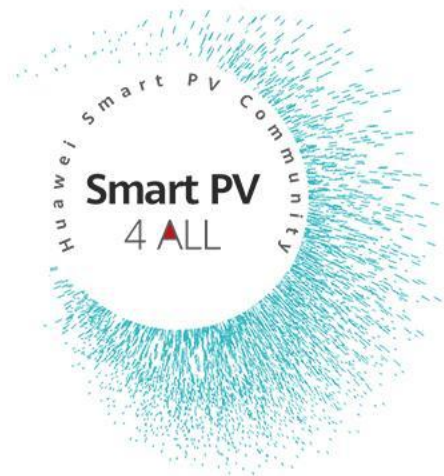




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Introduction to the FusionSolar Smart PV Management System 7.0



Security Level:



Overview — Product Positioning and Highlights

Positioning

- The SmartPVMS is a software system for the monitoring and O&M of PV power systems. It aims to display the current and historical running status of PV plants in a more real-time and comprehensive manner. In addition, the SmartPVMS provides functions such as intelligent alarming, analysis, diagnosis, and O&M to help customers improve the power generation efficiency and lower the O&M cost, achieving refined management and improved profitability.
- With the rapid development of PV, millions of PV plants have been established around the world. As the scale of PV plants keeps increasing, problems of traditional PV plants, such as high OPEX, inability to share data, and inability to evaluate the plant operational quality, become increasingly prominent. Higher requirements are posed in terms of automatic monitoring and production management, operation evaluation and maintenance, networking, and system reliability of PV plants. Based on the preceding PV plant development trends and customers' requirements, Huawei launched the SmartPVMS, which is described as follows:
 - > The smart PV cloud platform provides intelligent, high-quality, maintenance-free, and cost-effective plant status monitoring and intelligent O&M services. Users do not need to deploy hardware devices or arrange professional maintenance personnel.
 - > The basic functions of the smart PV cloud platform, such as status monitoring, PV plant management, intelligent O&M, and data reports, are free of charge. Value-added features such as Smart I-V Curve Diagnosis are charged on demand.
 - > The smart PV cloud platform provides high-precision and reliable data transmission, open northbound data interfaces, and a SmartLogger with the data recovery function to ensure the integrity of plant data.

Highlights

• Simple management and monitoring platform for all scenarios

- > Applies to all scenarios, including residential, commercial and industrial, and utility-scale PV plants.
- > Supports cloud-based and server-based deployment to meet customers' installation requirements.
- > Uses the multi-layer user architecture, which is applicable to distributed scenarios, facilitating user management.
- > Defines multiple roles for proper permission assignment to user accounts.

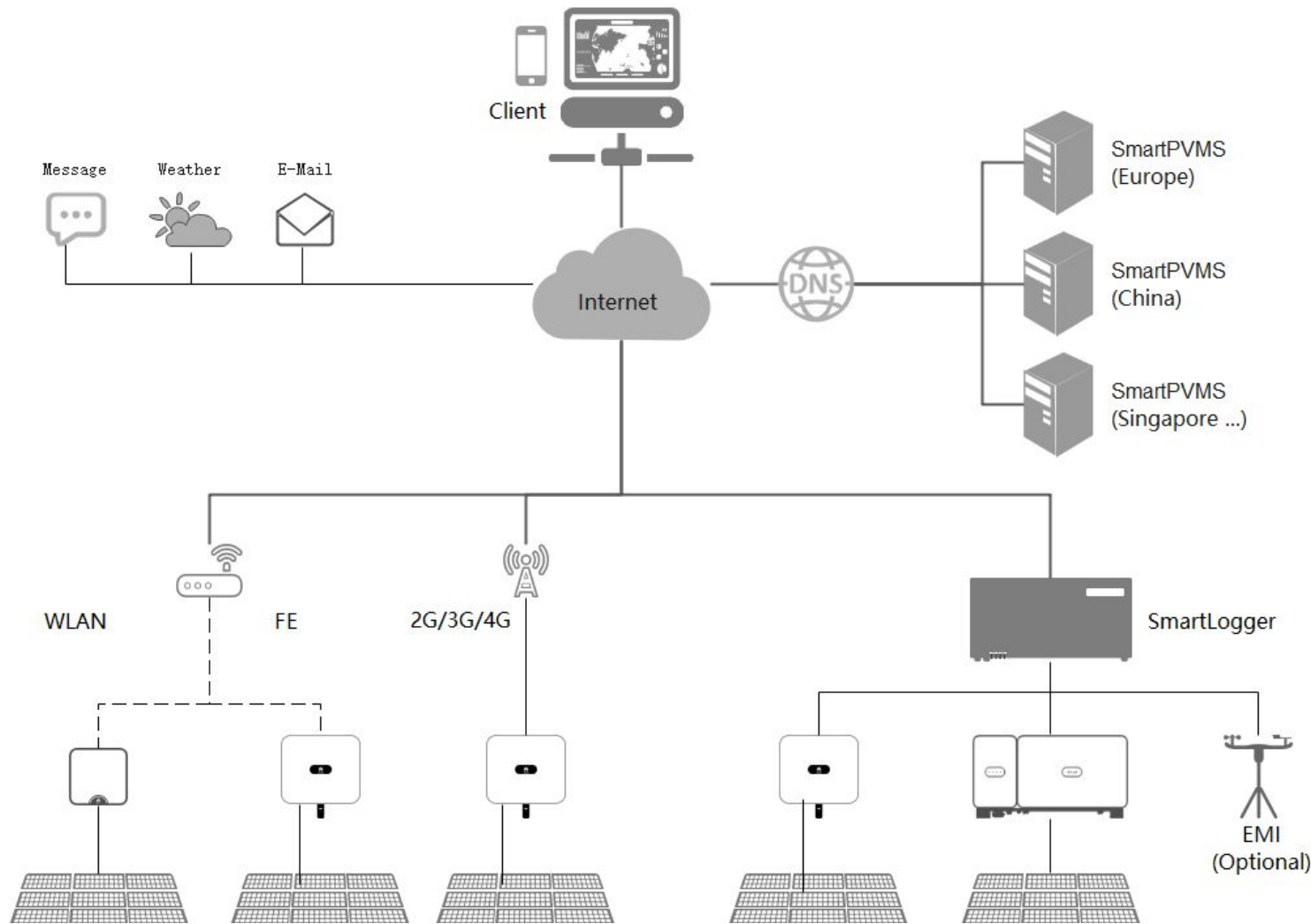
• Lifetime management allowing you to learn the plant operating status

- > PV plant information on one screen, facilitating management
- > Real-time monitoring of plant-level, device-level, and module-level running data
- > Traceable and presentable plant-level and device-level historical data of multiple types
- > Real-time display of fault alarms, facilitating quick response and troubleshooting
- > Report and alarm push and subscription for learning the plant running status

• Intelligent and efficient O&M

- > Simple and efficient centralized O&M and monitoring
- > Real-time alarm push and troubleshooting suggestions, enabling quick response
- > Accurate locating of arc faults, reducing the onsite troubleshooting time (full optimizer configuration required)
- > Intelligent diagnosis and warning, detecting device exceptions in advance
- > Mobile O&M/Electronic tickets, delivering simple and efficient O&M
- > Remote health check and proactive optimization, ensuring the healthy and stable operation of PV plants

Networking and Device Access — System Networking



The system consists of the SmartPVMS server, PV devices, third-party services, and clients, which are connected through the Internet.

- The system can connect to devices such as string inverters, transformers, power meters, optimizers, environmental monitoring instruments (EMIs), and batteries.
- The SmartLogger can connect to multiple inverters and inverters can connect to the system through the Smart Dongle.
- The SmartPVMS uses a firewall as the primary protection.
- Services such as DNS, email, weather, and map are mainly provided by third-party providers.
- Clients mainly include user PCs and smart phones.

Product Overview

Devices Matching

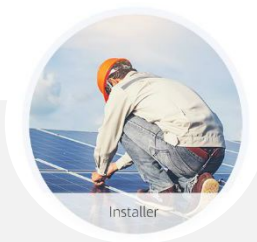
Inverter	Sub-Component	Communication	Firmware Requirement
SUN2000L-2/3/3.68/4/4.6/5KTL	SUN2000P-375W DDSU666-H DTSU666-H 100A/40mA	Built-in WLAN	Inverter: V100R001C00SPC330B121 and above FusionSolar APP: iOS V2.2.4 Android v2.3.5 and above
SUN2000-2/3/4/5KTL-L0	SUN2000P-375W DDSU666-H DTSU666-H 100A/40mA	Built-in WLAN Smart Dongle-4G	Inverter: V100R001C00SPC330B121 and above Dongle: V100R001C00SPC106 and above FusionSolar APP: iOS V2.2.4 Android v2.3.5 and above
SUN2000L-3/4/5KTL-CN	SUN2000P-375W	Built-in WLAN Smart Dongle-4G (1.0 & 2.0)	Inverter: V100R001C00SPC114B069 FusionSolar APP: Android v2.3.5 and above(iOS not support)
SUN2000-3/4/5/6/8/10KTL-M0	DTSU666-H 250A/50mA	Smart Dongle-WLAN-FE Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC105 Dongle:V100R001C00SPC106 FusionSolar APP: Android v2.3.5 and above(iOS not support)
SUN2000-8/10/12/15/17/20KTL-M0	DTSU666-H 250A/50mA	Smart Dongle-WLAN-FE Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC105 Dongle: V100R001C00SPC106 FusionSolar APP: Android v2.3.5 and above(iOS not support)
SUN2000-29.9KTL, 33KTL-A SUN2000-36KTL	NA	Bluetooth Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: Dongle: V100R001C00SPC106 FusionSolar APP: Android v2.3.5 and above(iOS not support)

Inverter	Sub-Component	Communication	Firmware Requirement
SUN2000-50/60KTL-M0	DTSU666-H 250A/50mA	Bluetooth Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC330B121 and above Dongle: V100R001C00SPC106 and above FusionSolar APP: iOS V2.5.1 Android 2.5.6 and above
SUN2000-V3(60–75KTL/1100 V)	DTSU666-H 250A/50mA	Bluetooth Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC330B121 and above Dongle: V100R001C00SPC106 and above FusionSolar APP: iOS V2.5.1 Android 2.5.6 and above
SUN2000-V5 (100–125KTL/1100 V)	DTSU666-H 250A/50mA	Bluetooth Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC330B121 and above Dongle: V100R001C00SPC106 and above FusionSolar APP: iOS V2.5.1 Android 2.5.6 and above
SUN2000-HAV2 (90–105KTL/1500 V)	NA	Bluetooth Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC330B121 and above Dongle: V100R001C00SPC106 and above FusionSolar APP: iOS V2.5.1 Android 2.5.6 and above
SUN2000-HAV3 (160–196KTL/1500 V)	NA	Bluetooth Smart Dongle-4G Smartlogger1000A Smartlogger2000/3000A SmartLogger3000A expansion module	Inverter: V100R001C00SPC330B121 and above Dongle: V100R001C00SPC106 and above FusionSolar APP: iOS V2.5.1 Android 2.5.6 and above

Function List Overview

Function List	Category	Function	WEB	APP
	Homepage	PV Plants List	√	√
		Add Plant	√	√
	Report Management	Plant Report	√	×
		Inverter Report	√	×
		Battery Report	√	×
	Device Management	Device Details	√	√
		O&M Dashboard	√	×
	Intelligent O&M	Alarm Management	√	√
		Task Management	√	√
		Smart IV Curve Diagnosis	√	×
	Dashboard Display	KPI Dashboard	√	×
		Energy Flow	√	√
	Homepage of Single Plant	Plant Layout	√	√
		Kiosk Mode	√	×
	System Setting	Plant Management	√	×
		User Management	√	×
	Demo	Demo Site	√	√

Common Functions for different users



How to add a new PV plant

- By using FusionSolar APP
- By using FusionSolar portal



How to manage PV plants

- Visualization of plant operations (Plant / Device / Module)
- Real-time status
- Historical data
- Report subscription



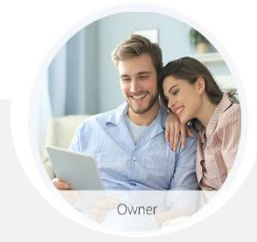
Smart O&M

- Alarm management
- Remote online diagnosis



External publicity

- Demo site
- KPI Dashboard



Visibility of plant operation anytime, anywhere

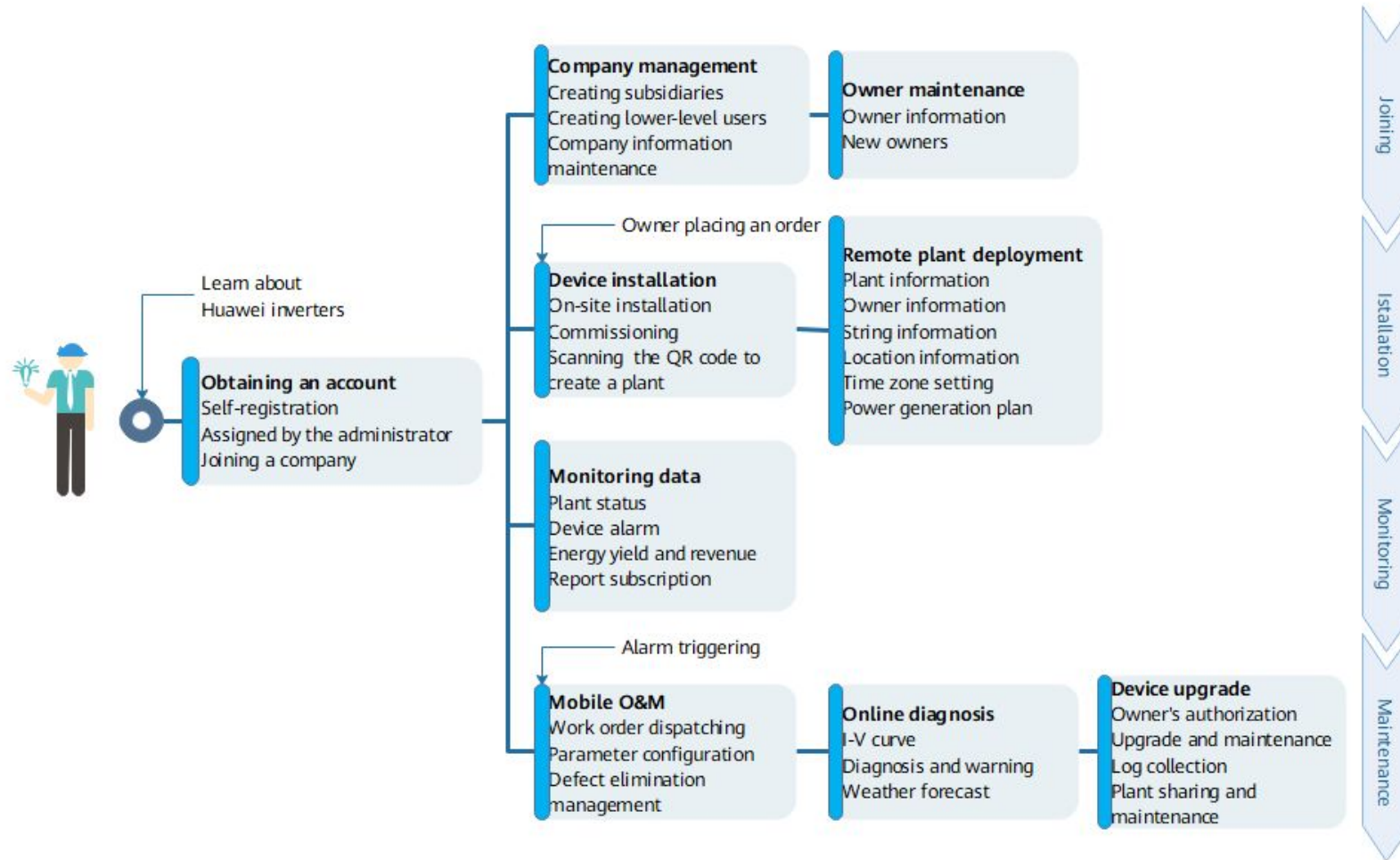
- Real-time energy flow
- Module-level monitoring
- Revenue and social contribution



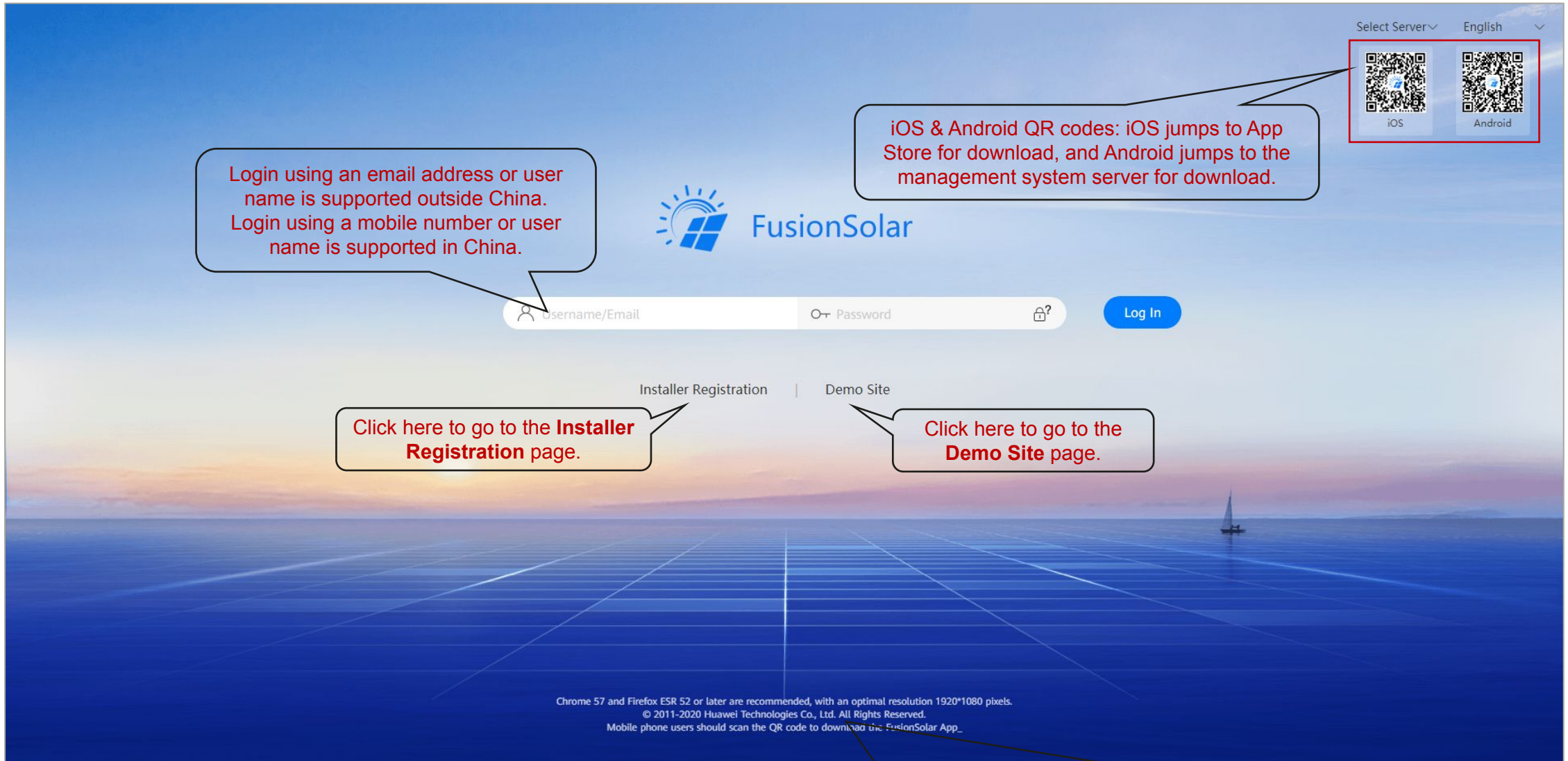
Convenient public sharing

- Kiosk mode

Installer Journey

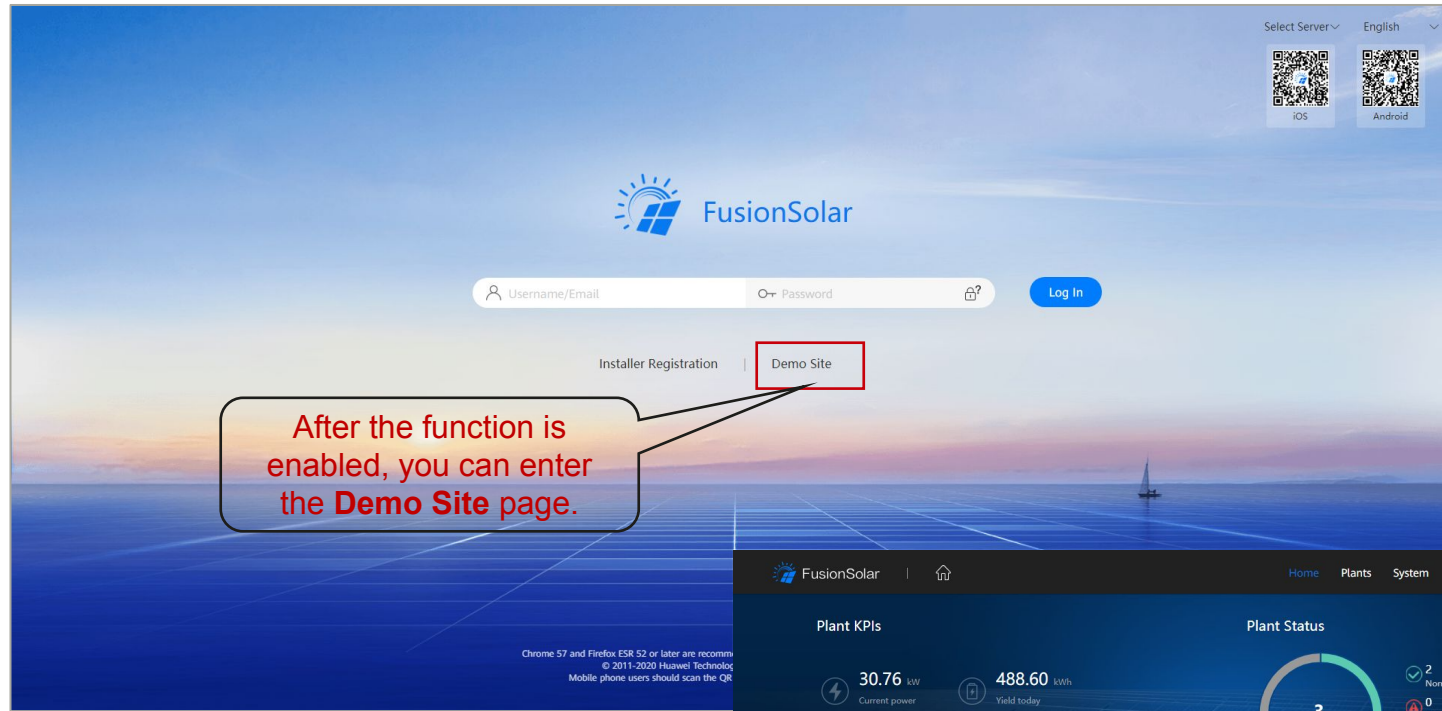


System Login — Using an Account, Email Address, or Mobile Number



Currently, only Chrome and Firefox are supported. It is not officially claimed that Safari and Internet Explorer are supported. However, user experience is hardly affected using Safari and Internet Explorer according to internal tests.

System Login — Demo Site Function

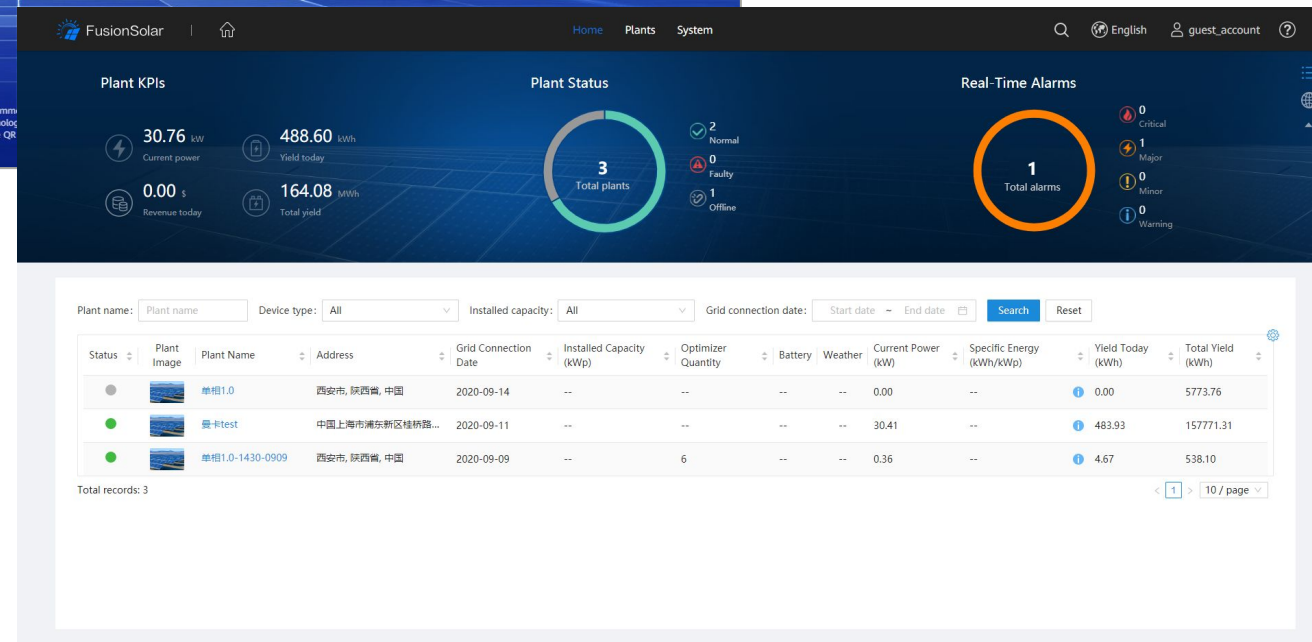


Function overview

- The demo site function allows you to log in to the SmartPVMS as a guest.
- This function aims to promote the benefits of the SmartPVMS to installers and owners, and help them understand the functions of the system by viewing plant information.

Intended users

- Guests



System Login – Installer Registration

FusionSolar

English

Log In

Installer Registration

Note:
If your company has registered an account in the system, you do not need to register again.
Ask your administrator to add you to the user list.

* Company name: zyb-company

* Email:

* Username: zybInstall

* Password:

* Confirm password:

* Email verification code: 992157

Send

☒ I have read and agree to [Terms of Use](#) and [Privacy Policy](#)

Submit

答复 全部答复 转发 即时消息

2020/9/11 (周五) 22:35

Installer registration

收件人 zhangyangbing

Dear zybInstall,

You are registering an account via email. Your verification code: **992157**

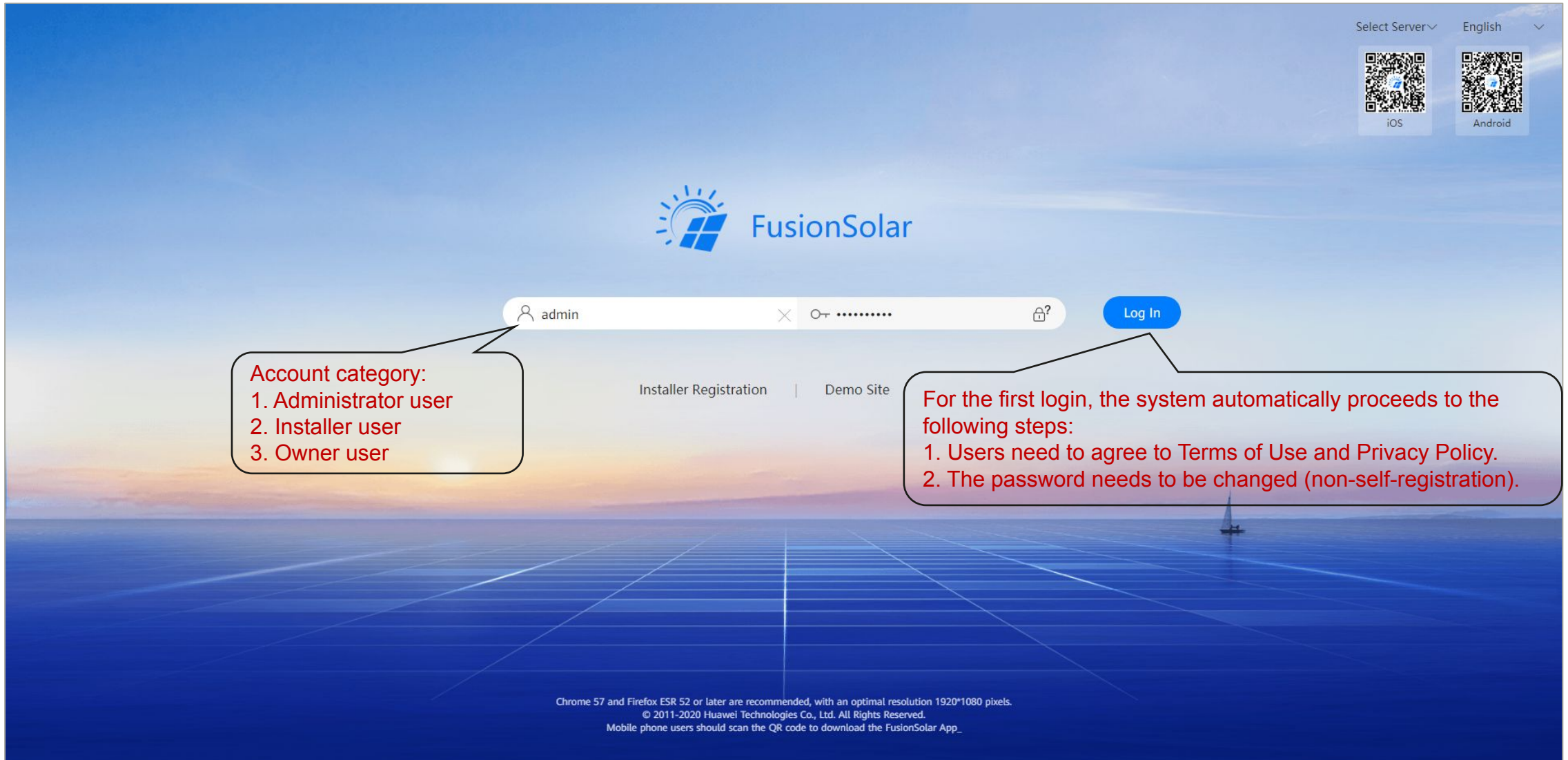
Reminder: The verification code is valid for 5 minutes. Use it before it expires.

The email address is mandatory outside China and the mobile number is mandatory in China.

Obtain a verification code using the email address or mobile number.

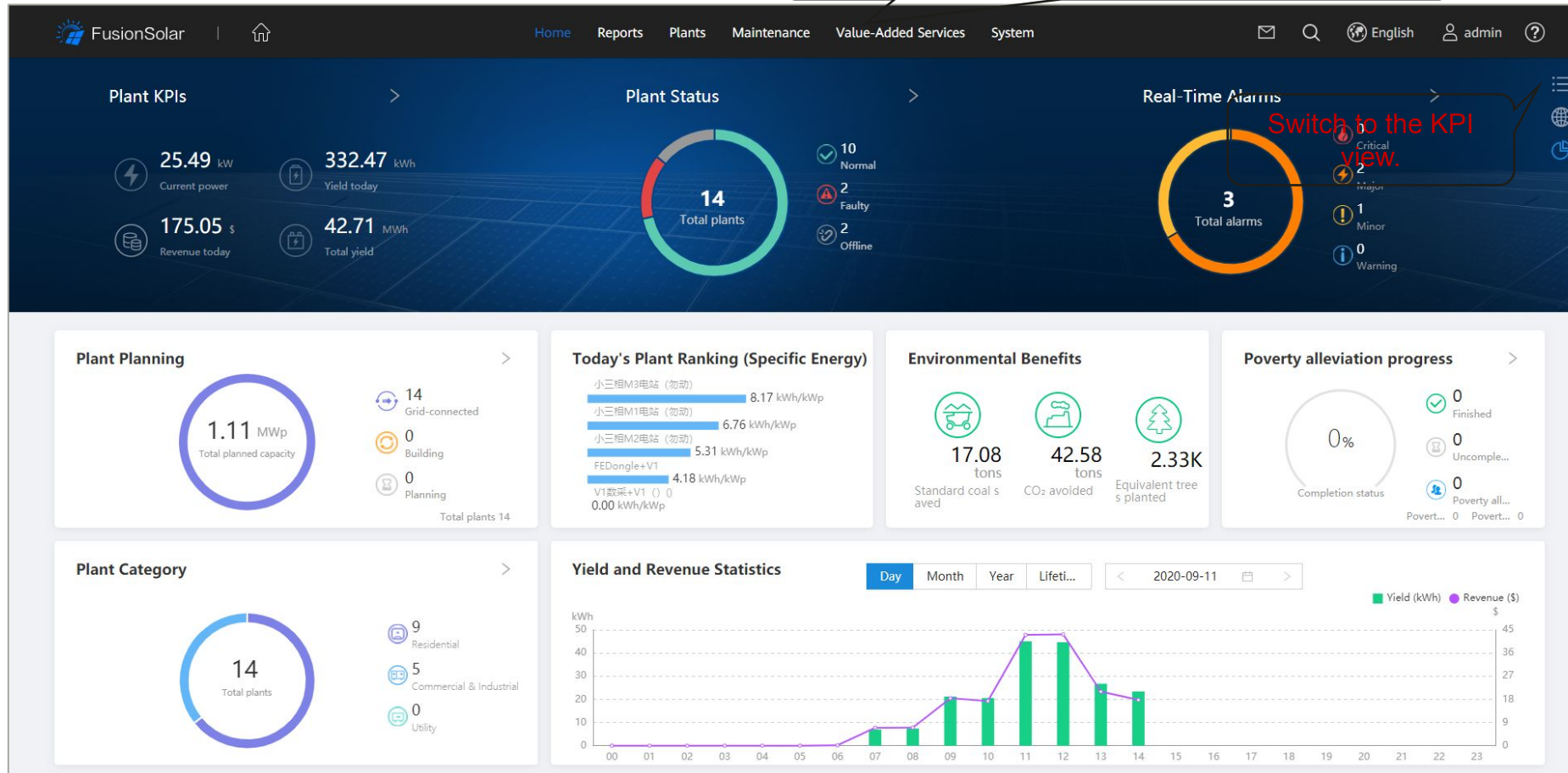
After submission, if the company name exists, the system prompts you to join the company. After you enter the information, the system sends an account application to the administrator (installer) of the level-2 company and the administrator will manually create and allocate an account.

System Login — Using an Account, Email Address, or Mobile Number



Feature Overview — Home Page: KPI View

Note: Poverty alleviation management is available only to customers in the China Region.



Function overview

- The KPI view on the home page displays the plant planning, plant category, today's plant ranking (specific energy), environmental benefits, yield and revenue statistics, and poverty alleviation progress of the plants managed by the current user.
- The KPI view displays key energy yield indicators of the plants managed by the company, facilitating monitoring and management.

Intended users

- Installers

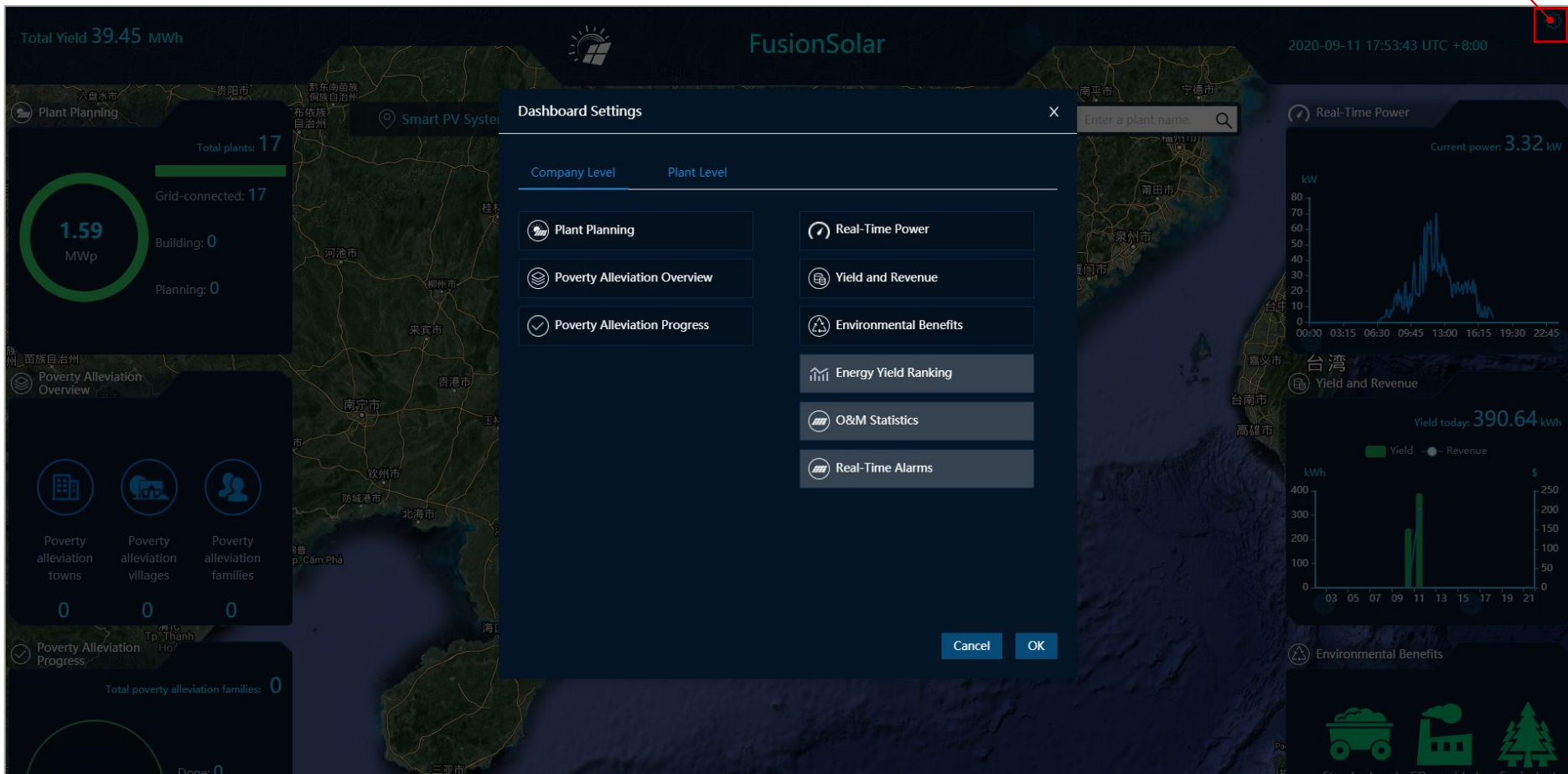
Procedure

- Choose Home > KPI view.
- Alternatively, click  in the upper right corner of the home page.

The poverty alleviation information is visible only to customers in China.

Feature Overview — Home Page: Dashboard

Dashboard
Settings



Function overview

- You can view the company- or plant-level dashboard data of the entire intelligent O&M center.
- By default, the company-level dashboard is displayed. Only six function blocks can be displayed on the dashboard.

Intended users

- Installers

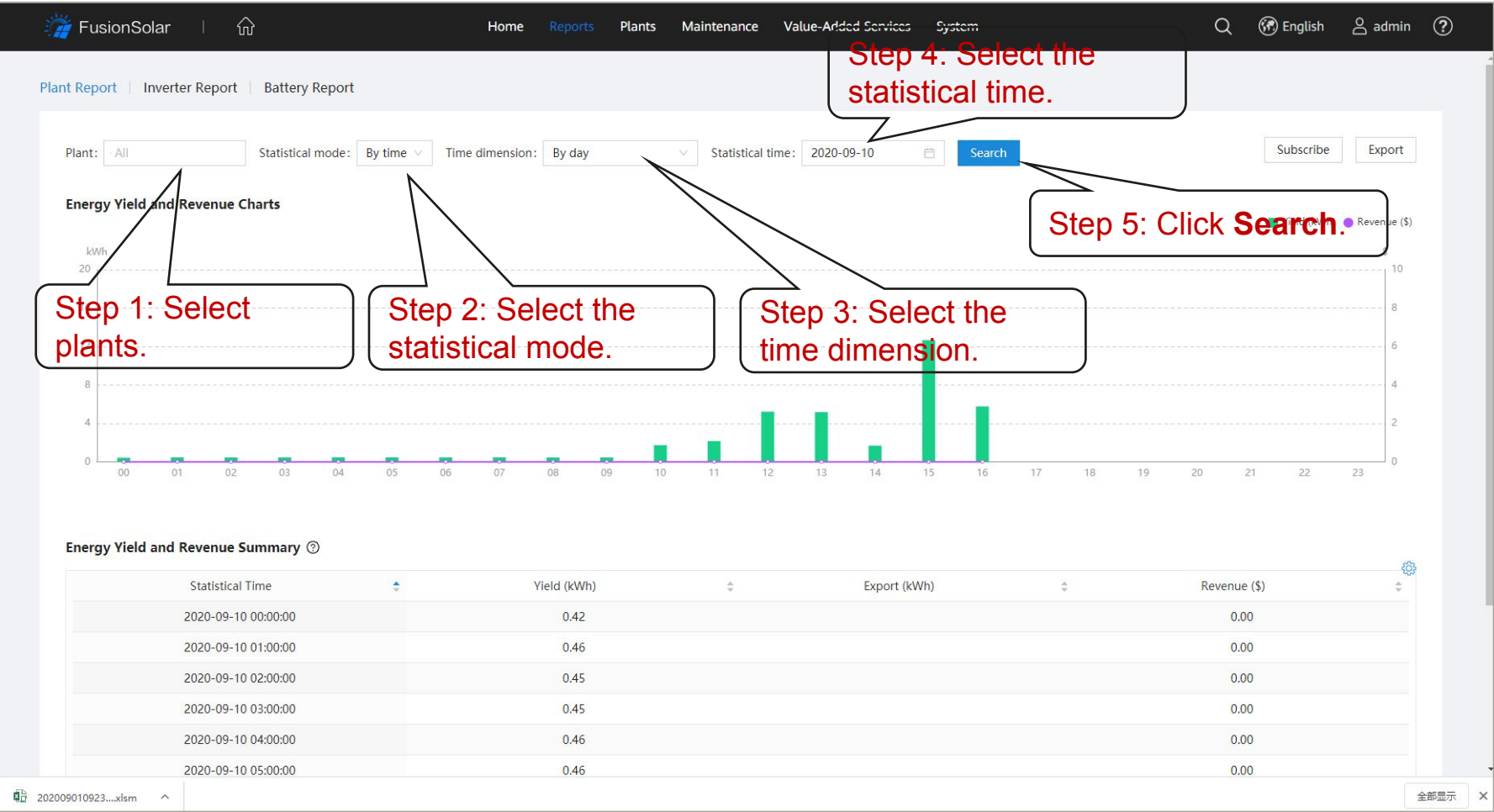
Procedure

- Choose **Home > Dashboard**.
- Step 1: Click the setting button in the upper right corner to customize the display of the dashboard.
- Step 2: Drag the indicators to adjust the sequence. The first six function blocks can be displayed.

Related specifications

- The minimum resolution for dashboard display is 1920 x 1080.

Feature Overview — Reports: Plant Report



Function overview

- Query and view key running data of plants in multiple dimensions, subscribe to reports by email, and export reports.

- Function menu: **Reports > Plant Report**

Intended users

- Installers

Procedure

- Choose **Reports > Plant Report**.
- Step 1: Select plants.
- Step 2: Select the statistical mode: by time/plant.
- Step 3: Select the time dimension: by day/month/year/lifetime.
- Step 4: Select the statistical period.
- Step 5: Click **Search**.

Summary specifications

- Hourly data: Data of the previous hour is summarized at the fifth minute of the next hour. After hourly data summary is complete, the hourly data is summarized to daily, monthly, and yearly data in sequence. Previous hourly data is recovered hour by hour from the current hour of the system. Recovery of all hourly data is completed within 24 hours. The previous daily, monthly, and yearly data is recovered at 02:00 every day.

Feature Overview — Reports: Inverter Report

The screenshot shows the FusionSolar web interface. At the top, there's a navigation bar with 'Home', 'Reports', 'Plants', 'Maintenance', 'Value-Added Services', and 'System'. Below this, a breadcrumb trail shows 'Plant Report' > 'Inverter Report' > 'Battery Report'. The main content area has a filter section with 'Device' set to 'app.huawei2020...', 'Time dimension' set to 'By day', and 'Statistical time' set to '2020-09-10'. A 'Search' button is next to these filters. Below the filters is a table titled 'Inverter Report' with columns: Plant Name, Device Name, Installed Capacity (kWp), Yield (kWh), Total Yield (kWh), Specific Energy (kWh/kWp), Peak AC Power (kW), Grid Connection Duration (h), and Loss Due to Export Limitation (kWh). The table lists 13 records. Four callout boxes with red text and arrows point to specific elements: 'Step 1: Select inverters' points to the 'Device' dropdown; 'Step 2: Select the time dimension.' points to the 'Time dimension' dropdown; 'Step 3: Select the statistical time.' points to the 'Statistical time' date field; and 'Step 4: Click Search.' points to the 'Search' button. At the bottom of the table, it says 'Total records: 13' and there's a pagination control showing '1 / 2' and '10 / page'.

Step 1: Select inverters.

Step 2: Select the time dimension.

Step 3: Select the statistical time.

Step 4: Click Search.

Function overview

- Query and view key running data of inverters by day, month, or year, and subscribe to reports by email and export reports.
- Function menu: **Reports > Inverter Report**

Intended users

- Installers

Procedure

- Choose **Reports > Inverter Report**.
- Step 1: Select inverters.
- Step 2: Select the time dimension: by day/month/year.
- Step 3: Select the statistical period.
- Step 4: Click **Search**.

Feature Overview — Reports: Battery Report

The screenshot shows the FusionSolar web interface for the Battery Report. The top navigation bar includes 'Home', 'Reports', 'Plants', 'Maintenance', 'Value-Added Services', and 'System'. The 'Reports' menu is active. Below the navigation bar, there are tabs for 'Plant Report', 'Inverter Report', and 'Battery Report'. The 'Battery Report' tab is selected. The main content area has a filter section with 'Device' set to 'All', 'Time dimension' set to 'By day', and 'Statistical time' set to '2020-09-10'. A 'Search' button is visible. Below the filter section is a table with the following columns: 'Plant Name', 'Device Name', 'Charge (kWh)', 'Discharge (kWh)', 'Charge Time (h)', 'Discharge Time (h)', and 'Battery SOC (%)'. The table contains one row of data for a device named 'V6-1-2.0-'. The page also shows a 'Subscribe' and 'Export' button. Four numbered steps are highlighted with callouts: Step 1: Select batteries. (points to the Device dropdown), Step 2: Select the time dimension. (points to the Time dimension dropdown), Step 3: Select the statistical time. (points to the Statistical time input field), and Step 4: Click Search. (points to the Search button).

Step 1: Select batteries.

Step 2: Select the time dimension.

Step 3: Select the statistical time.

Step 4: Click Search.

Function overview

- Query and view key running data of batteries by day, month, or year, and subscribe to reports by email and export reports.
- Function menu: **Reports > Battery Report**

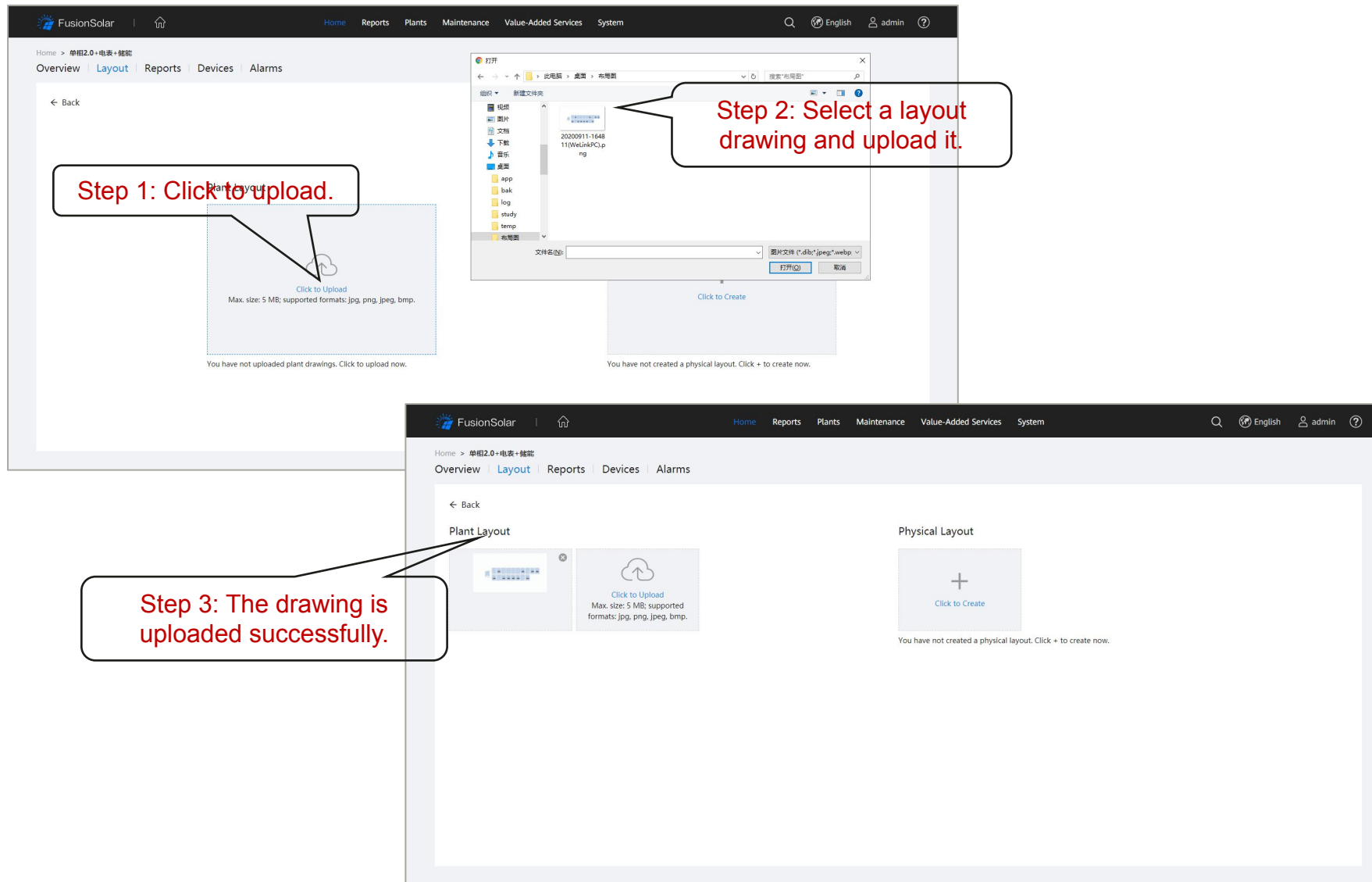
Intended users

- Installers

Procedure

- Choose **Reports > Battery Report**.
- Step 1: Select batteries.
- Step 2: Select the time dimension: by day/month/year.
- Step 3: Select the statistical period.
- Step 4: Click **Search**.

Feature Overview — Single Plant: Layout — Uploading a Plant Layout Drawing



Function overview

- The **Layout** tab page is used to draw a plant layout and associate it with real devices so that the system can remotely monitor the plant devices. You can upload a plant drawing or create a physical layout.

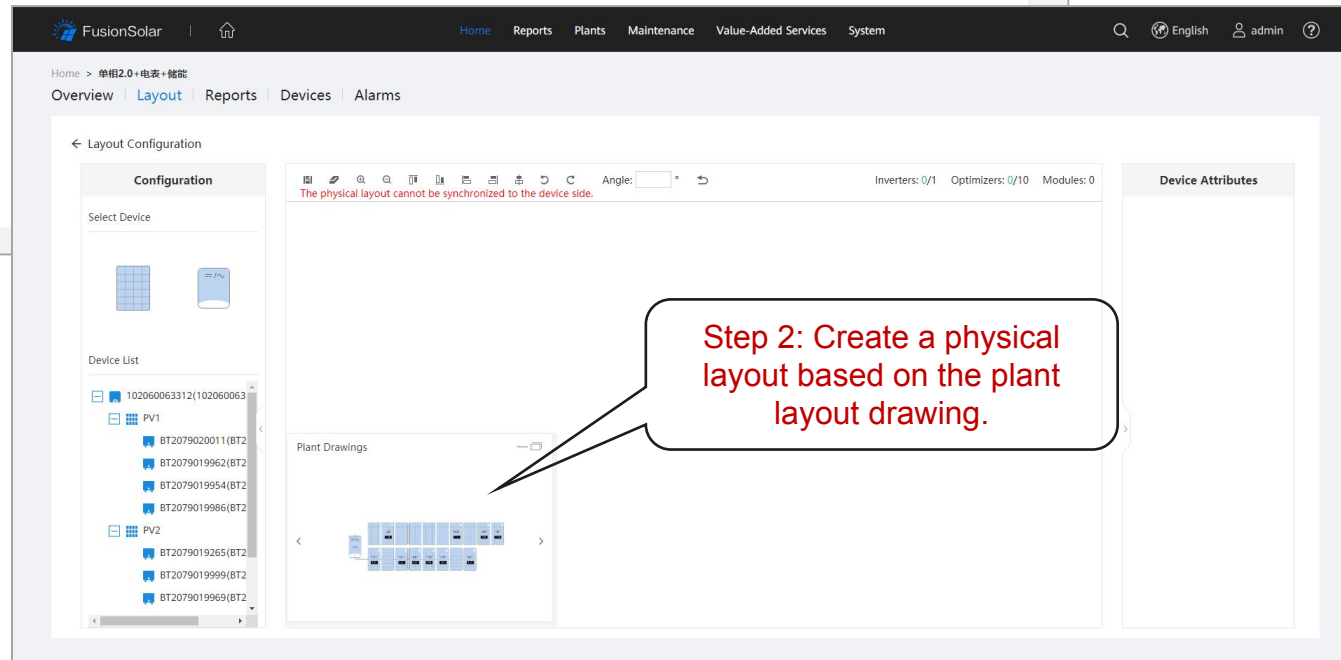
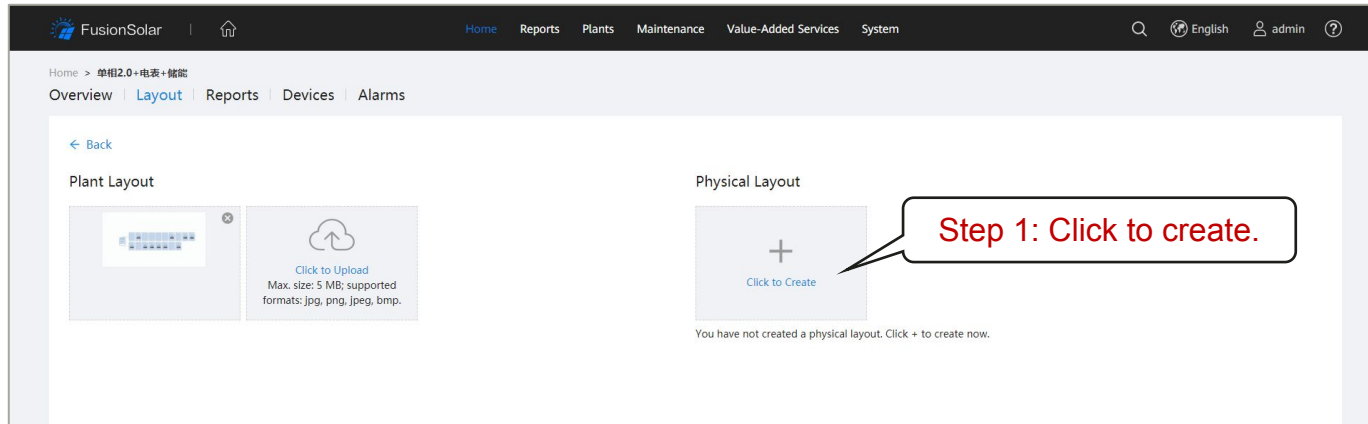
Intended users

- Installers

Procedure

- Choose **Home > List View**, and click a plant in the plant list to enter the single plant page. Click the **Layout** tab.
- Step 1: Click to upload the plant layout drawing.
- Step 2: Select a plant layout drawing to be uploaded.
- Step 3: A message is displayed, indicating that the upload is successful.

Feature Overview — Single Plant: Layout — Creating a Physical Layout



Function overview

- The **Layout** tab page is used to draw a plant layout and associate it with real devices so that the system can remotely monitor the plant devices. You can upload a plant drawing or create a physical layout.

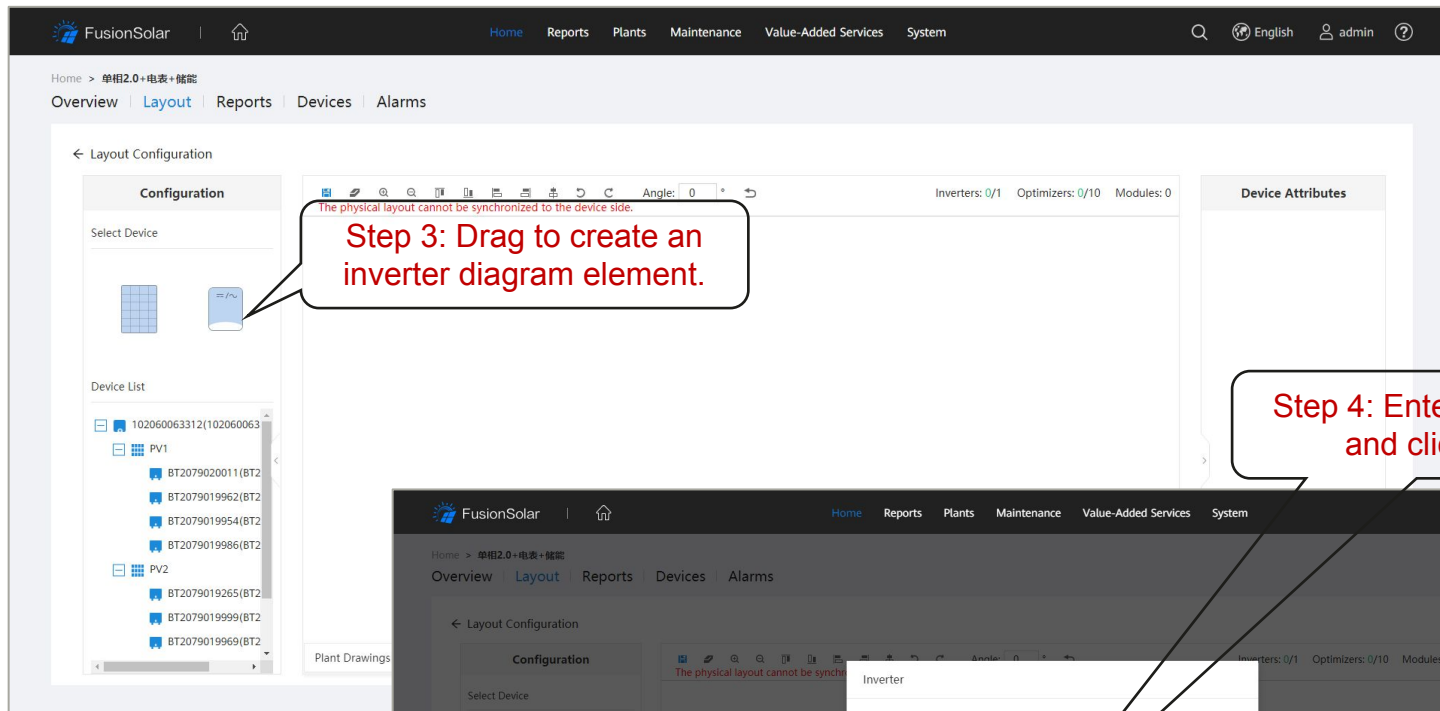
Intended users

- Installers

Procedure

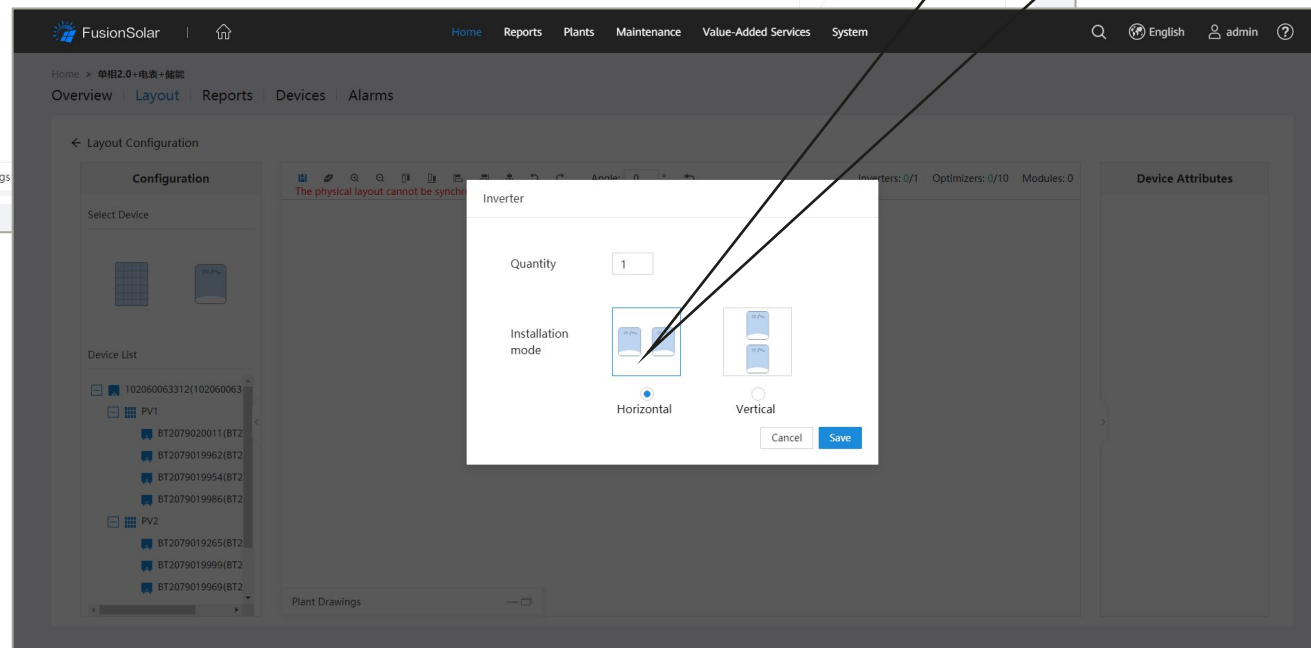
- Step 1: Click **+** to create a physical layout.
- Step 2: Select a plant layout drawing to be uploaded.
- Step 3: Drag to create an inverter diagram element.
- Step 4: Enter the quantity and click **Save**.
- Step 5: Drag the inverter SN to the diagram element to associate the SN with the inverter.
- Step 6: Drag the module diagram element, enter the quantity, and click **Save**.
- Step 7: Drag the optimizer SN to the diagram element to associate the SN with the optimizer.

Feature Overview — Single Plant: Layout — Creating a Physical Layout



Step 3: Drag to create an inverter diagram element.

Step 4: Enter the quantity and click **Save**.



Function overview

- The **Layout** tab page is used to draw a plant layout and associate it with real devices so that the system can remotely monitor the plant devices. You can upload a plant drawing or create a physical layout.

Intended users

- Installers

Procedure

- Step 1: Click **+** to create a physical layout.
- Step 2: Select a plant layout drawing to be uploaded.
- Step 3: Drag to create an inverter diagram element.
- Step 4: Enter the quantity and click **Save**.
- Step 5: Drag the inverter SN to the diagram element to associate the SN with the inverter.
- Step 6: Drag the module diagram element, enter the quantity, and click **Save**.
- Step 7: Drag the optimizer SN to the diagram element to associate the SN with the optimizer.

Feature Overview — Single Plant: Layout — Creating a Physical Layout

Function overview

- The **Layout** tab page is used to draw a plant layout and associate it with real devices so that the system can remotely monitor the plant devices. You can upload a plant drawing or create a physical layout.

Intended users

- Installers

Procedure

- Step 1: Click **+** to create a physical layout.
- Step 2: Select a plant layout drawing to be uploaded.
- Step 3: Drag to create an inverter diagram element.
- Step 4: Enter the quantity and click **Save**.
- Step 5: Drag the inverter SN to the diagram element to associate the SN with the inverter.
- Step 6: Drag the module diagram element, enter the quantity, and click **Save**.
- Step 7: Drag the optimizer SN to the diagram element to associate the SN with the optimizer.

Feature Overview — Single Plant: Layout — Creating a Physical Layout

The screenshots show the FusionSolar web interface. The top screenshot shows the 'Layout' tab with a grid of diagram elements. A callout box points to the grid with the text: "Step 7: Drag the optimizer SN to the diagram element to associate the SN with the optimizer." The bottom screenshot shows the same interface with an inverter and a module added to the grid. A callout box points to the 'Save' button with the text: "Step 8: Click to save the layout." The interface includes a 'Configuration' sidebar with a 'Select Device' section and a 'Device List' section. The 'Device List' shows a list of devices with their SNs and quantities. The 'Configuration' section shows a grid of diagram elements. The 'Layout' tab shows a grid of diagram elements. The 'Device Attributes' section is on the right.

Function overview

- The **Layout** tab page is used to draw a plant layout and associate it with real devices so that the system can remotely monitor the plant devices. You can upload a plant drawing or create a physical layout.

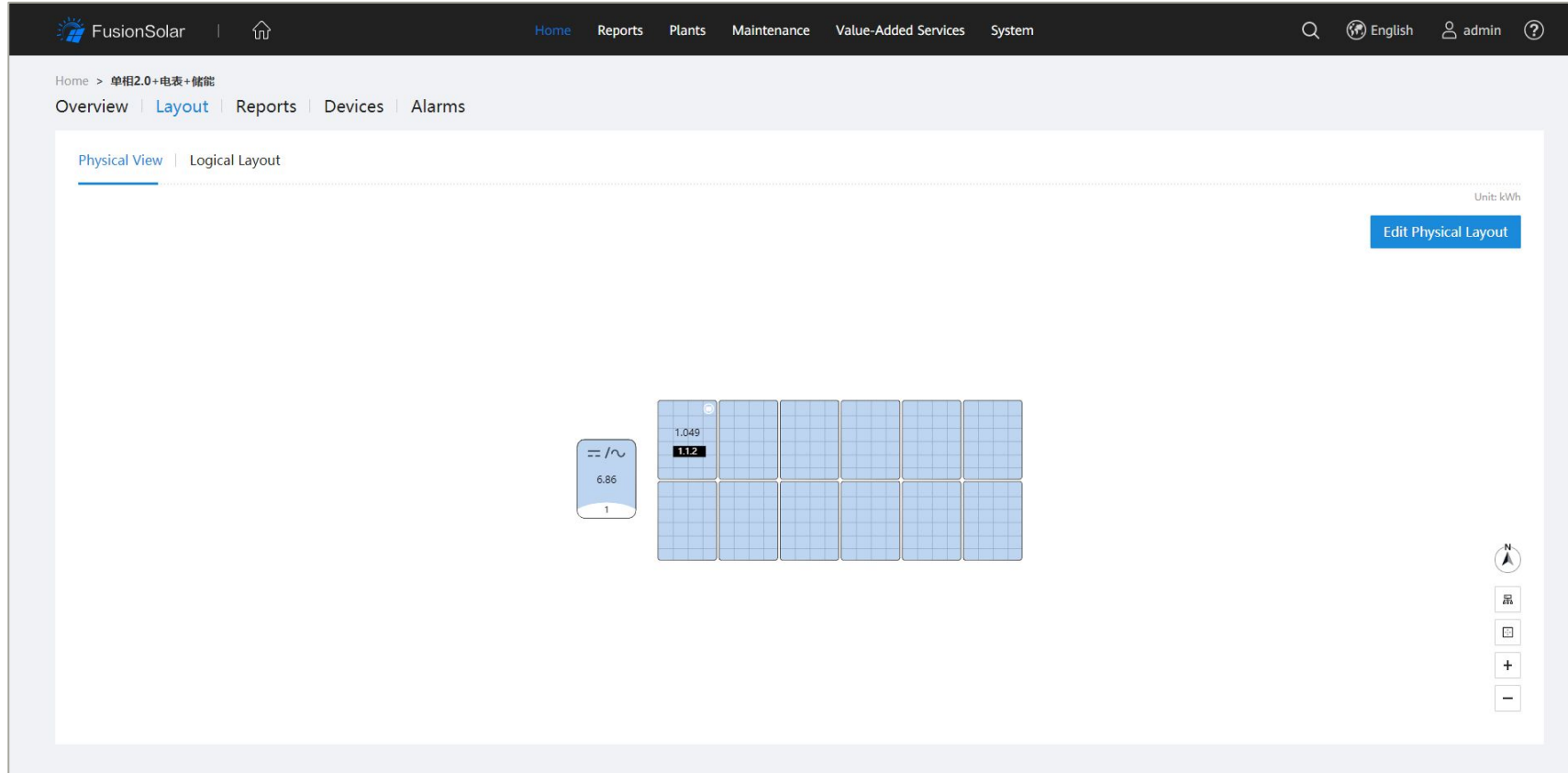
Intended users

- Installers

Procedure

- Step 1: Click **+** to create a physical layout.
- Step 2: Select a plant layout drawing to be uploaded.
- Step 3: Drag to create an inverter diagram element.
- Step 4: Enter the quantity and click **Save**.
- Step 5: Drag the inverter SN to the diagram element to associate the SN with the inverter.
- Step 6: Drag the module diagram element, enter the quantity, and click **Save**.
- Step 7: Drag the optimizer SN to the diagram element to associate the SN with the optimizer.
- Step 8: Click to save the layout.

Feature Overview — Single Plant: Layout — Creating a Physical Layout



Function overview

- The **Layout** tab page is used to draw a plant layout and associate it with real devices so that the system can remotely monitor the plant devices. You can upload a plant drawing or create a physical layout.

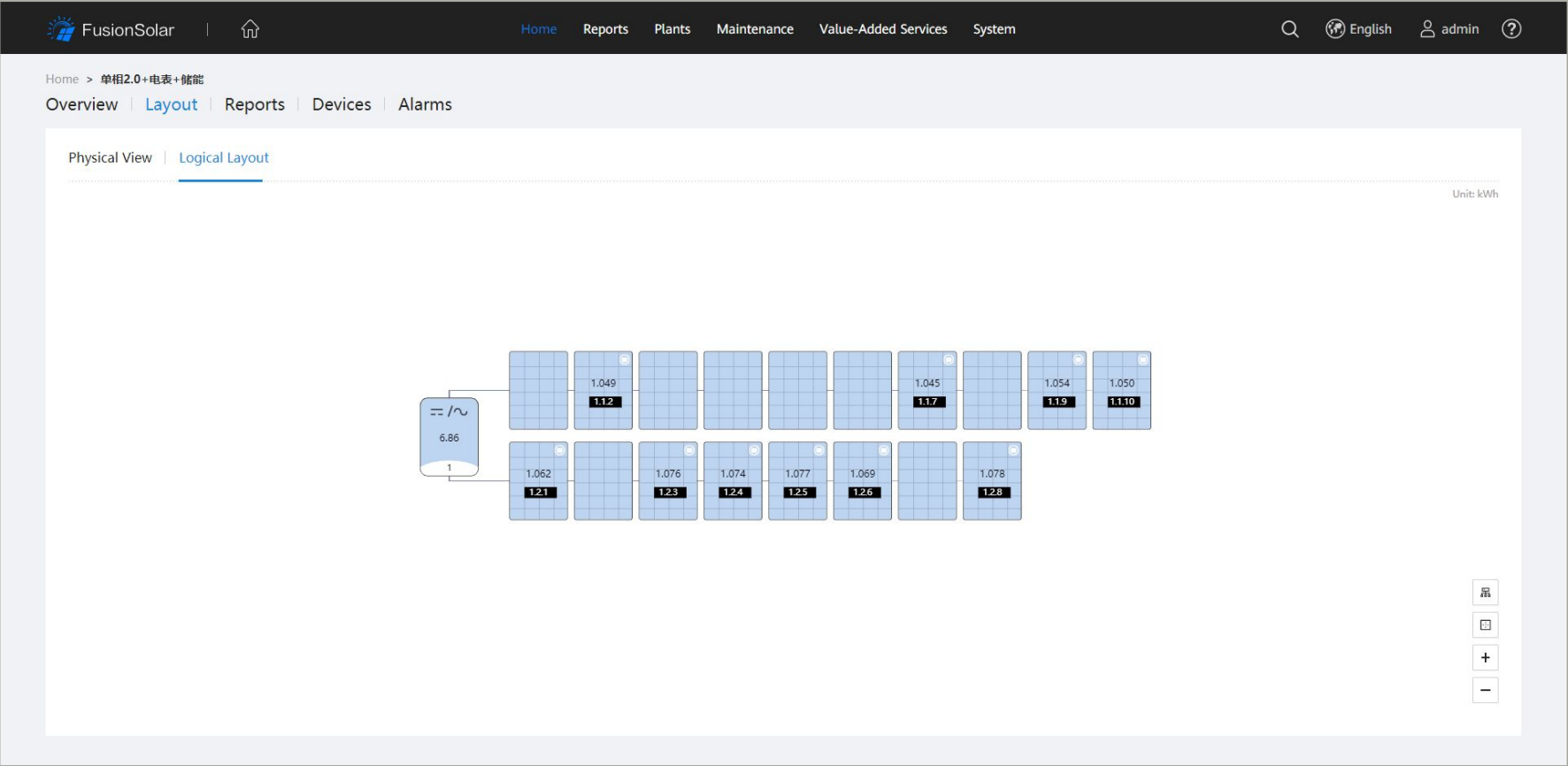
Intended users

- Installers

Procedure

- Step 1: Click **+** to create a physical layout.
- Step 2: Select a plant layout drawing to be uploaded.
- Step 3: Drag to create an inverter diagram element.
- Step 4: Enter the quantity and click **Save**.
- Step 5: Drag the inverter SN to the diagram element to associate the SN with the inverter.
- Step 6: Drag the module diagram element, enter the quantity, and click **Save**.
- Step 7: Drag the optimizer SN to the diagram element to associate the SN with the optimizer.
- Step 8: Click to save the layout.

Feature Overview — Single Plant: Layout — Logical Layout



Function overview

- The logical view displays the logical access status of PV modules, which is automatically generated by the system based on the optimizer number and position.

Intended users

Procedure

Choose **Home > List View**, and click a plant in the plant list to enter the single plant page. Click the **Layout** tab and click the **Logical Layout** tab.

Feature Overview — Plant: Default Electricity Prices

FusionSolar | Home Reports Plants Maintenance Value-Added Services System

Plants

Plant Management

Default Electricity Prices

Plan Management

Feed-in Tariff Purchase Price

1 Add

Date range: 01-01 - 07-09 **2** + -

Start time: 00:00:00	End time: 17:00:00	Price: 0.8	CNY/kWh	Delete
Start time: 17:00:00	End time: 24:00:00	Price: 0.9	CNY/kWh	Delete

Date range: 07-10 - 12-31 **2** + -

Start time: 00:00:00	End time: 24:00:00	Price: 0.7	CNY/kWh	Delete
----------------------	--------------------	------------	---------	--------

Save

Function overview

- The time-of-use electricity price capability is provided to calculate the revenue based on different electricity prices in different time segments, making the revenue calculation more accurate.

Intended users

- Installers

Procedure

- Choose **Plant > Default Electricity Prices**.
- The installer can configure the default electricity prices of the company.
- Step 1: Click **Add** to add a date segment. The date segments must be from 01-01 to 12-31, that is, 366 days.
- Step 2: Click **+** to add an hour segment. The hour segments must be from 00:00 to 24:00.
- Step 3: Set the feed-in tariff and purchase price separately.
- Step 4: When creating a PV plant, you can use the default electricity prices of the company.

Feature Overview — Plant: Plan Management

FusionSolar | Home Reports **Plants** Maintenance Value-Added Services System

Plant: All Plan type: Year: 2020 Search Reset

Add Delete Import Export

☐	Plant Name	Year	Plan Type	Remarks	Operation
☐	Dongle+ V1	2020	Energy yield plan	Energy yield plan for Dongle V1	
☐	Residential Inverter				

Total records: 2

Modify Plan

Basic Info

Plant: Residential Inverter ①

Year: 2020 ②

Plan type: Energy yield plan ③

Remarks: Plan for Residential Inverter

Plan Details (Unit: kWh)

January	February	March	April	May	June
1.00 ④	1.20	1.30	1.50	1.70	1.80
July	August	September	October	November	December
2.00	2.30	2.30	2.00	1.50	0.80
Total: 19.40					

Cancel OK

Function overview

- This function helps users manage the annual energy yield plan, plan the annual energy yield of plants, and determine whether to connect the plants to the power grid or purchase electricity.

Intended users

Procedure

- Choose **Plants** > **Plan Management**.
- Step 1: Select plants.
- Step 2: Select the plan year.
- Step 3: Select the plan type. Note: Currently, only **Energy yield plan** is supported.
- Step 4: Make energy yield plans by month.
- Step 5: After the planned energy yield is set, you can query and compare the planned yield and plan completion rate when querying the plant report by year on the **Plant Report** page.

Feature Overview — Device: Device Management

The screenshot displays the FusionSolar web interface for Device Management. The left sidebar shows the navigation menu with 'Device' selected. The main area shows a list of devices with columns for Communication Status, Device Name, Plant Name, Device Type, and Software Version. A red callout box labeled 'Step 1: Select a device.' points to the 'Smart PV System' folder in the left sidebar. Another red callout box labeled 'Step 2: Click to set parameters.' points to the 'Set Parameters' button above the device list. A third red callout box labeled 'Step 3: Set parameters.' points to the 'Parameter Settings (SUN2000)' dialog box, which is open and shows various configuration options like Insulation resistance protection, Unbalance voltage protection, and Phase angle offset protection. A fourth red callout box labeled 'Step 4: Click Set.' points to the 'Set' button at the bottom of the dialog box.

Device Management

Adapter Management

Device Access

Upgrade Management

Device Log Export

Enter keywords

Device type: All Device name: SN: Search

Set Parameters Delete Export Basic Info Export Performance Data

Communication Status	Device Name	Plant Name	Device Type	Software Version
☐	AM0020190618FXC6	曼卡Test	SmartLogger1000A	V300R001C00SPC040
☐	EM0020190618FXC6	曼卡Test	EMI	V100R001C01EDI001
☒	AM0020190618FXC6	曼卡Test	Grid meter	V100R001C01AM001
☐	INV_2000V2R2C00_0006	曼卡Test	String inverter	V200R002C00SPC113
☐	INV_2000V2R2C00_0149	曼卡Test	String inverter	V200R002C00SPC113
☐	INV_2000V2R2C00_0032	曼卡Test	String inverter	V200R002C00SPC113
☐	INV_2000V2R2C00_0056	曼卡Test	String inverter	V200R002C00SPC113
☐	INV_2000V2R2C00_0055	曼卡Test	String inverter	V200R002C00SPC113

Parameter Settings (SUN2000)

Device Information

Grid Parameter

Protection Parameter

Power Adjustment

Insulation resistance protection (MQ): 0.100 Parameter value range:[0.033~1.500]

Unbalance voltage protection (%): 20.0 Parameter value range:[0.0~50.0]

Phase angle offset protection: Disable

Level-1 OV protection (V): 0.0 Parameter value range:[230.0~312.8]

Level-1 OV protection time (ms): Parameter value range:[50~7200000]

Level-2 OV protection (V): 0.0 Parameter value range:[230.0~312.8]

Set Update Cancel

Function overview

- To manage all types of devices in a centralized manner, including setting parameters, deleting devices, and exporting basic information and performance data.

Intended users

- Installers

Procedure

- Step 1: Select a device.
- Step 2: Click **Set Parameters**.
- Step 3: Set parameters.
- Step 4: Click **Set**.
- Note: Parameter settings affect device running. Therefore, set the parameters under the guidance of professional personnel.

Step 4: Click **Set**.

Feature Overview — Device: Parameter Settings

Parameter Settings (SUN2000-6KTL-L1)

Device Information

Grid Parameter

Protection Parameter

Feature Parameter

Power Adjustment

Time Zone Parameter

Grid code:

Australia-AS4777

Output mode:

L/N

Automatic startup upon grid recovery:

Enable

On-grid recovery time (s):

60

Grid reconnection voltage upper limit (V):

253.0

Grid reconnection voltage lower limit (V):

205.0

Parameter value range:[0~7200]

Parameter value range:[230.0~312.8]

Parameter value range:[103.5~230.0]

Set

Update

Cancel

Function overview

- Users can remotely modify device configuration parameters and set parameters for multiple devices in batches (to be implemented).
- Parameters can be displayed in groups, facilitating quick filtering.

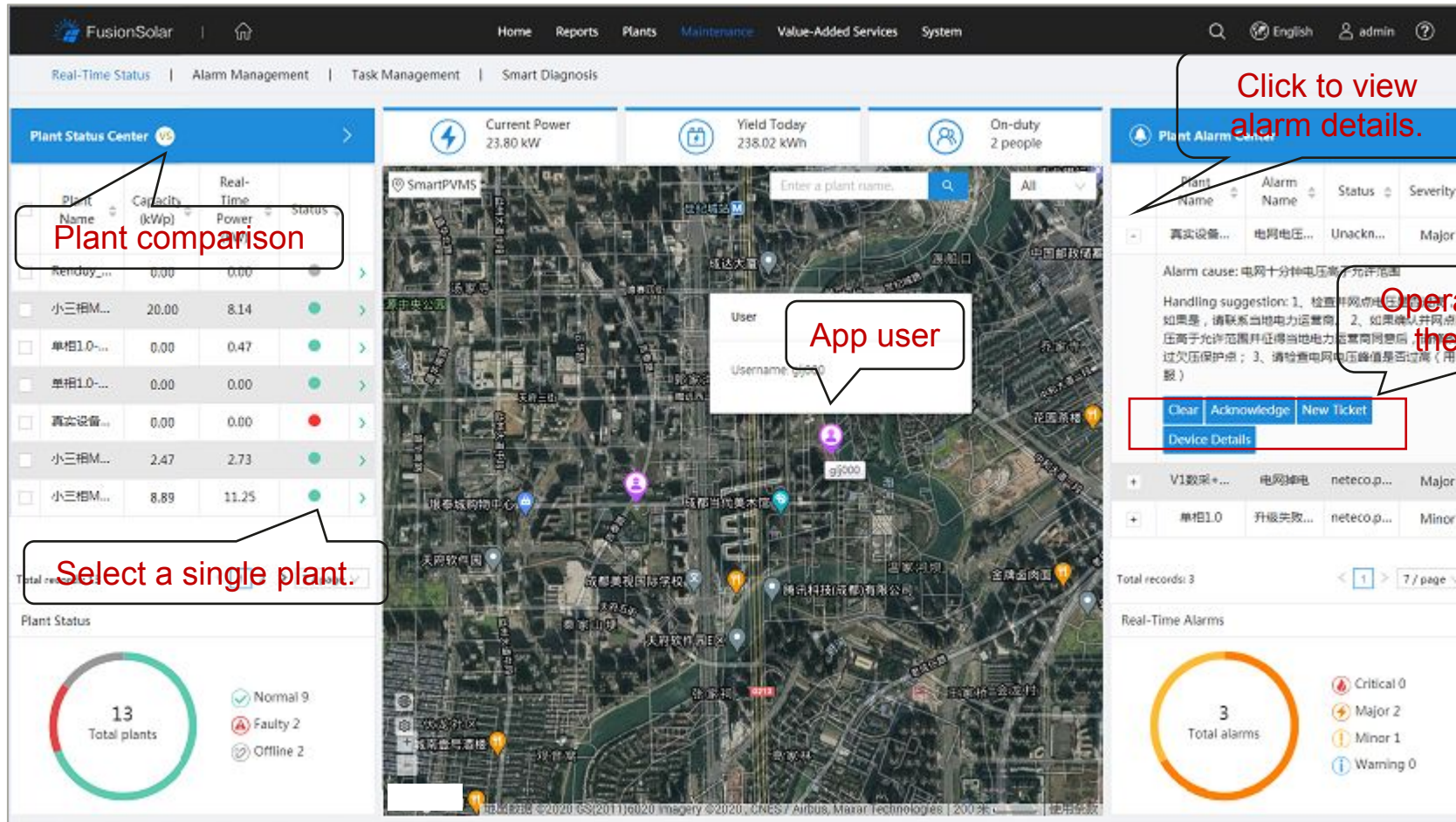
Intended users

- Installers

Procedure

- Choose **Plants > Device > Device Management**.
- Step 1: Select a device and click the **Set Parameters** button. The **Parameter Settings** dialog box is displayed.
- Step 2: Parameters in the **Device Information** group are displayed by default, including the device model, protocol version, and software version. In addition, the function of changing the authentication password is provided.
- Step 3: Select a group and set parameters as required. A dialog box is displayed indicating whether the modification is successful.

Feature Overview — Maintenance: Real-Time Status



Function overview

- The **Real-Time Status** page provides information about plant status, plant location, app user location, and plant alarm so that O&M personnel can learn the plant running status in real time, identify problems, and take corresponding measures.

- The following functions are provided:

- ✓ Plant status center
- ✓ Plant comparison
- ✓ Plant alarm center
- ✓ New ticket

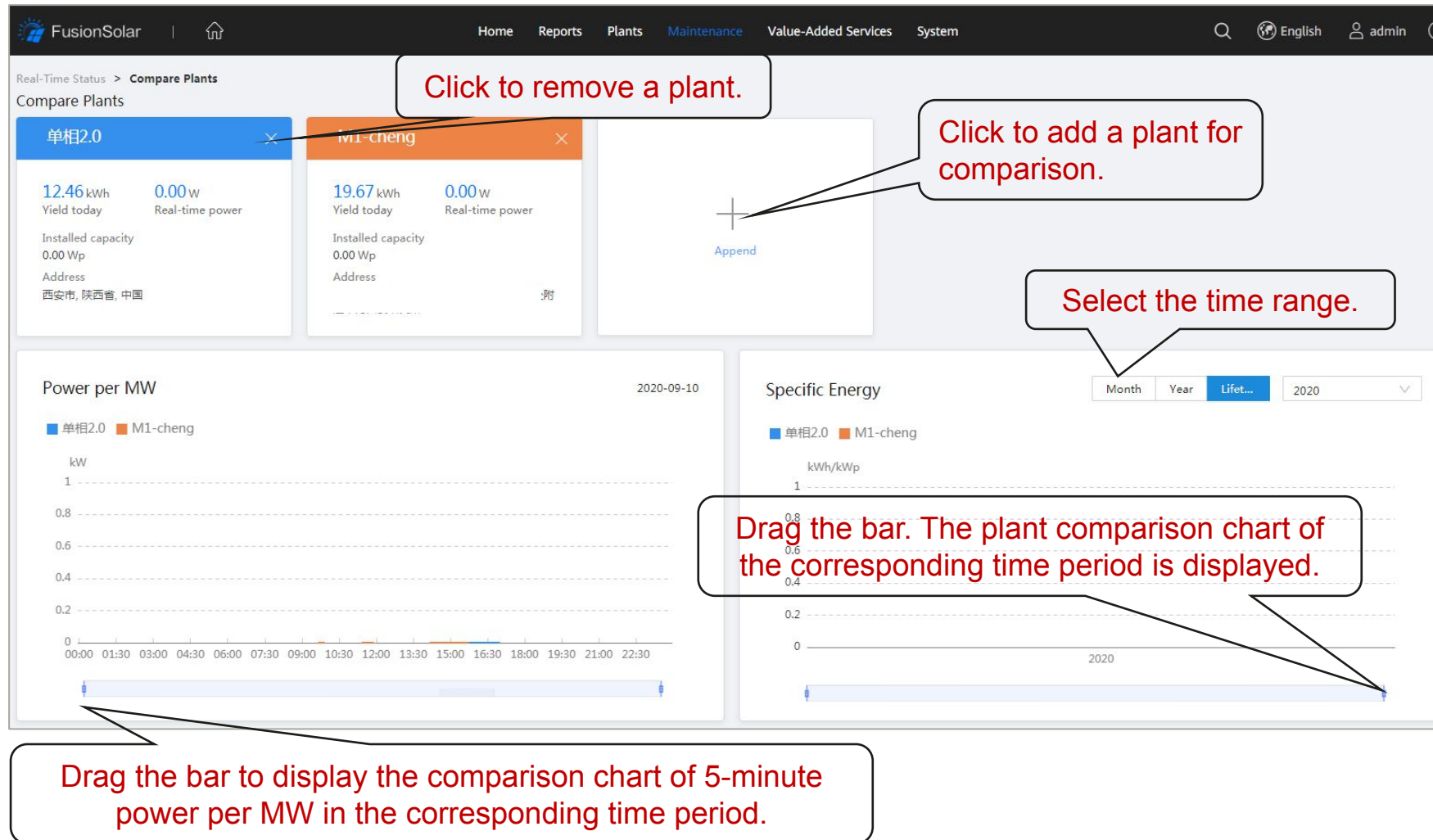
Intended users

- Installers

Procedure

CHOOSE Maintenance > Real-Time Status.

Feature Overview — Maintenance: Compare Plants



Function overview

- The plant comparison function allows you to view the comparison charts of power per MW and specific energy of the selected plants. You can determine the energy yield efficiency of a plant by comparing it with other plants.

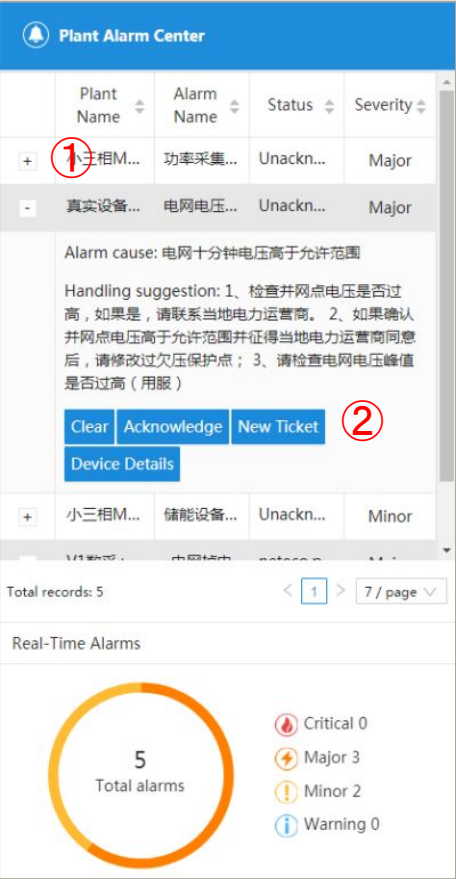
Intended users

Installers

Procedure

- Choose **Maintenance > Real-Time Status > Plant Status Center > Compare Plants**.
- Step 1: Select plants for comparison.
- Step 2: Select the time range for specific energy.
- Step 3: Drag the bars. The plant comparison charts of the corresponding time periods are displayed.

Feature Overview — Maintenance: New Ticket



The screenshot shows the 'New Ticket' form. It has fields for Device name, Plant name, Device type, and Device model. There's a 'File' upload button with a red circle 3. Below that is a 'Defect description' text area with a red circle 4. Then there's an 'Owner' field with a red circle 5. Below that is an 'Operation' dropdown set to 'Submit'. Then there's a 'Handling suggestion' text area with a red circle 6. At the bottom, there are 'Cancel' and 'Submit' buttons with a red circle 7.

Fields: Device name (210107296610F800001), Plant name (真实设备119.200), Device type (SUN2000), Device model (V200R001C90SPC117)

File: Select File to Upload (3)

Defect description (4)

Owner (5)

Operation: Submit

Handling suggestion (6)

Buttons: Cancel, Submit (7)

Function overview

- A new ticket can be created for an alarm in the system and O&M personnel can be specified to rectify the defect.

Intended users

- Installers

Procedure

- Installers
- Choose **Maintenance > Real-Time Status > Plant Alarm Center**.
- Step 1: Click + to view the alarm details.
- Step 2: Click the **New Ticket** button.
- Step 3 (Optional) Upload a file.
- Step 4: Enter the defect description.
- Step 5: Designate the owner.
- Step 6: Enter the handling suggestion.
- Step 7: Submit the ticket.

Feature Overview — Maintenance: Inspection

Real-Time Status | Alarm Management | Task Management | Smart Diagnosis

Task Management

Inspection

Task List

Plant List

Defect Elimination

Plant name:

Last inspected:

Start date ~ End date

Search

Reset

4

1

Add

Set Inspection Items

	Plant Name	Last Inspected	Last Inspection Result	Last Inspected By	Inspection Times	Days Since Last Inspection
+	小三相M3电...			--	0	--

Set Inspection Items

Inspection item name:

Search

Reset

3

Add

Modify

Download Template

Delete

Import

Export

Smart PV System

App

成都IOS

上海

新设备联调公司

小三相M1电站 (勿动)

小三相M2电站 (勿动)

小三相M3电站 (勿动)

☐	Icon	Inspection Item Name	Inspection Description	Creation Time
☐		Cable	Check whether...	2020-09-10 21:31:49
☐		Combiner box	Check whether...	2020-09-10 21:31:49
☐		Data collector	Check whether...	2020-09-10 21:31:49
☐		Data transmis...	Check whether...	2020-09-10 21:31:49
☐		Distribution b...	Check whether...	2020-09-10 21:31:49
☐		Inverter	Check whether...	2020-09-10 21:31:49
☐		Meter	Check whether...	2020-09-10 21:31:49
☐		Module	Check whether...	2020-09-10 21:31:49
☐		Monitoring s...	Check whether...	2020-09-10 21:31:49
☐		Rack	Check whether...	2020-09-10 21:31:49

Organizational Structure

Smart PV System

App

成都IOS

上海

新设备联调公司

Plant name:

Search

Reset

7

* Task name:

Description:

8

☐	Plant Name	Last Inspected
☒	Renduy_3M	--
☐	test	--
☐	Adfa	--

Total records: 3

1

9

page

Cancel

OK

Function overview

- This function is used for adding an inspection task.

Intended users

- Installers

Procedure

- Preset Inspection Items:**
- Step 1: Choose **Inspection > Task List** and click **Set Inspection Items**.
- Step 2: Select plants.
- Step 3: Set inspection items.
- Start the inspection:**
- Step 4: Add an inspection task.
- Step 5: Select a company.
- Step 6: Select plants.
- Step 7: Enter the task name.
- Step 8: Enter the task description.
- Step 9: Click **Submit** to submit the task.

Feature Overview — Maintenance: Inspection

Real-Time Status

Alarm Management

Task Management

Smart Diagnosis

Task Management

Inspection

Task List

Plant List

Defect Elimination

Task name:

Start Time: Start date ~ End date

Task status: All

Search

Reset

Add

Set Inspection Items

Set Handlers

	Task Name	Start Time	Completion Time	Task Status	Current Handler	Abnormal Items	Operation
+	Inverter Inspection	2020-09-11 10:07:22	--	Inspection in progress	jiangfigo	2	Details
-	Inverter in...	2020-09-11 09:48:00	--	To be assigned	admin	0	Execute

Plant Name

Inspection Result

Completion Time

Abnormal Items

小三相M1...	To be assi...	--	0
----------	---------------	----	---

Inspection task workflow processing

Inspection task flowchart

Inspection report

Function overview

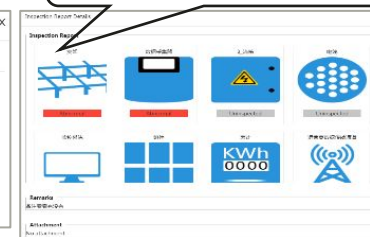
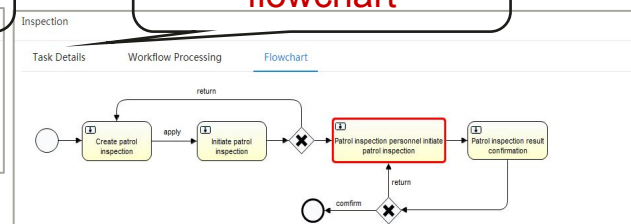
- The inspection management function is used to record, process, and track the inspection progress.
- View task details.
- View the plant inspection status.

Intended users

- Installers

Procedure

- Step 1: Choose **Inspection** > **Task List** to view inspection task details.
- Step 2: Choose **Inspection** > **Task List** to execute inspection tasks
- Step 3, Choose **Inspection** > **Plant List** to view plant inspection information.



Feature Overview — Maintenance: Defect Elimination

Task Management

Inspection

Task List

Plant List

Defect Elimination

To Be Dispatched

0

Total: 0

In Elimination

2

Total: 6

To Be Approved

0

Total: 1

Eliminated Today

0

Total: 0

Plant name:

Process status:

All

Result:

All

Start Time:

Start date

End date

Search

Reset

Add

Copy

Set Handlers

	Plant Name	Device Name	Alarm Name	Defect Description	Process Status	Current Handler	Start Time	Completion Time	Result	Operation
☐	FEDongl...	1019801...		? !	To Be A...	jiangfigo	2020-09-1...		No need to be handled	Details
☐	单相1.0-...	2101073...		不发电了，检...	In Elimin...	glj000	2020-09-1...			Details
☐	真实设备...	2101072...		这个设备你看...	In Elimin...	glj000	2020-09-1...			Details
☐	真实设备...	1019A0...		d2	In Elimin...	admin	2020-09-1...			Execute
☐	真实设备...	1019A0...		d1	In Elimin...	admin	2020-09-1...			Execute
☐	单相1.0-...	2101074...		Usiskd	In Elimin...	1388060...	2020-09-1...		Completely eliminated	Details
☐	单相1.0	2101073...		JSU' s is	In Elimin...	1388060...	2020-09-1...			Details

Total records: 7

<

1

>

10 / page

Function overview

- The defect elimination function is used to record, handle, and track the completion of defect elimination tasks.
- Defect elimination task dashboard
- Defect elimination task operations

Intended users

- Installers

Procedure

- Step 1: Choose **Task Management > Defect Elimination** and click **Details** to view defect elimination details.
- Step 2: Choose **Task Management > Defect Elimination** and click **Execute** to execute defect elimination tasks.

Feature Overview — Maintenance: Defect Elimination

Real-Time Status | Alarm Management | Task Management | Smart Diagnosis

Task Management

Inspection

Task List

Plant List

Defect Elimination

To Be Dispatched	More	In Elimination	More	To Be Approved	More	Eliminated Today	More
0		2		0		0	
Total: 0		Total: 6		Total: 1		Total: 0	

Plant name: Process status: All Result: All Start Time: Start date ~ End date Search Reset Add Copy Set Handlers

Set Handlers

```
graph LR; Start(( )) --> Fill[Fill in work ticket]; Fill -- dispatch --> Elim[Defect elimination]; Elim -- discard --> End(( )); Elim -- Submit for confirmation --> Conf[Defect elimination confirmation]; Conf -- Confirm --> End; Conf -- Back --> Elim; Fill -- Back --> Fill
```

New Ticket

* Device name: Plant name:

Device type: Device model:

File:

* Defect description:

* Owner:

Operation: ☒ Submit

* Handling suggestion:

Cancel Submit

Select User

Organizational Structure

Smart PV System

App

成都BOS

上海

新设篇联调公司

Username: Search Reset

	Username	User Type	User Status
☐	admin	Common user	Enabled
☐	%E8%87%...	Common user	Enabled
☐	bhjghjjj	Common user	Enabled
☒	guest_acc...	Common user	Enabled
☒	hcj123	Common user	Enabled
☐	jiangfigo	Common user	Enabled
☐	vhhhfggvv	Common user	Enabled
☐	zhangchi	Common user	Enabled
☐	魔术师多...	Common user	Enabled

Total records: 9 1 / 10 / page Cancel OK

Function overview

- Add a defect elimination task.

Intended users

- Installers

Procedure

- Step 1: Choose **Defect Elimination** and click **Set Handlers** to set node handlers.
- Step 2: Click **All**.
- Step 3: Set node handlers.
- Step 4: Add a defect elimination task.
- Step 5: Select a device.
- Step 6: Select plants.
- Step 7: Enter the defect description and handling suggestion.
- Step 8: Specify the owner.
- Step 9: Click **Submit** to submit the task.

Feature Overview — Maintenance: Smart Diagnosis

Real-Time Status | Alarm Management | Task Management | **Smart Diagnosis** | Smart Tracking

Smart Diagnosis

I-V Curve

Module Library Management

Task name: Check time:

Task Name	Faulty Units	Total Units	Check Time	Scanning Progress	Operation
-----------	--------------	-------------	------------	-------------------	-----------

Configure String Details

☐ Batch apply String quantity: 4

String	*Module Quantity	*Module Manufacturer	Module Model	*Module Type	*Max. Module Power (Pmax) (W)	String Capacity (Wp)
PV1	1	JA Solar	JAM6(K)-48-230	Monocrystal...	230	230
*Max. module power (Pmax) ... 230 *Module open-circuit voltag... 31.18 *Open-circuit voltage (Voc) t... -0.33 *Module manufacturer JA Solar *Module degradation rate in... 3 Fill factor (%) 77.01 *Optimal module operating ... 25.25 *Module short-circuit curren... 9.58 *Short-circuit current (Isc) te... 0.059 *Cell quantity (PCS/module) 48 *Module degradation rate fr... 0.7 Nominal module efficiency (%) 17.53 *Optimal module operating ... 9.11 *Maximum power (Pmax) te... -0.41 *Module type Monocrystalline *Grid connection date 2020-10-24 Module model JAM6(K)-48-230						
PV2	1	JA Solar	JAM6(K)-48-230	Monocrystal...	230	230
PV3	1	JA Solar	JAM6(K)-48-230	Monocrystal...	230	230

Add I-V Curve Diagnosis Task

Requirements for I-V curve diagnosis:

- Cleaning status of the strings must be consistent during diagnosis.
- The solar irradiance must be above the lower limit (400 W/m²) during I-V curve diagnosis.
- String configuration information must be correct.

Suggestions for string diagnosis:

- A maximum of 200 inverters can be diagnosed at a time (about 10 minutes).
- It is recommended that strings be cleaned before diagnosis to reveal the actual status of the diagnosed modules.
- You are advised to perform diagnosis between 11:00 am and 1:00 pm. Ensure that the front and rear rows of the strings are not blocked.

Task name: mytask

Select device: ☐ Smart PV System ☐ App ☐ 成都IOS ☐ 上海 ☒ Dongle+V1 ☐ Dongle+V2 ☐ V1数据+V1逆变器 ☐ V1数据+V1电表

String cleaning: ☐ Cleaned ☒ Not cleaned

Environmental parameters: ☐ Auto ☒ Manually set

Module horizontal irradiance (W/m²): 1200

Module back surface temperature (°C): 39

Function overview

- I-V curve diagnosis is also known as string health check. Abnormal strings can be quickly detected by I-V curve diagnosis. This greatly reduces the workload of plant detection personnel and improves the faulty module detection rate, thereby reducing the cost of faulty module locating and improving plant operating efficiency.

Intended users

- Installers

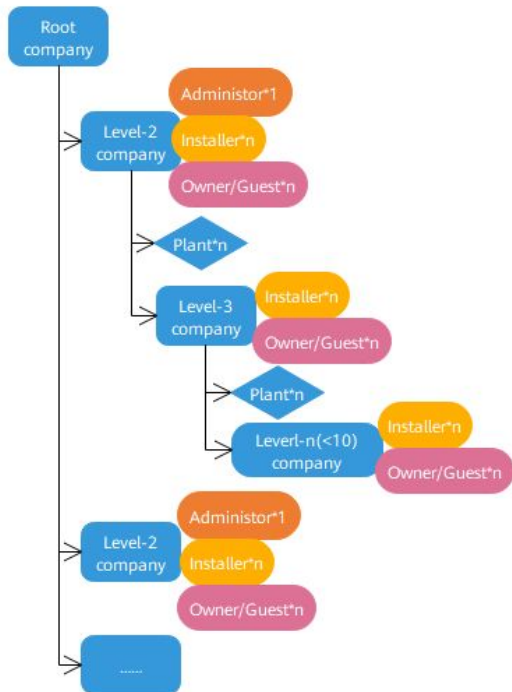
Procedure

- Step 1: Choose **Smart Diagnosis > I-V Curve**.
- Step 2: Click **Configure Strings**. On the displayed dialog box, select plants and click **Configure String Details**.
- Step 3: Click **Add Diagnosis Task**.
- Step 4: Start I-V scanning.

Requirements for I-V curve diagnosis

- Cleaning status of the strings must be consistent during diagnosis.
- The solar irradiance must be above the lower limit (400 W/m²) during I-V curve diagnosis.
- String configuration information must be correct.

Feature Overview — Company Management



The screenshot shows the 'Company Management' interface in the FusionSolar system. The top navigation bar includes 'Home', 'Reports', 'Plants', 'Maintenance', 'Value-Added Services', and 'System'. The 'Company Management' section is active, showing a list of companies on the left and a form for editing a 'Smart PV System' on the right. The form has tabs for 'Company Info', 'Logos and Titles', 'Mailbox', and 'User Management'. The 'Company Info' tab is selected, displaying fields for Name, Description, Contact method, Address, Website, Record number, Start date of safe running, Longitude and latitude, Radius, Currency, and a toggle for 'Supports Poverty Alleviation plant or not'. The 'Add' and 'Delete' buttons are visible at the top right of the form.

Note: The company management function will be greatly changed before October 30. Therefore, details are not described in this document.

Function overview

- A company administrator can create and manage companies and organizational structures, and maintain company information based on business requirements.

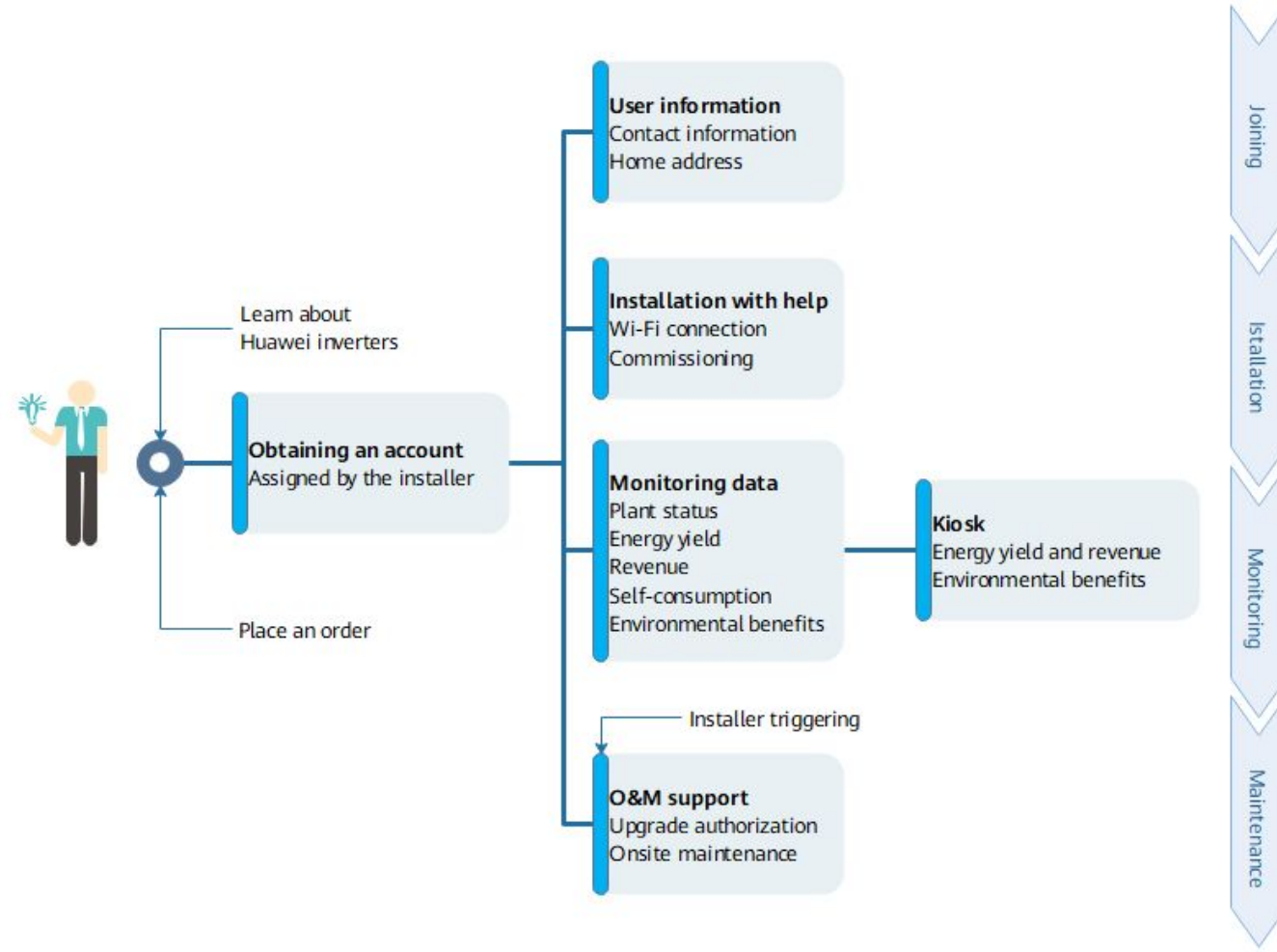
Intended users

- Administrators and installers

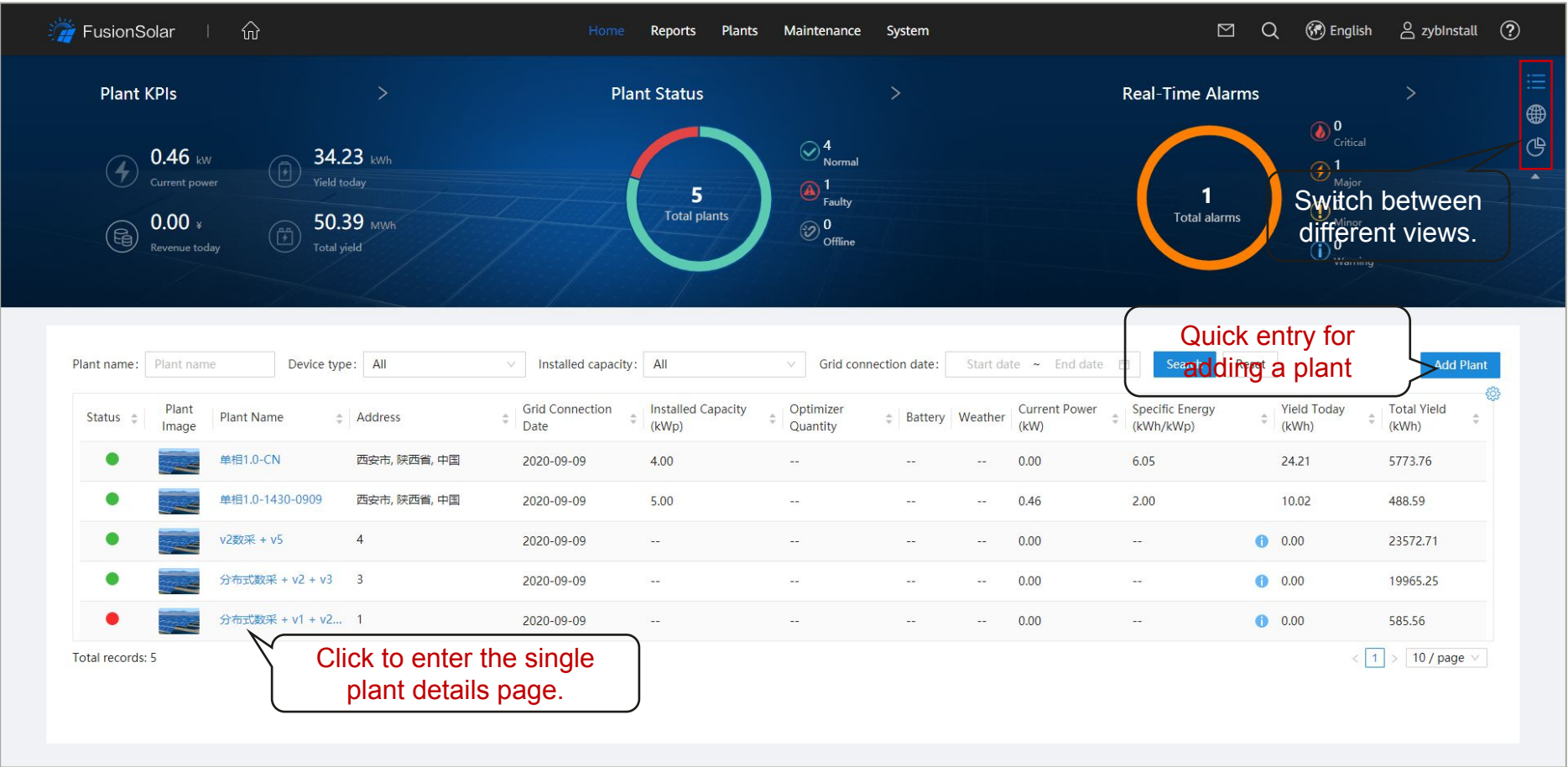
Procedure for creating a company

- Choose System > Company management.**
- Create a level-2 company: Create a company administrator (installer) at the same time. A level-2 company can also be created by installers through self-registration. The creator of a level-2 company is the company administrator by default.
- Create a level-3 or lower-level company: The company can be created by installers of the current level company. There is no company administrator.
- Multi-level management: Installers at each level can manage and maintain the current and lower-level companies and users. The creators of companies and users can be added, deleted, and modified.

Owner Journey



Feature Overview — Home Page: List View



Function overview

- The list view on the home page displays the information about the plants managed by the current user, including self-built plants and shared plants. The list view displays KPIs, helping users learn about the real-time status and alarm information of the plants and comprehensively understand the information about the managed plants in each dimension.

Intended users

- Installers, owners, and guests(Add Plant is only for installer)

Procedure

Choose Home > List View.

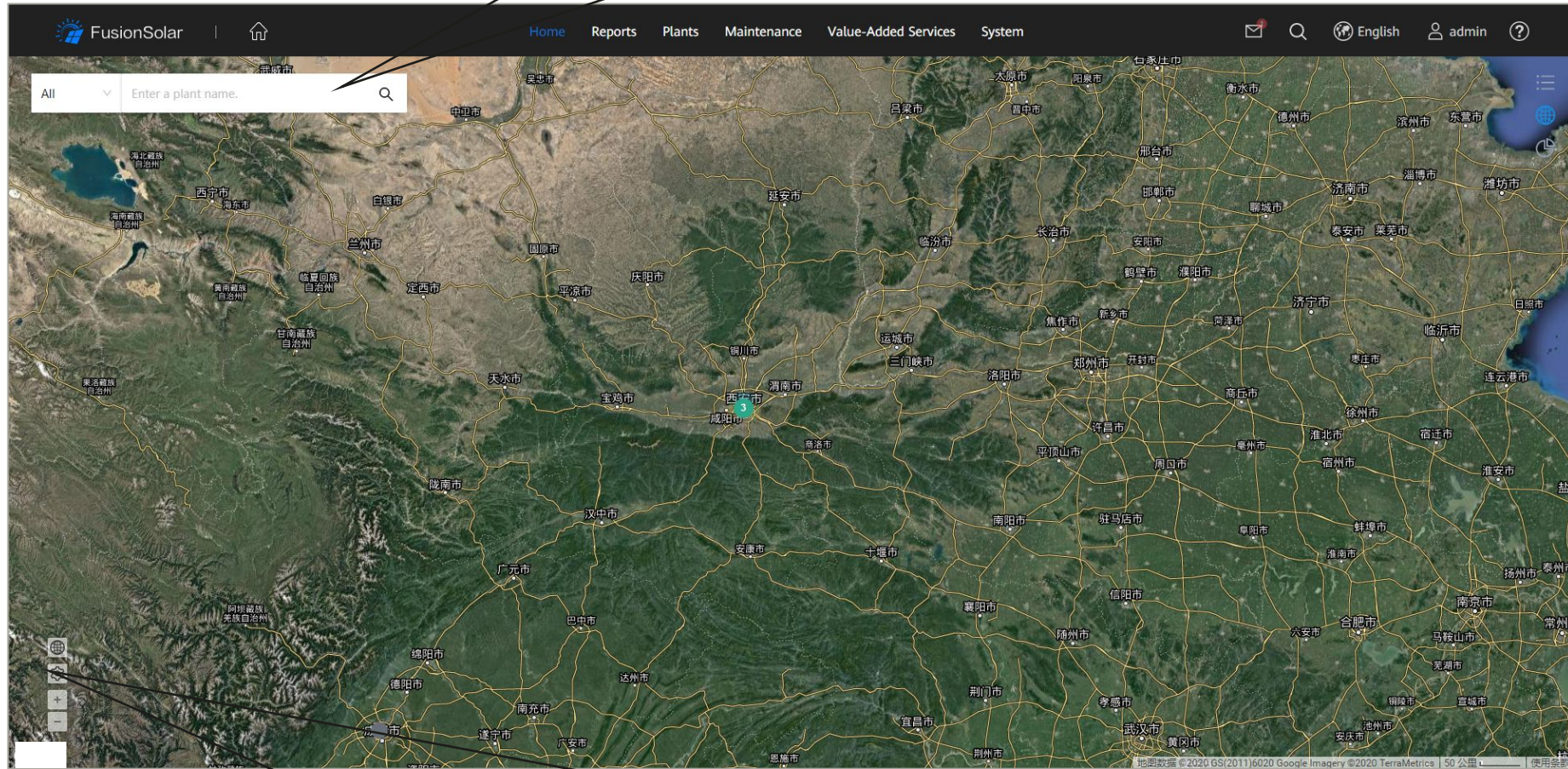
- The list view is displayed upon login or when you choose **Home > List View** on the home page.

Related specifications

- Data on the home page is automatically refreshed every 3 minutes.

Feature Overview — Home Page: Map View

Searching by name and status filtering are supported.



Only administrators can switch between different maps (Google Maps/AutoNavi Maps).
Chinese environment: AutoNavi Maps
Non-Chinese environment: Google Maps

Function overview

- The world map intuitively displays the location and distribution of plants.
- Click  in the lower left corner. In the displayed dialog box, set **Default Map** and **API Key**, which are **available only for the admin users**.
- (Optional) Select the plant status, enter the plant name, and click the search button. The location of the plant is displayed in the map view.
- When you move the mouse pointer to a plant, the plant location, yield, and weather information is displayed.
- Click the plant icon to enter the single plant page.

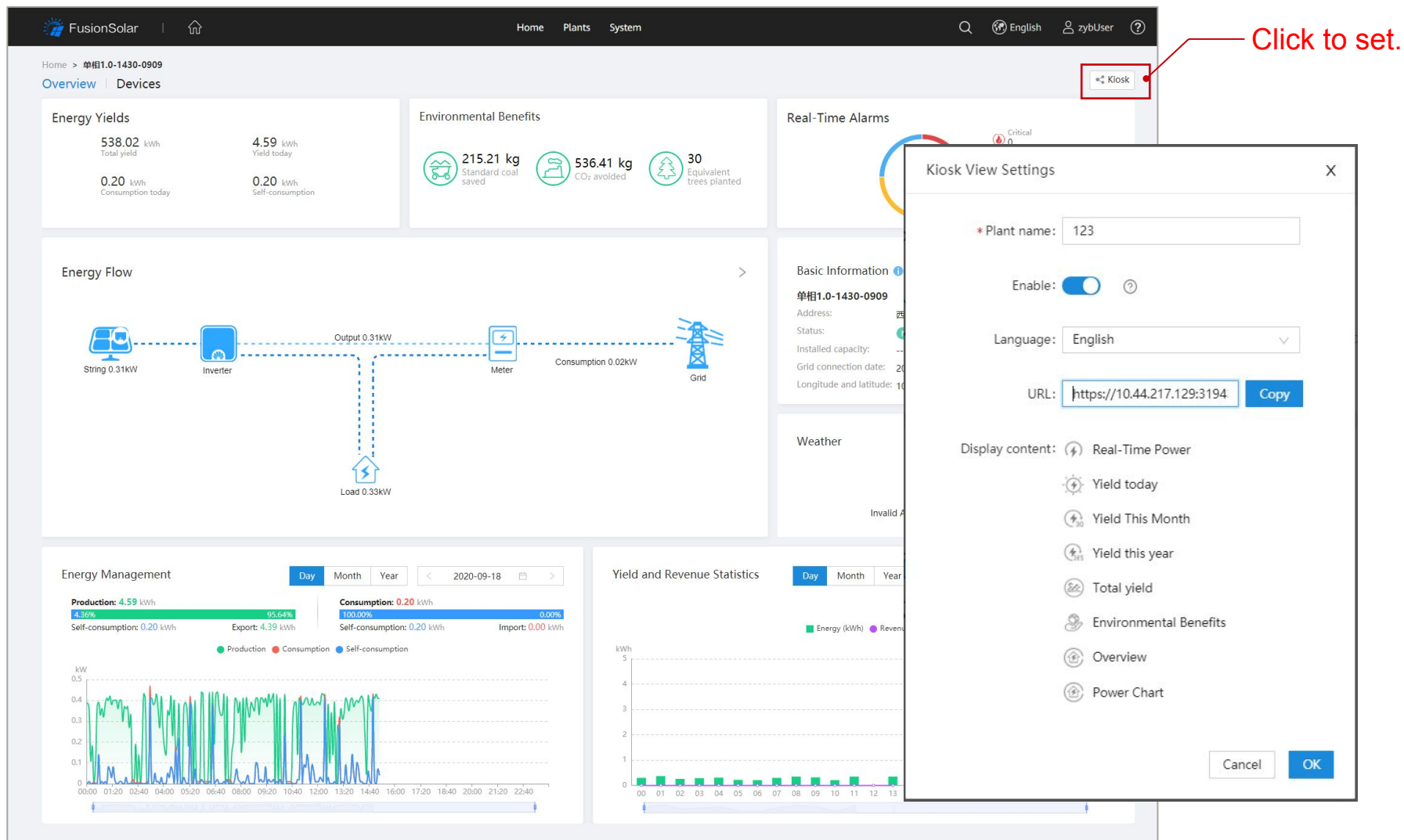
Intended users

- Installers, owners, and guests

Procedure

- Choose **Home** > **Map view**.
- Alternatively, click  in the upper right corner of the home page.

Feature Overview — Single Plant: Kiosk



Function overview

- Owner users can share the plant running information in the Kiosk view. Other users can access the Kiosk view without logging in to the system to learn about the shared plant information. Only a user who has the Kiosk view permission and logs in as the owner can create a Kiosk view.

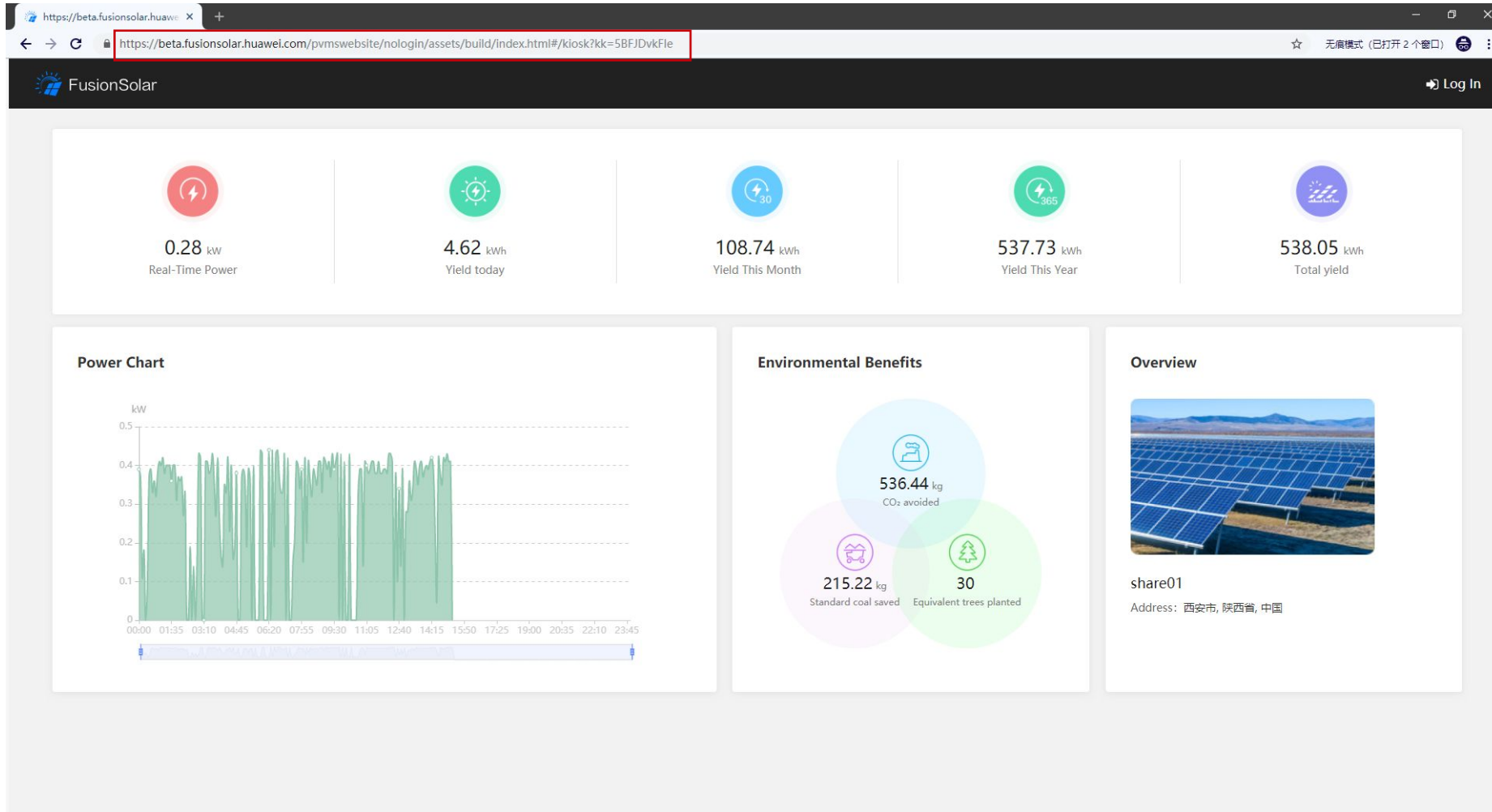
Intended users

- Owner

Procedure

- Log in to the system as an owner user. Choose **Home > List View**, and click a plant in the plant list to enter the single plant page. On the **Overview** tab page, click **Kiosk**.

Feature Overview — Single Plant: Kiosk



Function overview

- Owner users can share the plant running information in the Kiosk view. Other users can access the Kiosk view without logging in to the system to learn about the shared plant information. Only a user who has the Kiosk view permission and logs in as the owner can create a Kiosk view.

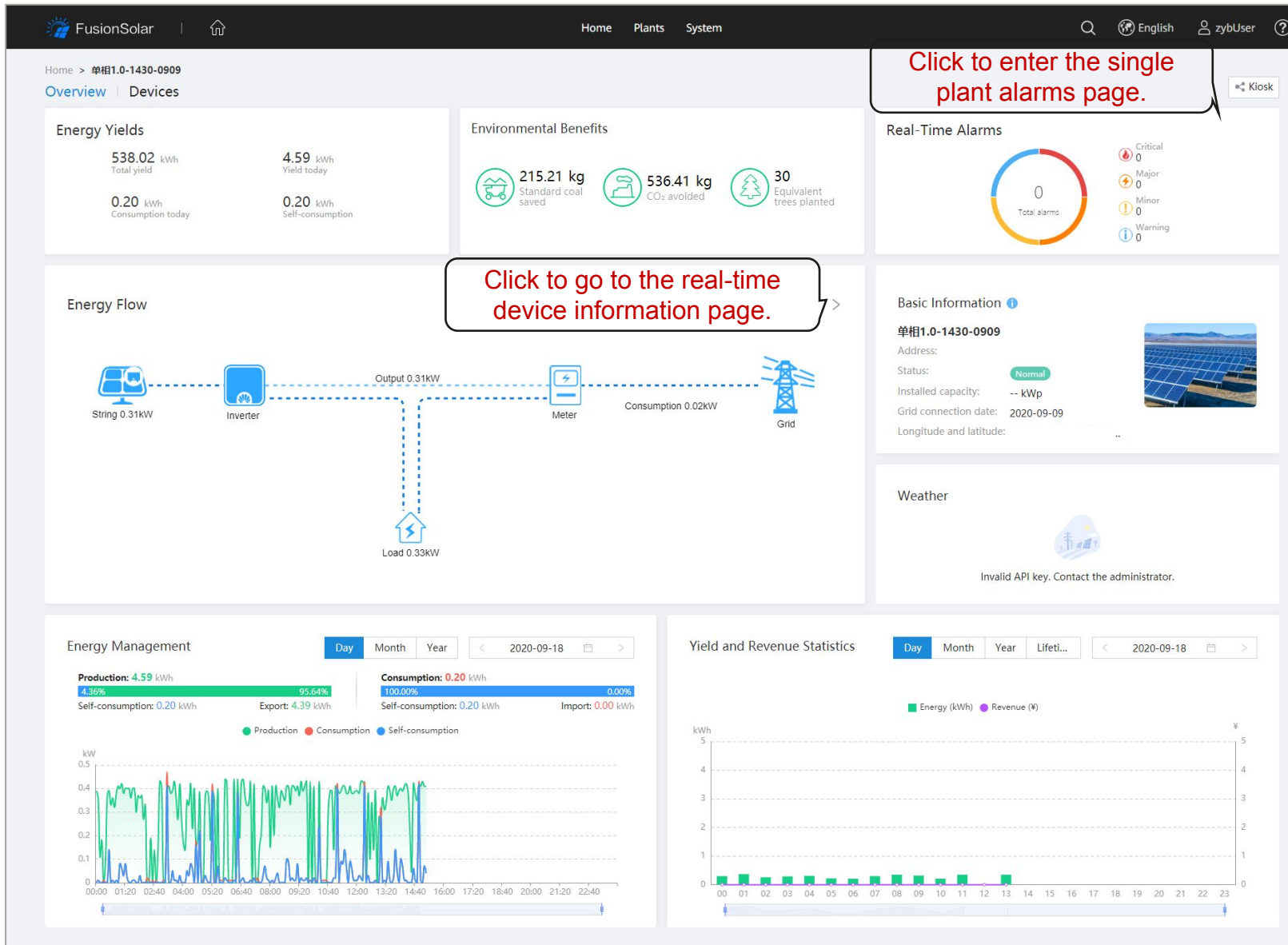
Intended users

- Owner

Procedure

- Share the link to other users, and the users can access the link without logging in to the system.

Feature Overview — Single Plant: Overview



Function overview

- The **Overview** page of a single plant displays the overview of the current plant, including energy yields, environmental benefits, real-time alarms, energy flow, basic information, energy management, weather forecast, and yield and revenue statistics. You can view the real-time energy flow between devices in the plant and the hourly energy yield and revenue of the plant.

Intended users

- Installers, owners, and guests

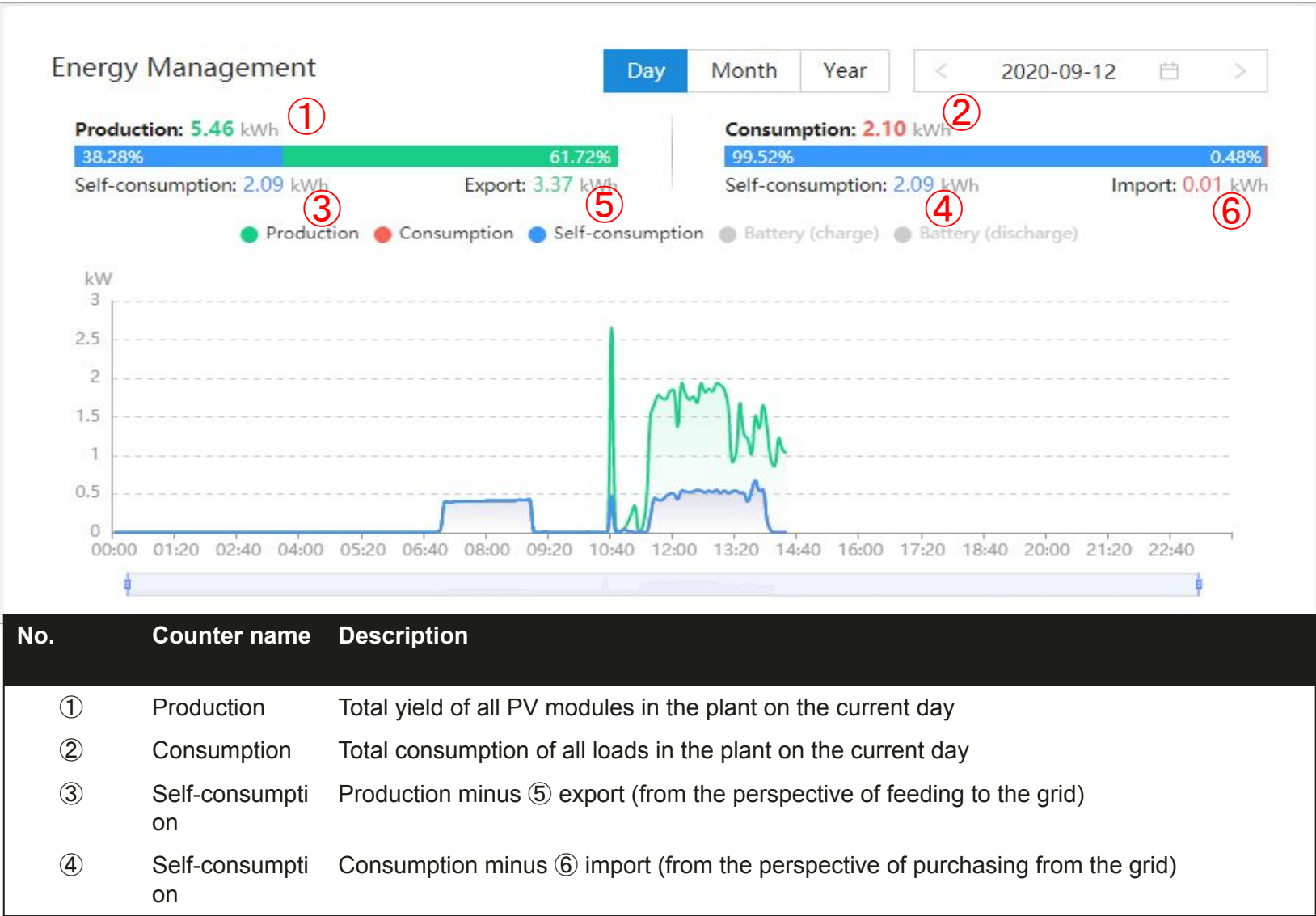
Procedure

Click on the plant icon, and click a plant in the plant list to enter the single plant page.

Related specifications

- The energy flow diagram is refreshed every 3 minutes (the same as that on the app).
- Weather: the weather of the current day and the next two days is displayed.
- The **Energy Management** area is refreshed every 3 minutes (the same as that on the app).
- Yield and revenue statistics: The data of the previous hour is collected at the fifth minute of each hour.

Feature Overview — Single Plant: Overview — Energy Management



Function overview

- The **Energy Management** area displays the relationship between self-consumption energy, daily yield, and daily consumption, helping users properly use electricity.
- In scenarios with batteries, energy is stored and discharged through batteries, improving the self-consumption rate.

Intended users

- Installers, owners, and guests

Feature Overview — Plant: Plant Management

FusionSolar |
 Home Reports Plants Maintenance Value-Added Services System

 English admin ?

Plants

- [Plant Management](#)
- [Default Electricity Prices](#)
- [Plan Management](#)

Enter a keyword. Q

Smart PV System

- Granada
- Shanghai

Plant name:

Search
Reset

☐	Plant Name	Installed Capacity (kWp)	Address	Contact Person	Contact Method	Grid Connection Date	Operation
☐	SUN2000-10KTL-...	1111.000	Dongguan, Guan...			2020-09-09	
☐	SUN2000-12KTL-...	222.000	Songshanhu, Son...			2020-09-09	
☐	SUN2000-40KTL-...	333.000					
☐	Residential Inverter	123.000					
☐	Smart Logger 1	1234.000					
☐	Smart Dongle 2	321.000					
☐	Dongle+ V1	100.000					
☐	huyong	12.000					

Total records: 9

Add Plant
Export
Delete

Add Plant

Set Basic Info
Add Devices
Set String Capacity
Set Electricity Prices
Set Other Info

* Company:

* Plant name:

* Installed capacity (kWp):

* Grid connection date:

Contact person:

Contact method:

* ☐ User's authorization obtained
If the content you entered involves third-party personal information, obtain authorization in advance.

Add Plant
Export
Delete

Note: There are multiple entries for creating a plant, including on home page, **Plant Management** page, and **Device Access** page, and by scanning QR codes using the FusionSolar app.

Function overview

- Users can centrally manage multiple plants and view global information and important information about a single plant. This meets different management requirements.

Intended users

- installers and owners (owners can only modify basic information, electricity price settings, and other information. Query and export basic plant information.)

Procedure

- Choose **Plants > Plant Management**.
- Step 1: Enter the plant information. You have to select **User's authorization obtained**.
- Step 2: Select access devices. You can scan the QR code to add an access device at the local end or enter the SN on the WebUI to query the access device. Note: A device that has been bound cannot be bound again.
- Step 3: Set the string capacity. Batch setting is supported. The number of strings is limited to the maximum number of strings.
- Step 4: Set electricity prices, including the feed-in tariff and purchase price. If the prices are not set, revenue calculation will be affected.
- Step 5: Other information: Users should accurately set the address to ensure that the weather and geographical location information are accurate. The time zone of the plant must be the same as that of the region where the device is located. Otherwise, the plant data statistics and display will be affected.

Feature Overview — Device: Real-Time Info

FusionSolar

Home

Reports

Plants

Maintenance

Value-Added Services

System

English

admin

Device Management > Device Details

Real-Time Info

Alarm Info

Historical Info

Active Power Adjustment

Reactive Power Adjustment

Power Factor Adjustment

Real-time device data

String	Input Voltage (V)	Input Current (A)
PV1	358.20	1.34
PV2	0.00	0.00

• Inverter status

Grid connection

• Operation mode

Unlimited

• Host name

210107379610HB001430

• Yield today

5.02 kWh

• Power factor

1.00

• Total yield

494.78 kWh

• Grid frequency

50.03 Hz

• Output reactive power

-0.01 kvar

• Device internal temperature

38.00 °C

• Total input power

0.48 kW

• Inverter startup date

2020-09-09 08:59:46

• Inverter rated power

5.00 kW

• Inverter shutdown date

2020-09-08 18:11:38

• Output mode

L/N

• Active power

0.47 kW

• Grid voltage

223.30 V

• Power Grid current

2.11 A

Basic Information

• Device name	210107379610HB001430	• Manufacturer	Huawei	• Device type	Residential inverter
• Group information	单柜1.0-1430-0909	• SN	210107379610HB001430	• Device replacement record	-
• Device address	西安市, 陕西省, 中国	• Model	SUN2000L-5KTL	• Software version	V100R001C00SPC334

Function overview

- Users can view the real-time information, alarm information, and historical information about devices.
- Real-time information includes real-time device data and basic information. The active power adjustment, reactive power adjustment, and power factor adjustment functions are provided.
- Current alarm information of devices can be viewed on the **Alarm Info** tab page.
- Historical information about device running data can be viewed by day on the **Historical Info** tab page.

Intended users

Procedure

Device > Device Management.

- Step 1: Click a device name to go to the device details page.
- Step 2: By default, the **Real-Time Info** tab page is displayed.
- Step 3: You can click the **Alarm Info** tab page to view alarm information.
- Step 4: You can click the **Historical Info** tab page to view historical information.

FusionSolar Smart PV Management System

Category	Changes	Old Version	New Version
UI	UI Optimization	Old	UI optimization tends to be simple and technical
login	Login	Support login using an account, email address and mobile number	- China: Support login using an account and mobile number - Other regions : Support login using an account and email address
	Account info	- The account name can be modified only once - profile photo can not be modified	- The account name can not be modified - Uploading an image to modify profile photo
Add plants	Basic info setting	Select the region where the PV plant is located.	Not support currently
	Add device	Some devices connected to the same SmartLogger can be added to the PV plant and connected to the management system.	All devices connected to the SmartLogger must be added to the same PV plant and connected to the management system.
Data display	Refresh frequency of home page	Refresh frequency: 1min	Refresh frequency: 3min
Plant management	Company info settings	- The title and logo of the home page and login page can be set. - Enterprise email addresses can be configured to send reports and alarms.	- The title and logo of the home page and login page can not be set. - Use the unified system mailbox service to send emails.
Role management	Role permission customization	In addition to the default role, role permissions can be customized.	User-defined role permissions are no longer supported. Only default roles and existing customized roles are retained.
System	Search & Help	Search for function & online help by name is not supported.	Search for function & online help by name is supported.

Thank you.



把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。
Bring digital to every person, home, and
organization for a fully connected,
intelligent world.

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