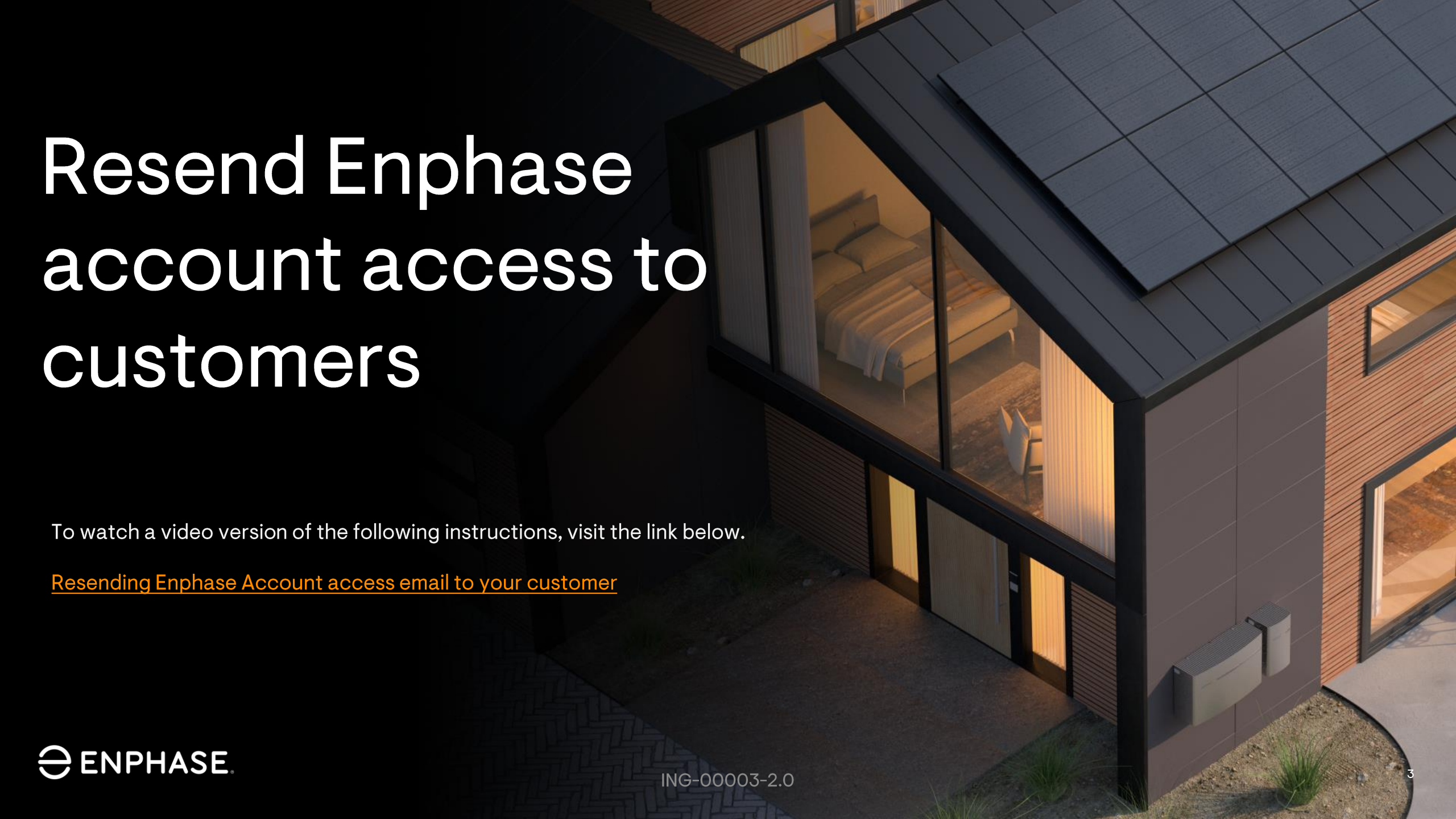
Solar troubleshooting guide

ENPHASE.

Solar troubleshooting guide: Contents

Resend Enphase account access to customers



To watch a video version of the following instructions, visit the link below.

Resending Enphase Account access email to your customer

ENPHASE

Learning objectives

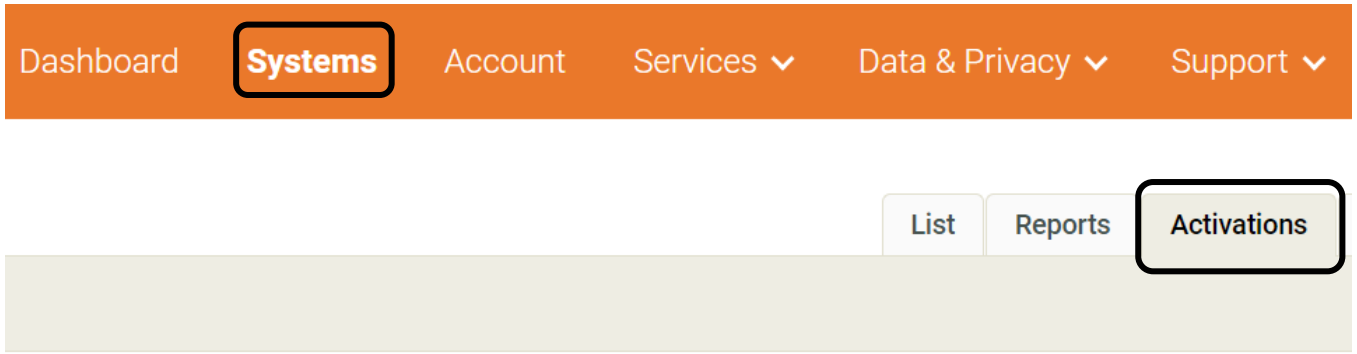
- Explain how to resend Enphase access to customers using the Enphase Installer Portal.

Resend Enphase access to customers

If a customer loses access to the Enphase App, an installer can easily resend access to the customer's email.

Step 1
Log in to the Enphase Installer Portal.

Step 2
Select **Systems** from the top left of the taskbar.

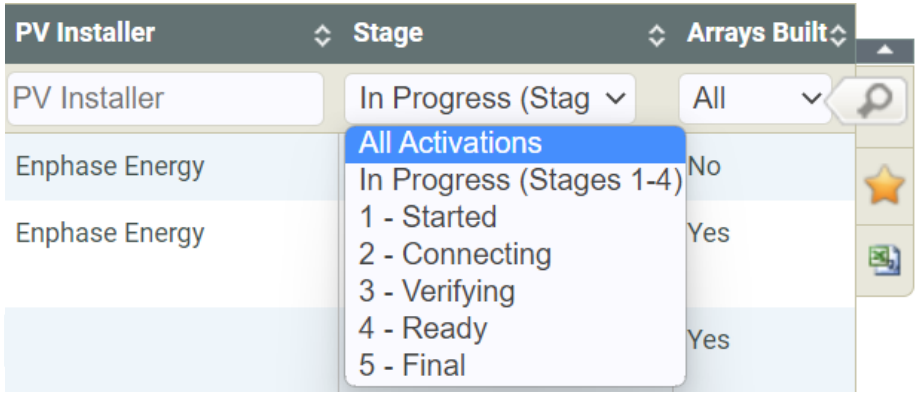


Step 3
Select **Activations** from the top right tabs.

A drop-down menu will appear.

Resend Enphase access to customers

Step 4
Select **All Activations** from the **Stage** drop-down menu.



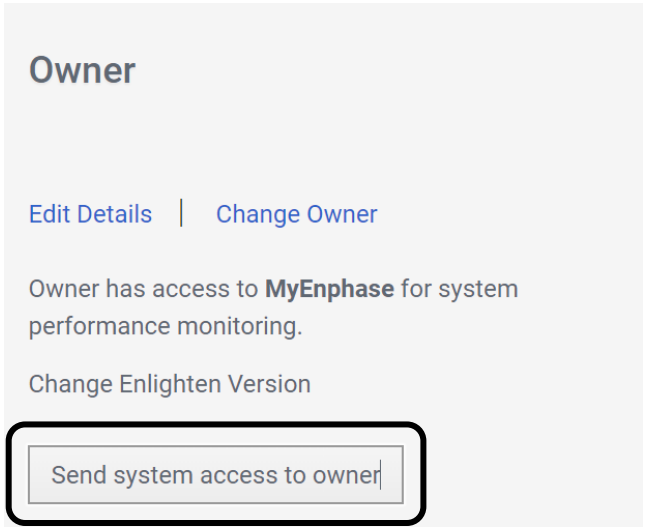
A new page will appear.

Step 5
Select the system name.

The activation form will appear.

Resend Enphase access to customers

Step 6
Under the **Owner** section, select **Send system access to owner.**



A new welcome email will be automatically sent to the email address listed on the activation form.

This email will provide the customer with instructions to log in to the Enphase App.

Learning check

- How can an installer resend Enphase access to customers using the Enphase Installer Portal?

Connecting a new IQ Gateway

Learning objectives

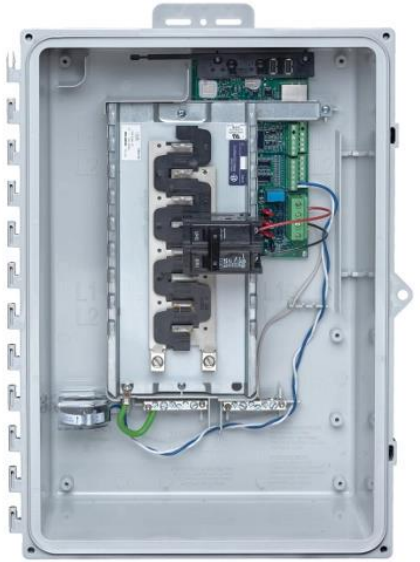
- Explain how to connect a newly commissioned IQ Gateway to Wi-Fi using the Enphase Installer Portal.

IQ Gateway connectivity

Before connecting, the installer must first find the IQ Gateway.

Finding the IQ Gateway

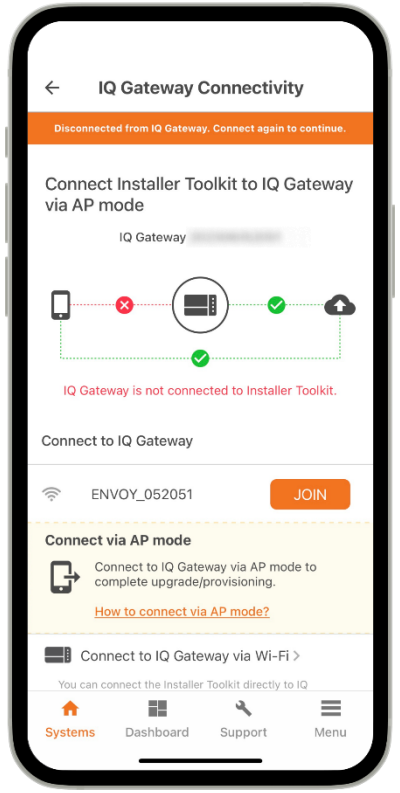
The IQ Gateway will be located near the electrical circuit breaker panel or near an electrical sub-panel.



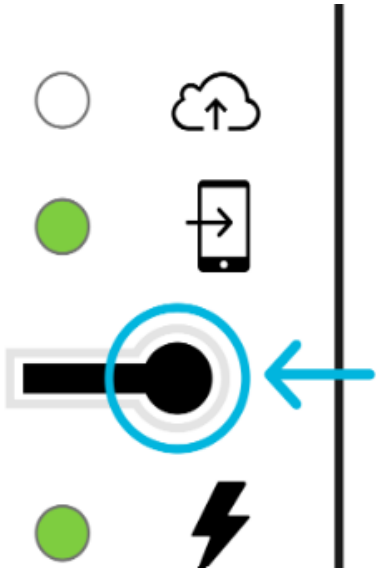
The IQ Gateway may be tucked away in a utility room, garage, or outside in a watertight enclosure like the IQ Combiner shown on the right.

IQ Gateway connectivity: AP mode

After locating the newly commissioned IQ Gateway, the installer must connect the device via AP mode before connecting it to the internet.



After commissioning, the Enphase Installer Portal's IQ Gateway Connectivity page will appear.



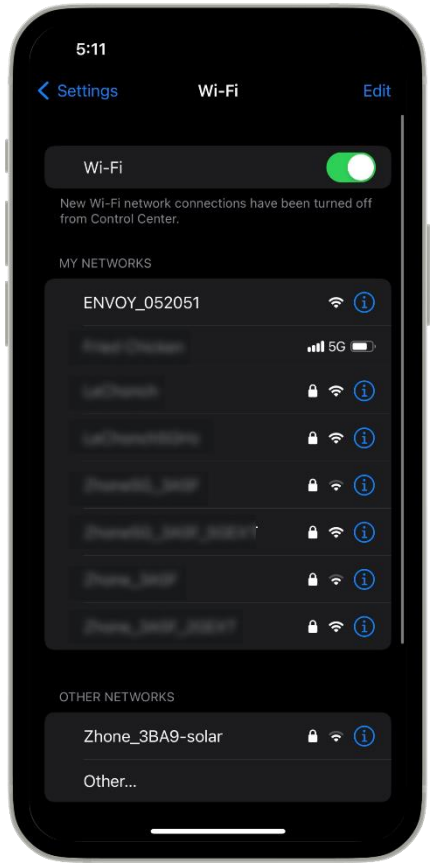
Step 1
Make sure the phone is within Wi-Fi range of the IQ Gateway.

Briefly press and immediately release the IQ Gateway menu button on the IQ Gateway.

This will enable AP mode.

Once a green LED appears by the cell phone icon, proceed to step 2.

IQ Gateway connectivity: AP mode



Step 2
Navigate again to **Settings** on a mobile device and select **Wi-Fi.**

Step 3
From the list of available networks, select the option that looks like the network name below:

ENVOY_xxxxxx

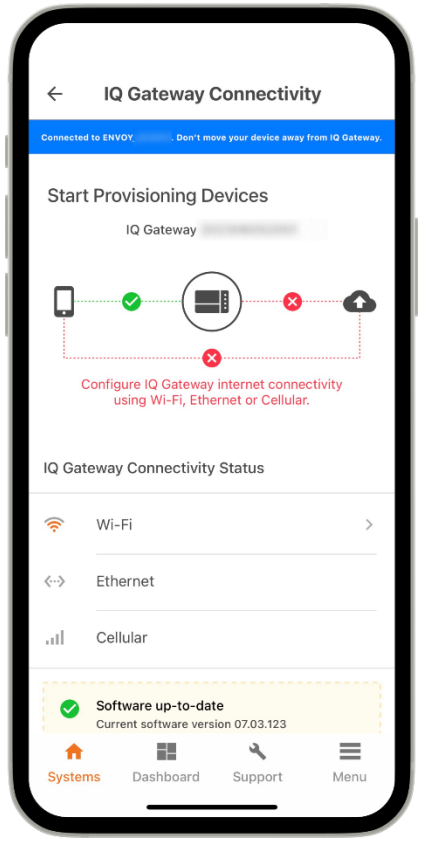
The last six digits of the network will be the IQ Gateway's serial number.

The installer may now navigate back to the Enphase Installer Portal to connect the IQ Gateway to the internet.

When connecting with Ethernet, there is no configuration necessary. When the modem is plugged into the IQ Gateway, it will automatically connect.

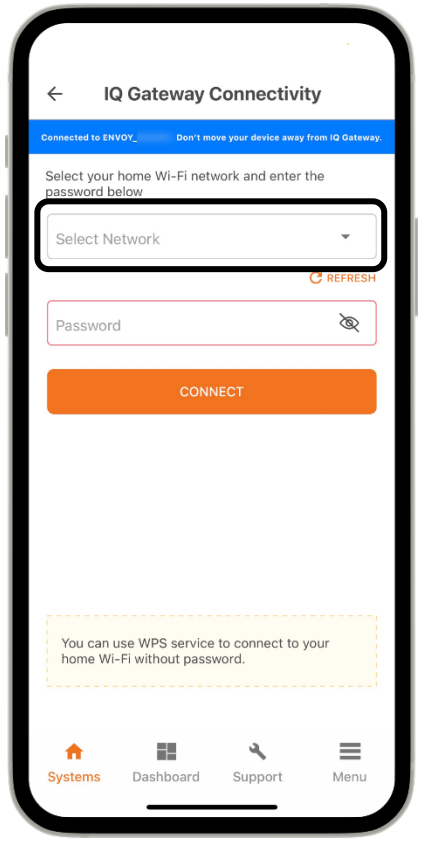
IQ Gateway connectivity

Follow these steps to connect the newly commissioned IQ. Gateway to Wi-Fi:



Once connected to the IQ Gateway in AP mode, the bar at the top of the screen will turn blue.

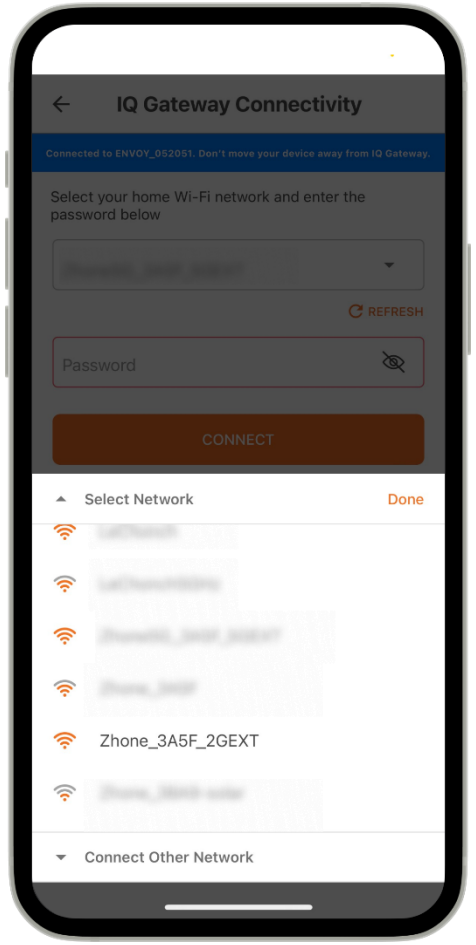
A green dashed line and check mark will appear between the mobile device icon and the IQ Gateway icon.



Step 1
Open the drop-down menu.

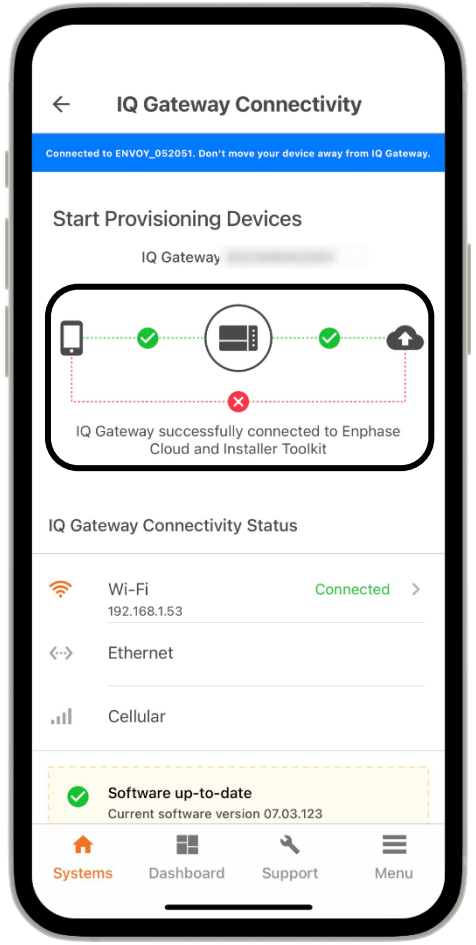
A list of networks will appear.

IQ Gateway connectivity



Step 2
Select the correct network and enter the password when prompted.

The IQ Gateway will now connect to the internet.

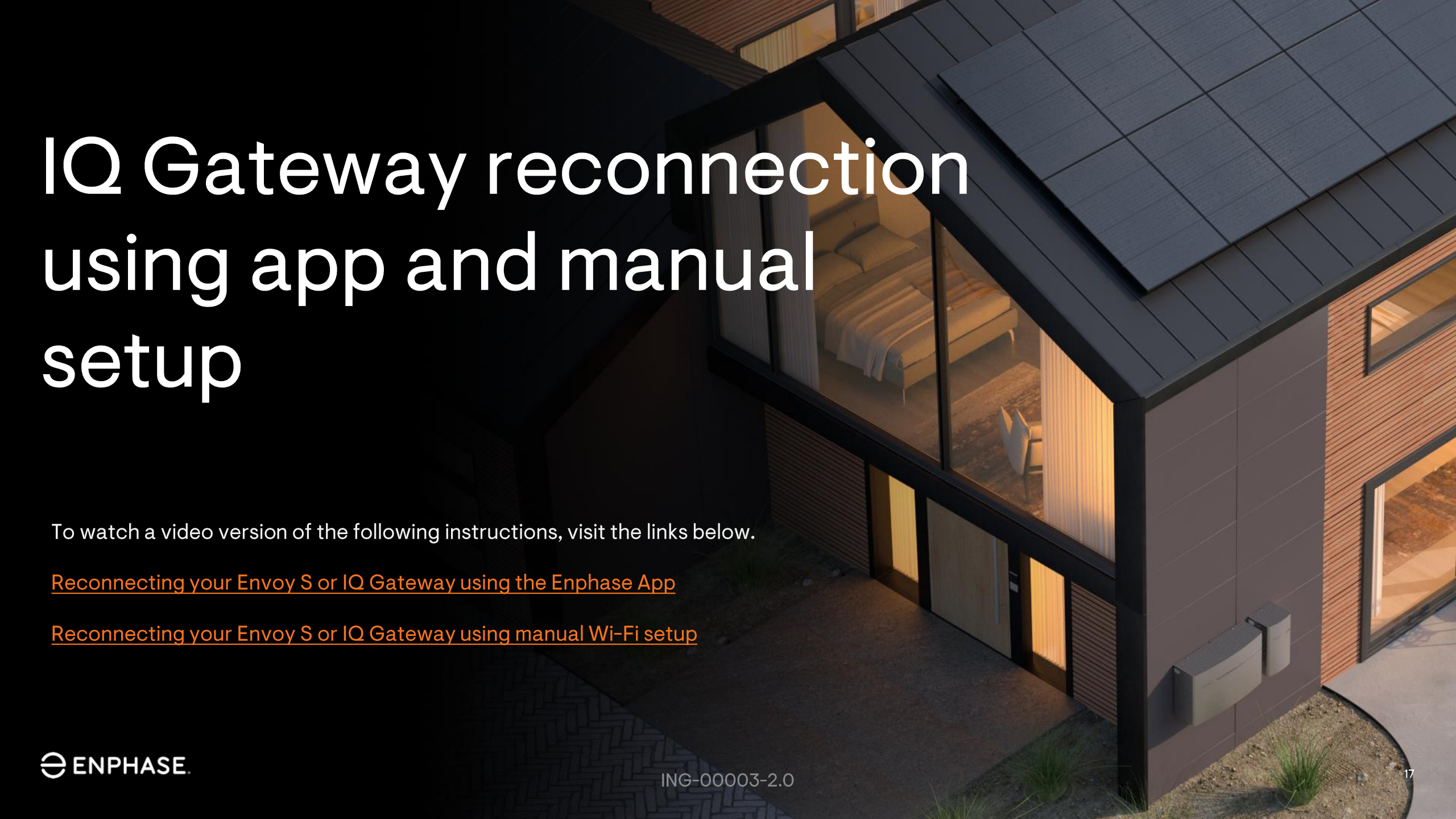


Step 3
Once the IQ Gateway is connected and successfully communicating, two dashed green lines and two green check marks will display.

Learning check

- How can an installer connect a newly commissioned IQ Gateway to Wi-Fi using the Enphase Installer Portal?

IQ Gateway reconnection using app and manual setup



To watch a video version of the following instructions, visit the links below.

Reconnecting your Envoy S or IQ Gateway using the Enphase App

Reconnecting your Envoy S or IQ Gateway using manual Wi-Fi setup

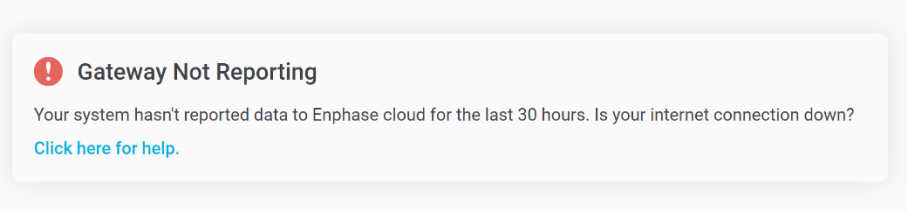
Learning objectives

- Explain how to check if an IQ Gateway is connected to the internet.
- Explain how to reconnect an IQ Gateway using the Enphase App.
- Explain how to reconnect an IQ Gateway using manual Wi-Fi setup.

IQ Gateway not reporting

If a system stopped reporting data, or the Wi-Fi password or provider has changed, the IQ Gateway must be reconnected to the internet.

If the system is not connected to the internet, there will be an alert at the top of the customer's dashboard in their Enphase Account.



First, make sure the site is connected to the internet. Check other devices (phones, computers, etc.) to see if they are connected.

If the customer's Wi-Fi is having issues, please instruct them to contact their internet provider to resolve.

Reconnecting the IQ Gateway

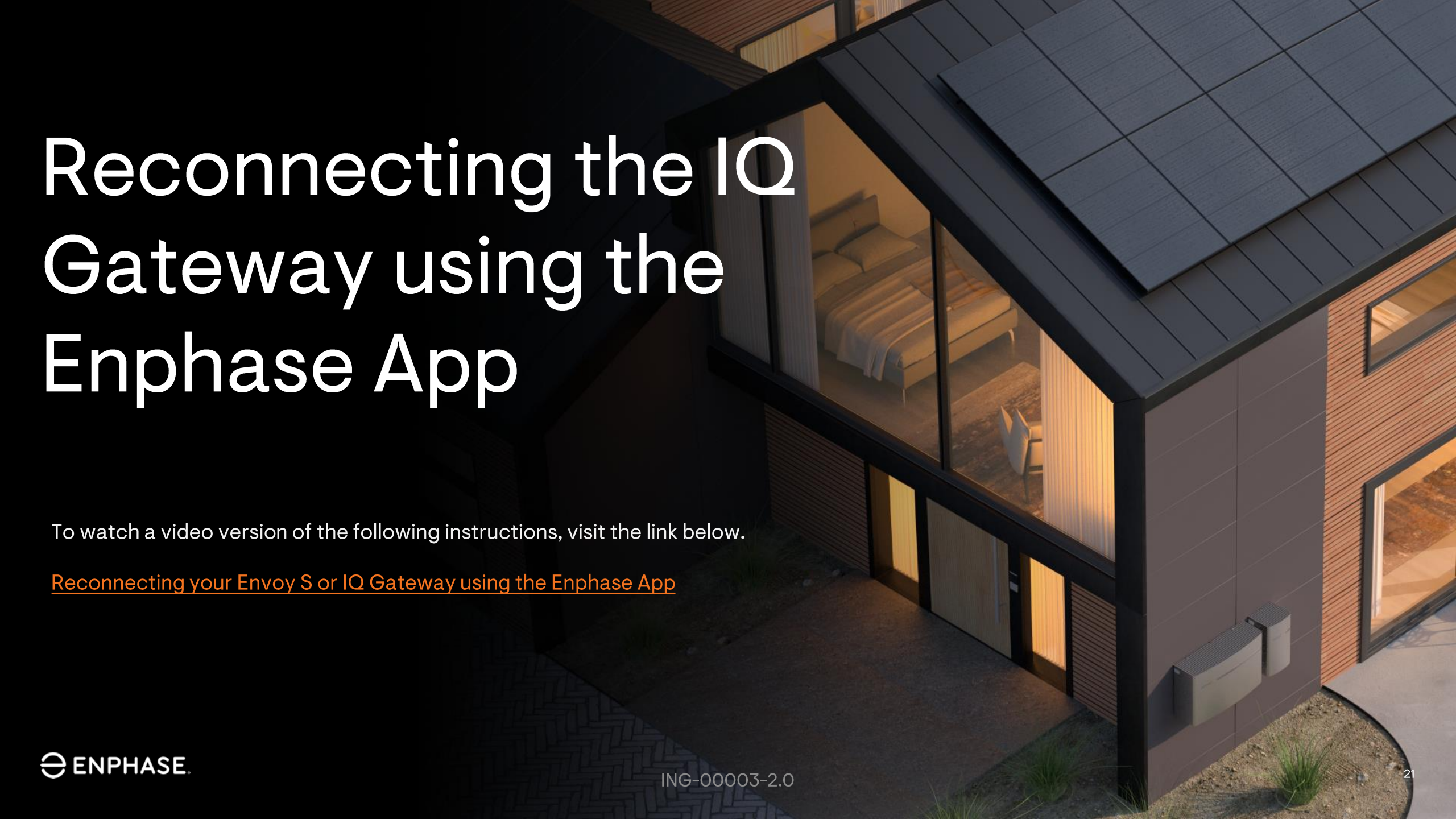
Once the installer has verified that the site is connected to internet, the IQ Gateway must be reconnected either manually or by using the Enphase App.

The next two sections will provide instructions for successfully reconnecting an IQ Gateway. The following support articles contain instructions for customers as well:

Reconnecting your IQ Gateway using the Enphase App

Reconnecting your IQ Gateway using manual Wi-Fi setup

Reconnecting the IQ Gateway using the Enphase App



To watch a video version of the following instructions, visit the link below.

Reconnecting your Envoy S or IQ Gateway using the Enphase App

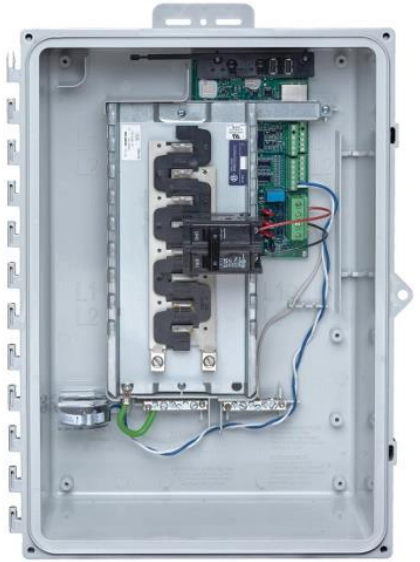
ENPHASE.

Reconnecting the IQ Gateway using the Enphase App

Before reconnecting, find the IQ Gateway.

Finding the IQ Gateway

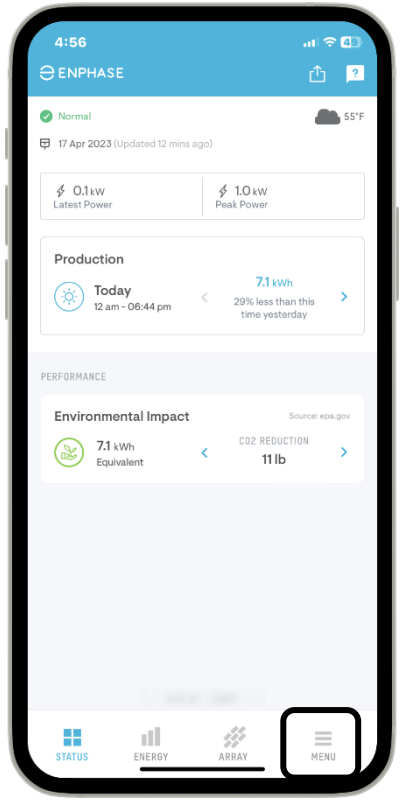
The IQ Gateway will always be located near the electrical circuit breaker panel or near an electrical sub-panel.



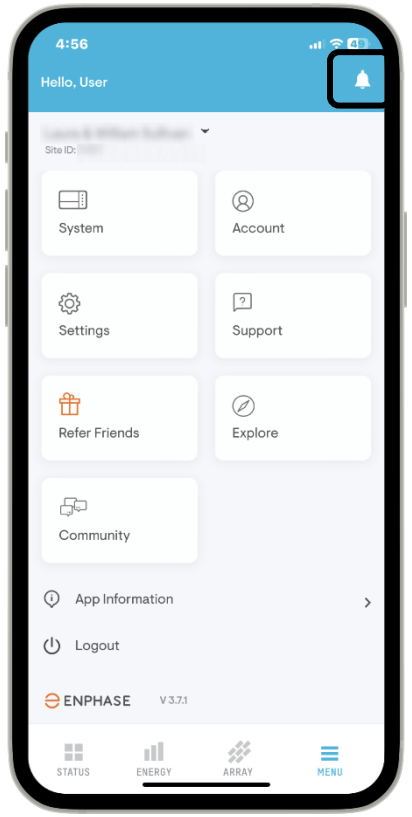
The IQ Gateway may be tucked away in a utility room, garage, or outside in a watertight enclosure like the combiners shown on the right.

Reconnecting the IQ Gateway using the Enphase App

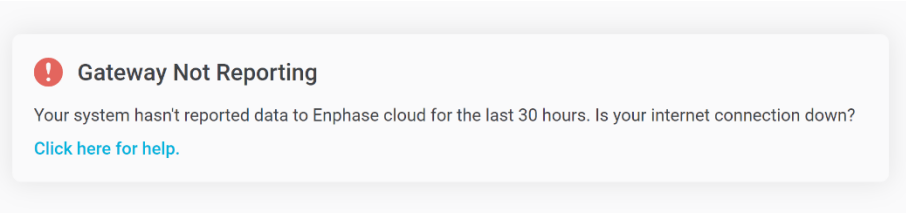
Step 1
Select the **Menu** tab.



Step 2
Select the bell icon at the top right of the screen.

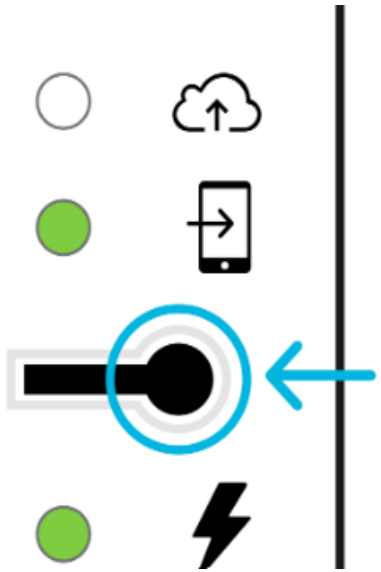


Step 3
Click the help link on the **Gateway Not Reporting** notice.



A **Reconnect to IQ Gateway** page will appear.

Reconnecting the IQ Gateway using the Enphase App



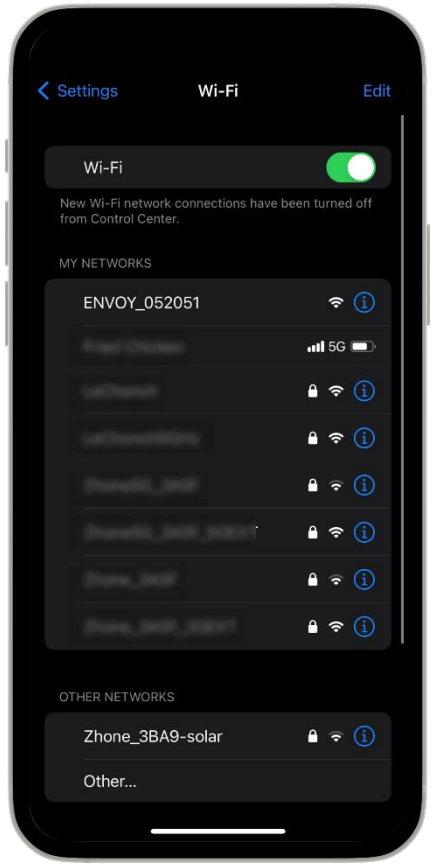
Step 4
Make sure a phone is in the Wi-Fi range of the IQ Gateway.

Briefly press and immediately release the IQ Gateway menu button.

This will enable AP mode.

Once a green LED appears by the phone icon, proceed to step 5.

If the LED flashes, wait two minutes and repeat this step.



Step 5
Navigate again to **Settings** on the mobile device and select **Wi-Fi.**

Step 6
From the list of available networks, select the option that looks like the network name below:

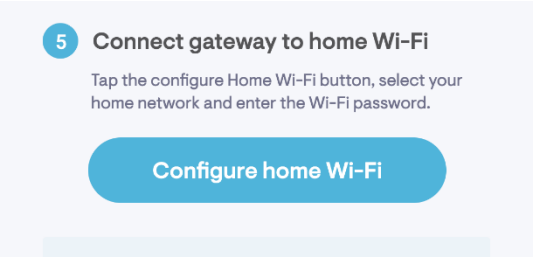
ENVOY_xxxxxx

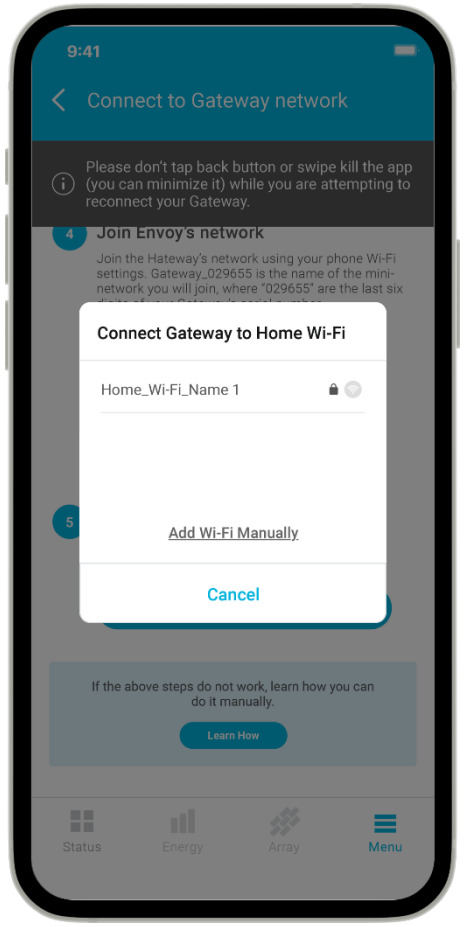
The last six digits of the network will be the IQ Gateway's serial number.

Reconnecting the IQ Gateway using the Enphase App

Step 7
Return to the **Reconnect to IQ Gateway** screen in the Enphase App.

Scroll down and select **Enable/Disable home Wi-Fi.**

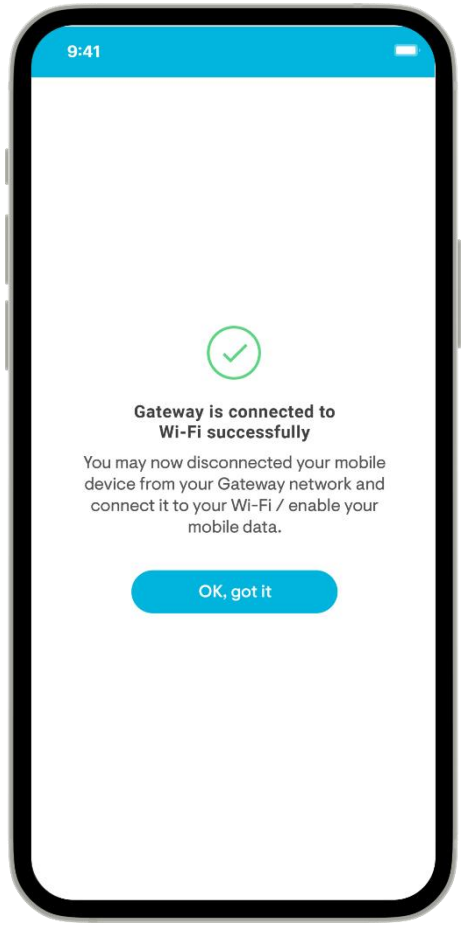




Step 8
On the pop-up that appears, select the correct network from the list of available networks.

Enter the Wi-Fi password and select **Connect.**

It may take a few minutes to establish the connection between the IQ Gateway and the home Wi-Fi.



Step 9
Once the connection is established, the screen will show the message **Gateway is connected to Wi-Fi successfully.**

Select **OK, got it.**

Reconnecting the IQ Gateway using the Enphase App

After reconnecting the IQ Gateway, there may still be a **Gateway Not Reporting** alert. Please note that it may take up to 30 minutes for the status update to display.

Step 10
Once the connection is established, check the LED indicator next to the cloud icon on the IQ Gateway.

If the LED lights up solid green, the IQ Gateway is back online with a successful connection.

The system now needs to re-sync, which can take anywhere from an hour to a few days, depending on how long the system was offline.

If the IQ Gateway is still unable to connect to Wi-Fi, review additional reconnection instructions.

IQ Gateway

IQ Combiner

IQ Gateway reconnection using manual Wi-Fi setup

To watch a video version of the following instructions, visit the link below.

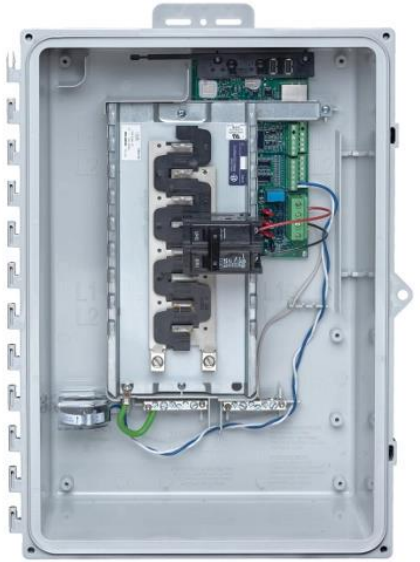
Reconnecting your Envoy S or IQ Gateway using manual Wi-Fi setup

Reconnecting the IQ Gateway using manual Wi-Fi setup

Before reconnecting, find the IQ Gateway.

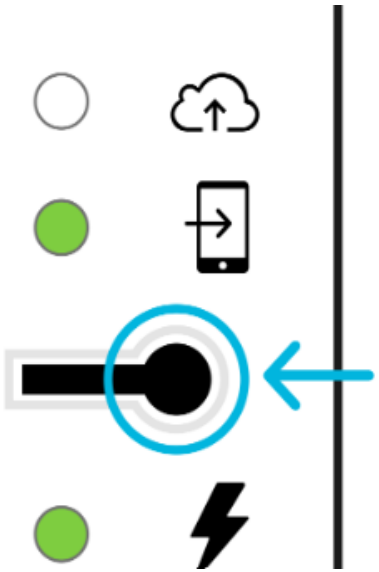
Finding the IQ Gateway

The IQ Gateway will always be located near the electrical circuit breaker panel or near an electrical sub-panel.



The IQ Gateway may be tucked away in a utility room, garage, or outside in a watertight enclosure like the combiners shown on the right.

Reconnecting the IQ Gateway using manual Wi-Fi setup



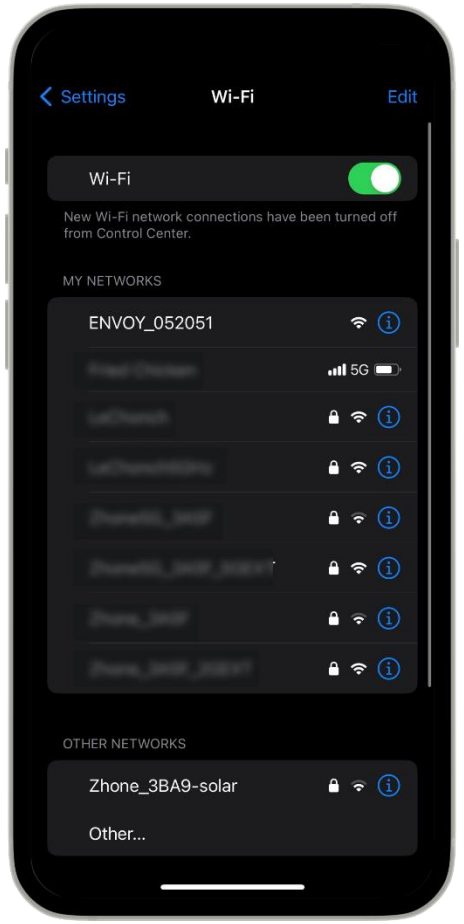
Step 1
Make sure a phone is in Wi-Fi range of the IQ Gateway.

Briefly press and immediately release the IQ Gateway menu button on the IQ Gateway.

This will enable AP mode.

Once a green LED appears by the phone icon, proceed to step 2.

If the LED flashes, wait two minutes and repeat this step.



Step 2
Navigate again to **Settings** on the mobile device and select **Wi-Fi.**

Step 3
From the list of available networks, select the option that looks like the network name below:

ENVOY_xxxxxx

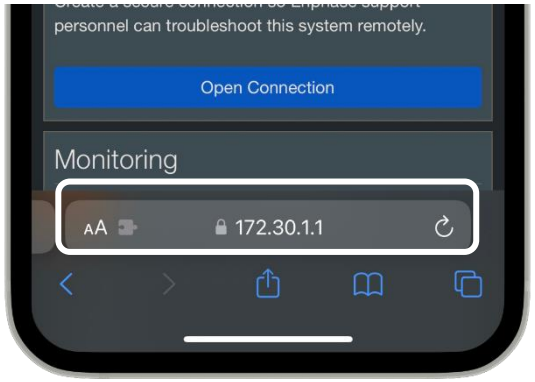
The last six digits of the network will be the IQ Gateway's serial number.

Reconnecting the IQ Gateway using manual Wi-Fi setup

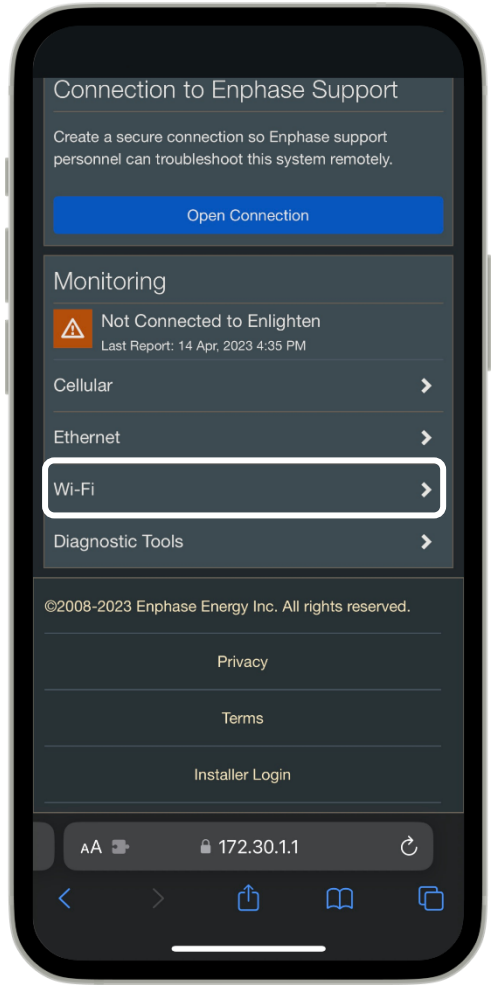
Step 4
Open any browser (Chrome, Microsoft Edge, Firefox, etc.) on a device.

In the address bar, type in the following address:

172.30.1.1



The IQ Gateway Configuration page will now load.



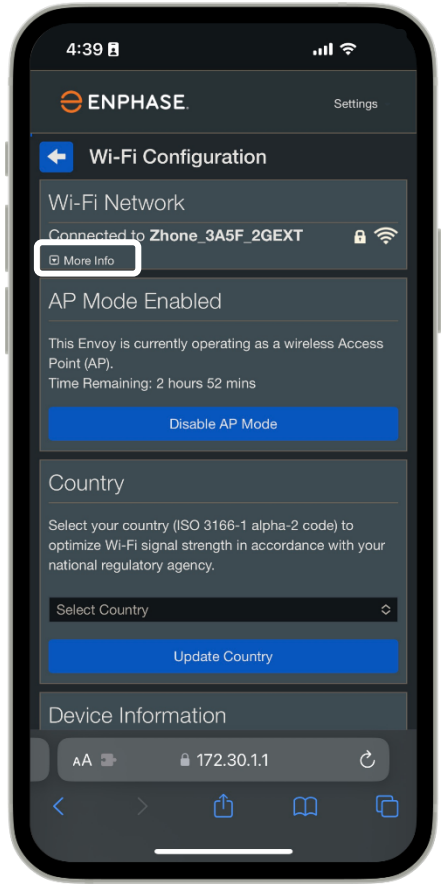
Step 5
Scroll down the IQ Gateway Configuration page and select **Wi-Fi** under the **Monitoring** section.

Step 6
When prompted, provide the IQ Gateway username and password:

Username
envoy

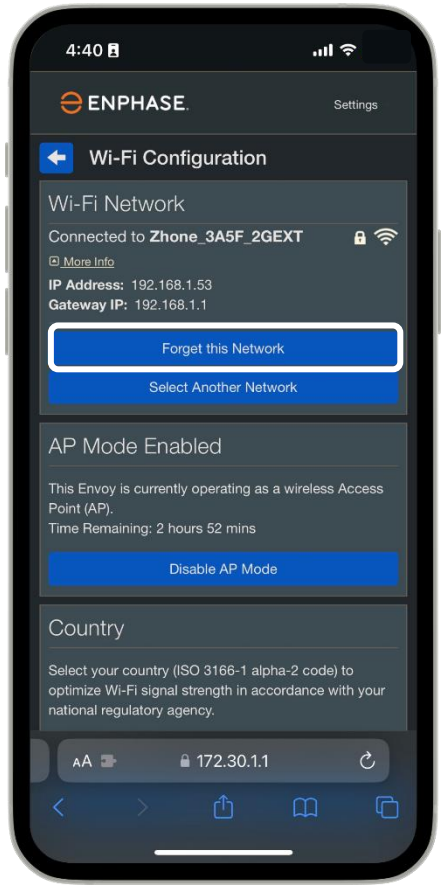
Password
Last six digits of the IQ Gateway's serial number

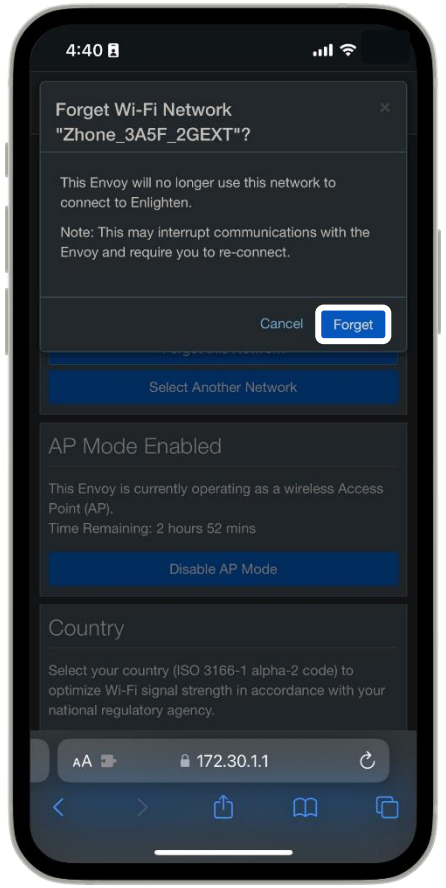
Reconnecting the IQ Gateway using manual Wi-Fi setup



Step 7
The Wi-Fi configuration will still be open.

Select **More Info.**





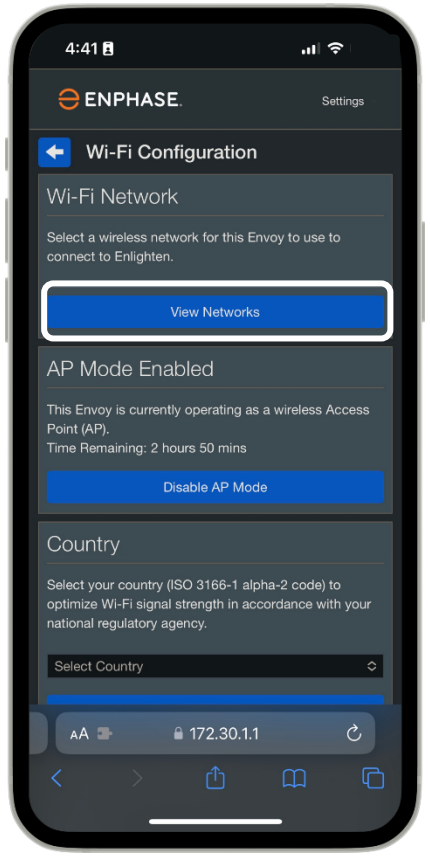
Step 8
Select **Forget this Network.**

A message will appear.

Select **Forget.**

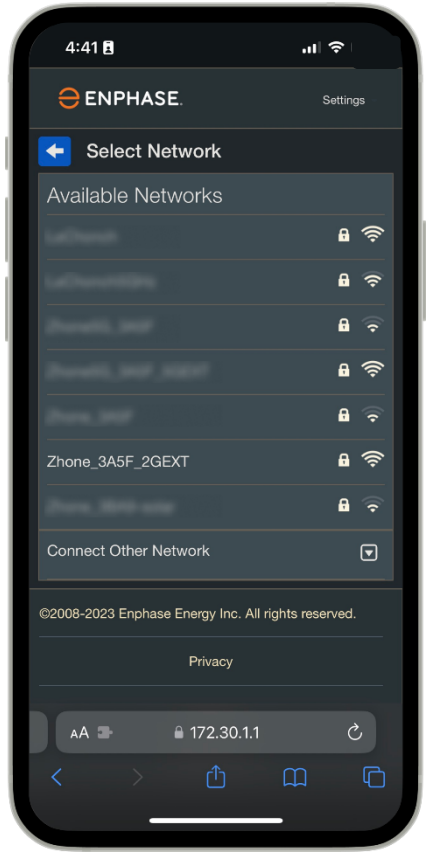
The IQ Gateway will be disconnected from previous Wi-Fi networks.

Reconnecting the IQ Gateway using manual Wi-Fi setup

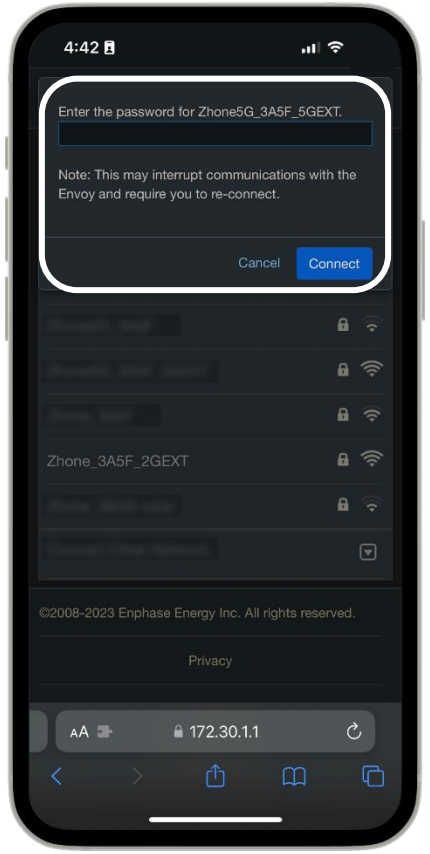


Step 9
The Wi-Fi configuration page will still be open.

Select the **View Networks** option.



Step 10
Select the correct Wi-Fi network from the list of available networks.



Step 11
Enter the password for the network.

Select **Connect.**

Reconnecting the IQ Gateway using manual Wi-Fi setup

Step 12
Once the connection is established, check the LED indicator next to the cloud icon on the IQ Gateway.

If the LED lights up solid green, the IQ Gateway is back online with a successful connection.

The system now needs to re-sync, which can take anywhere from an hour to a few days, depending on how long the system was offline.

IQ Gateway

IQ Combiner

Learning check

- Explain how to check if an IQ Gateway is connected to the internet.
- Explain how to reconnect an IQ Gateway using the Enphase Installer App.
- Explain how to reconnect an IQ Gateway using manual Wi-Fi setup.

Troubleshooting power line communications

To watch a video version of the following instructions, visit the link below.

How to troubleshoot powerline noise between the Gateway and the microinverters

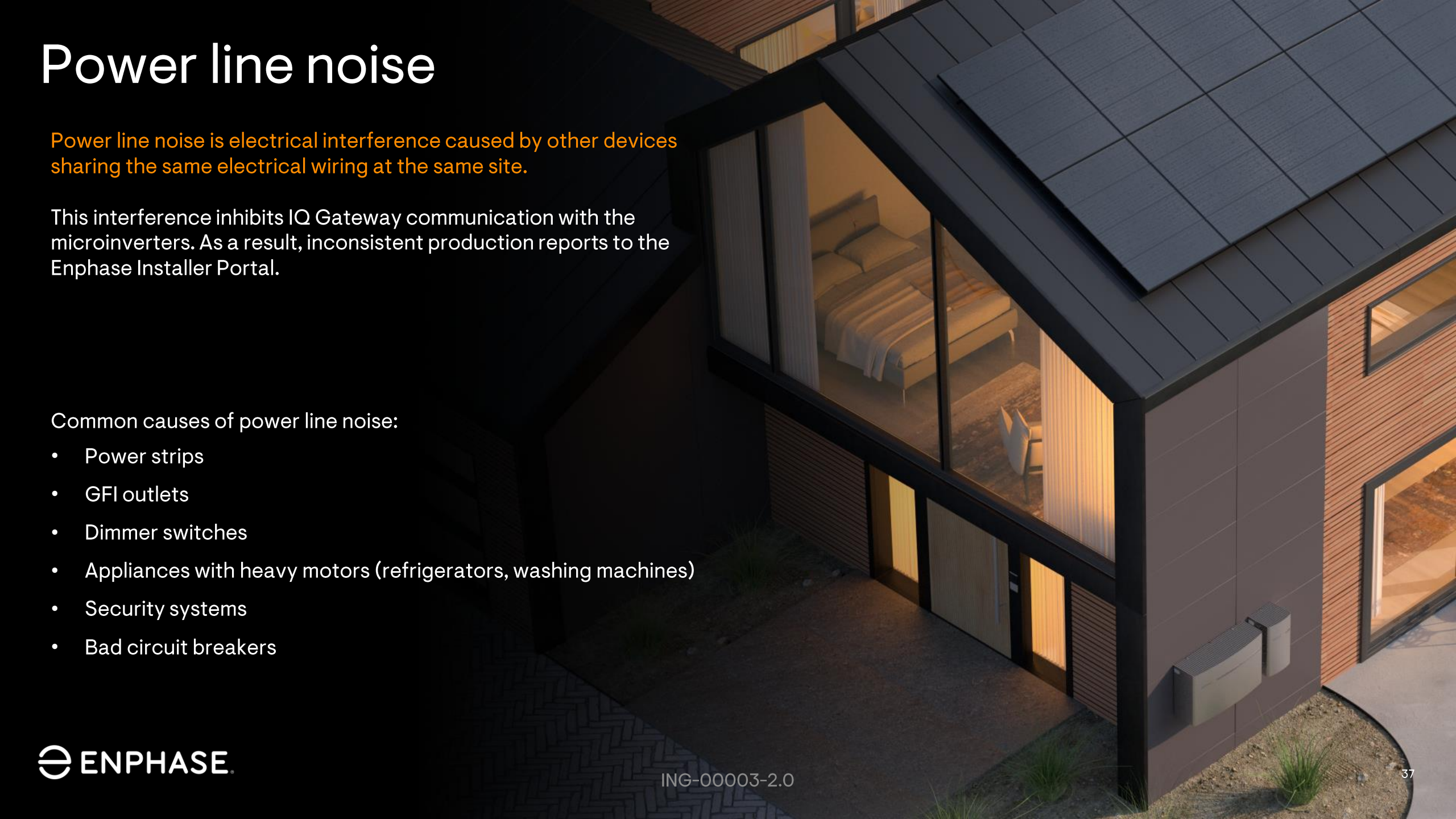
Learning objectives

- Understand what power line noise is.
- Understand how to recognize power line communication issues.
- Understand how to connect an IQ Gateway to the Enphase Installer Portal.
- Understand how to perform a noise check using the Enphase Installer App.
- Understand how to reduce noise interference per system type.

Power line noise

Power line noise is electrical interference caused by other devices sharing the same electrical wiring at the same site.

This interference inhibits IQ Gateway communication with the microinverters. As a result, inconsistent production reports to the Enphase Installer Portal.



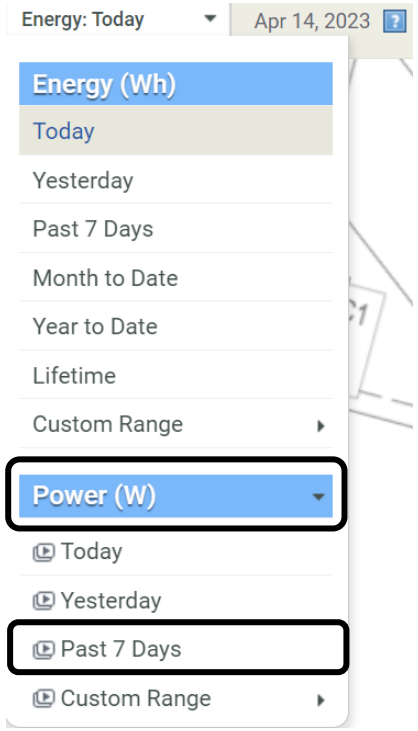
Common causes of power line noise:

- Power strips
- GFI outlets
- Dimmer switches
- Appliances with heavy motors (refrigerators, washing machines)
- Security systems
- Bad circuit breakers

Production issues and noise

If microinverters are reporting production to the IQ Gateway irregularly or at night, this could be a power line communication issue due to noise interference.

To assess production reporting, follow the instructions below :



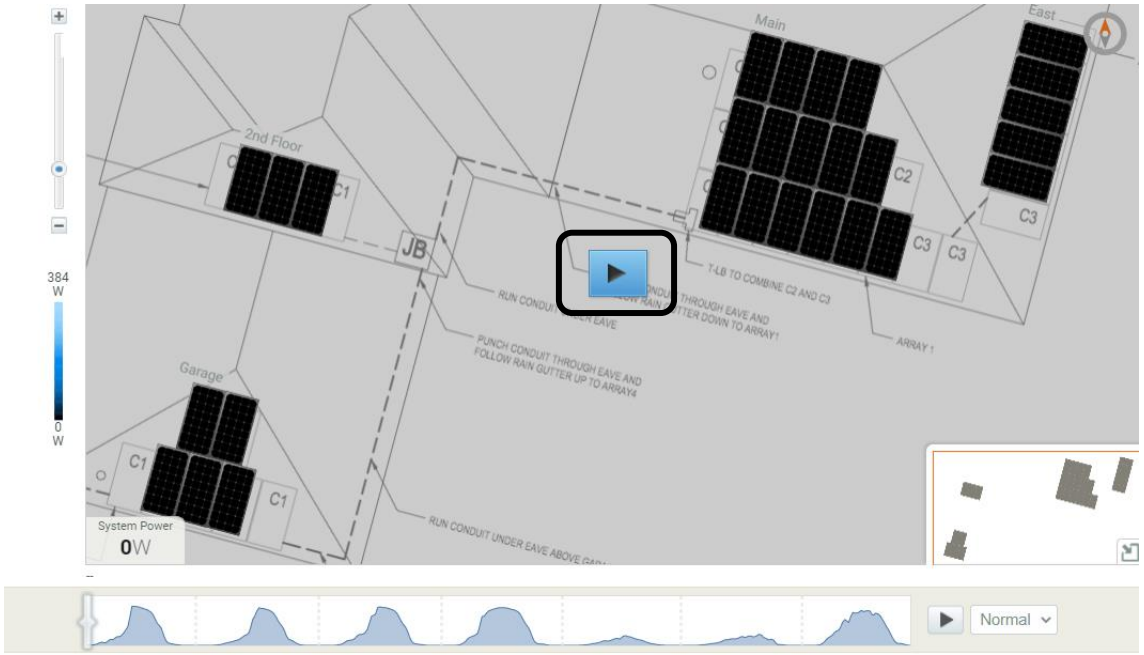
Step 1
Log in to the Enphase Installer Portal.

Step 2
Click the top-right drop-down menu on the **Systems** page.

Select **Power**.

Step 3
Select **Past 7 Days.**

Production issues and noise



Production graph is showing plateaus rather than peaks.

Step 4

Press the play icon and watch the production on both the panel array and the graph below it.

- Does the array panel report sporadic production, or production during the night?
- Does the graph pattern show plateaus rather than peaks?

If so, an installer can use the Enphase Installer App to assess whether the power line communication issues are caused by noise interference.

Preparing for a noise check

Preparing for a noise check

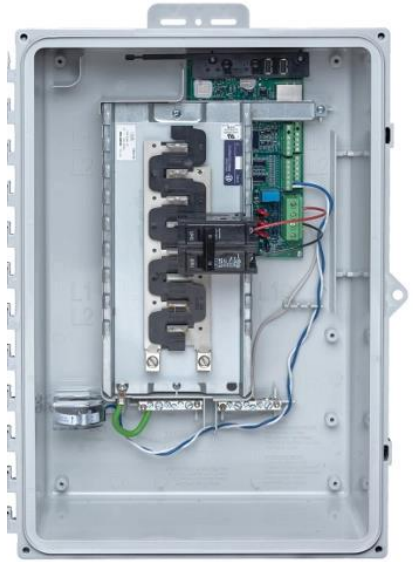
The customer's IQ Gateway will not be able to collect data from the microinverters if there are power line communication issues. However, once resolved, all the previously missing data will load.

Using the Enphase Installer App, installers can monitor real-time power line communications between the IQ Gateway and microinverters to detect power line noise.

An installer MUST be on-site to run a noise check.
Noise checks can ONLY be completed using the Enphase Installer App.

Identify IQ Gateway type

Before running a noise check, the installer must first identify the IQ Gateway type.



Finding the IQ Gateway

The IQ Gateway will always be located near the electrical circuit breaker panel or near an electrical sub-panel.

The IQ Gateway may be tucked away in a utility room, garage, or outside in a watertight enclosure like the combiners shown on the left.

Identify IQ Gateway type

Once the system is located, refer to the images below to determine the IQ Gateway model.

IQ Gateway, Envoy-S Metered, Envoy-S Standard

Envoy R
(Noise check unavailable)

EMU
(Noise check unavailable)

The Envoy-R and EMU models are NOT compatible with Enphase Installer App noise check capabilities.

However, this guide does cover noise reduction options for these systems.

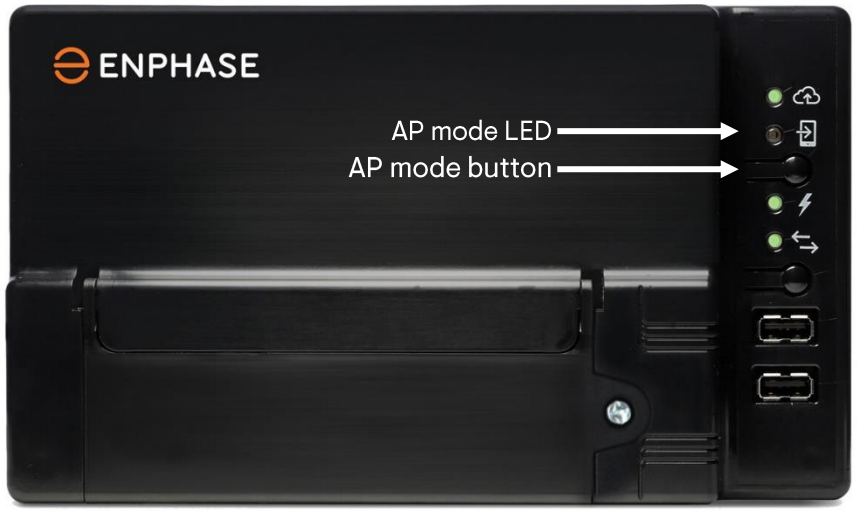
Enable wireless AP

Before running a noise check on the IQ Gateway, Envoy-S Metered, or Envoy-S Standard, the installer must enable wireless AP (Access Point) mode on the IQ Gateway and connect it to the Installer App.

Enabling AP mode

Step 1
Quickly press and release (do not hold) the AP Mode button until the AP Mode LED lights solid green.

Step 2
Select **Settings** on a mobile device, then select **Wi-Fi**.



Enable wireless AP

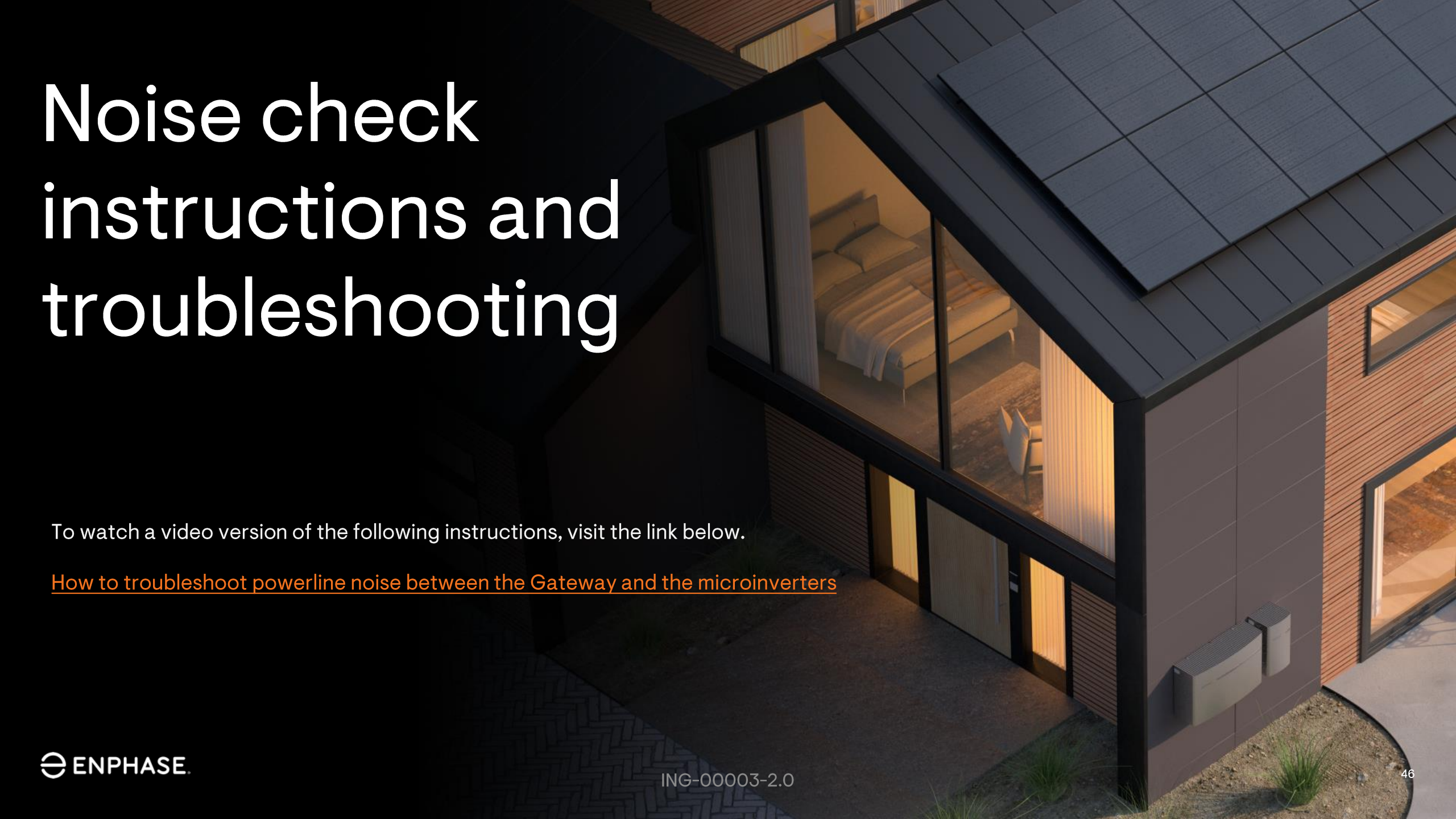
Step 3
From the list of available networks, select the option that looks like the network name below:

ENVOY_xxxxxx

The last six digits of the network will be the IQ Gateway's serial number.

The IQ Gateway should successfully connect to the phone via AP Mode.

Noise check instructions and troubleshooting



To watch a video version of the following instructions, visit the link below.

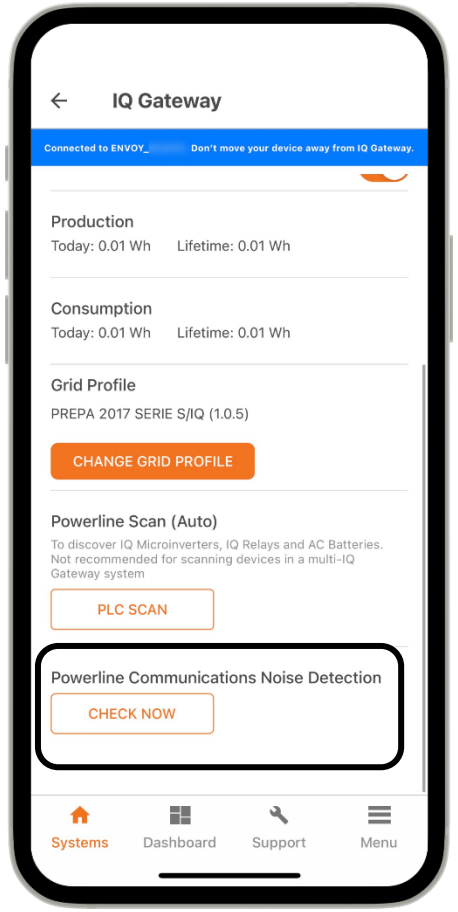
How to troubleshoot powerline noise between the Gateway and the microinverters

Noise checks

Once the Enphase Installer Portal is open, the installer can run a noise check.

Step 1
Select **Systems** on the bottom left of the taskbar.

Step 2
Select **IQ Gateway.**



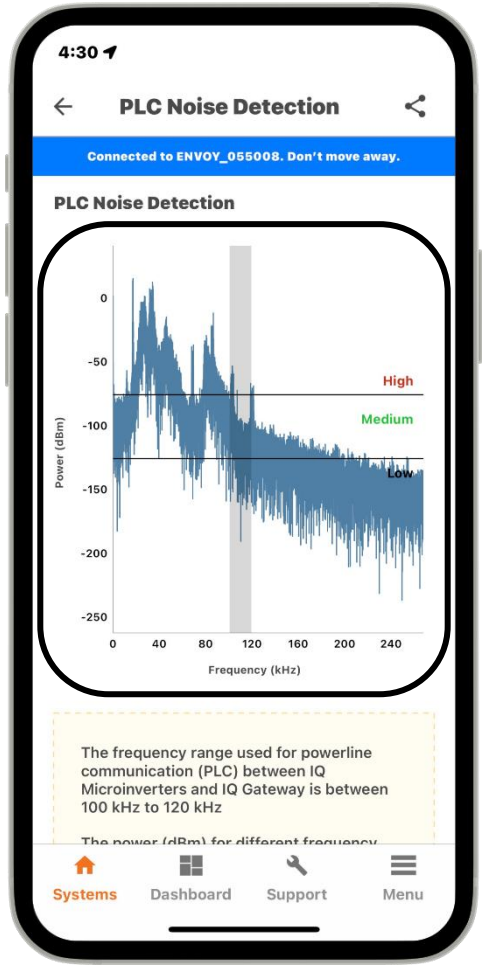
Step 3
Under the **Powerline Communications Noise Detection** heading, select **CHECK NOW.**

A noise check will now run.

Noise checks

When the noise check is complete, a report will display the noise level.

High noise detected:	Greater than -75 dBm
Medium noise detected:	Between -75 dBm and -125 dBm
Low noise detected:	Less than -125 dBm



If medium to high noise is detected, the installer will need to troubleshoot noise reduction.

If low noise is detected, try relocating the IQ Gateway closer to the source of electricity and testing the communication again. If issues persist, RMA is needed.

Troubleshooting power line noise

Noise reduction:
IQ Gateway and IQ Gateway S-Metered

To reduce noise interference on an IQ Gateway or IQ Gateway S-Metered, Enphase recommends installing a **radius power line filter**.

Visit this link to view radius power line filter pricing, specifications, and installation instructions.

Troubleshooting power line noise

Noise reduction:
IQ Gateway-S Standard, Envoy-R, and EMU

If an installer is troubleshooting an IQ Gateway-S Standard, Envoy-R, or EMU, they should first try relocating the system by unplugging the device and moving it to a separate circuit in the home.

Once the device is relocated, the installer will need to confirm that the IQ Gateway is successfully communicating with the microinverters.

Communication check: Envoy-R and EMU

Check the LCD display indicating the microinverter count in the lower-right corner.

If the correct count is displayed, this indicates that communication has been restored.

Communication check: IQ Gateway-S Standard

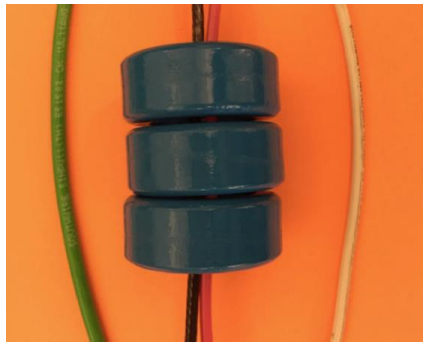
Check the fourth LED from the top, which is the communication LED.

If the LED is green, this indicates that communication has been restored.

Troubleshooting power line noise

Noise reduction:
Envoy-R, EMU, Envoy-S Standard, and Envoy-S Metered

In addition to relocating the device, Enphase also recommends trying to isolate the source of the power line noise by installing ferrite toroid rings on the suspected circuit.



View installation instructions for ferrite toroid rings.

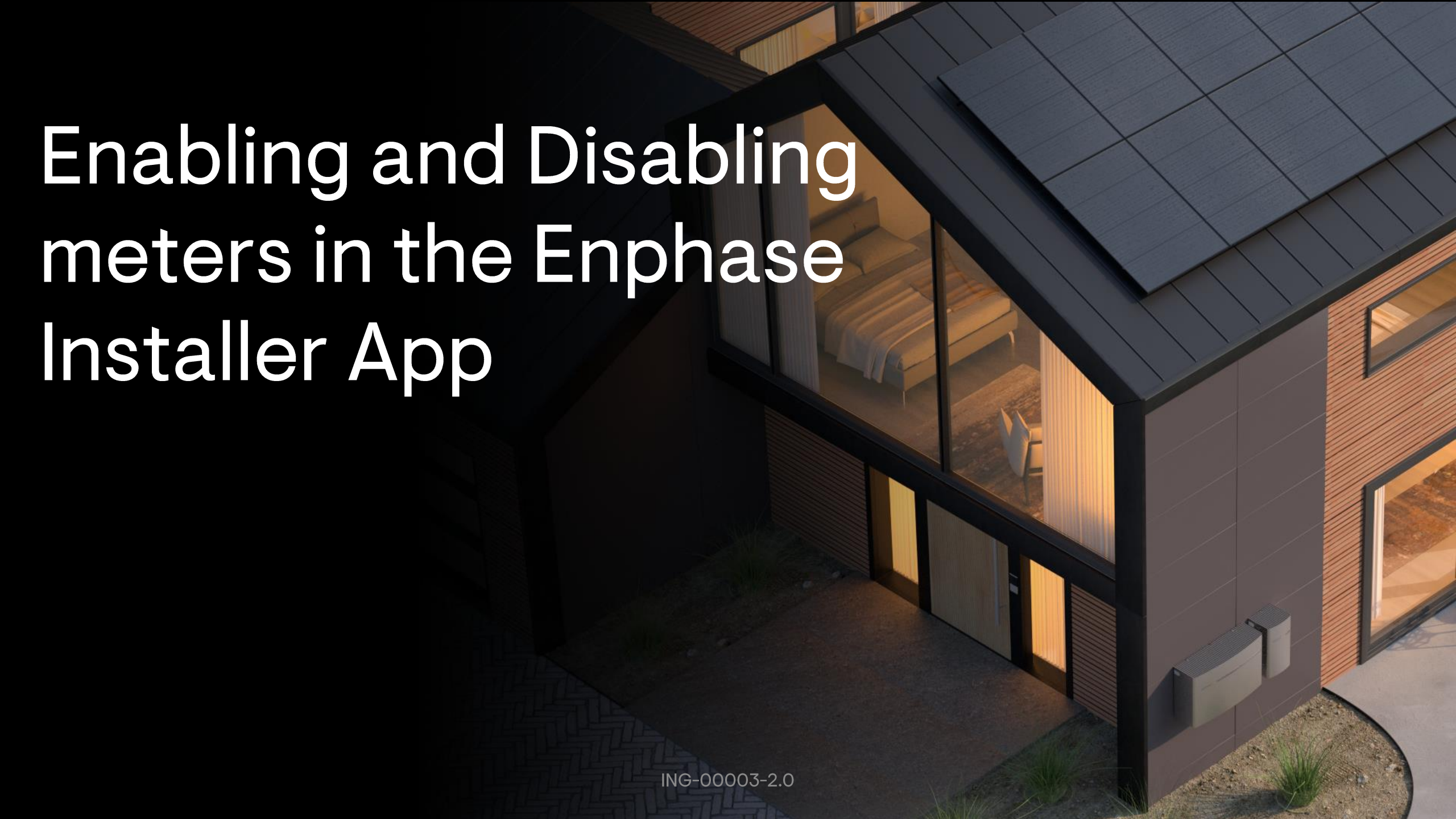
If the system is still impacted by power line noise even after relocating the device and installing ferrite rings, the best practice is to install a dedicated circuit off the main service panel to isolate the system's power. Please contact an electrician to do so.

After installing a dedicated circuit, the installer can install ferrite toroid rings at the new location for extra precaution.

Learning check

- Define power line noise.
- Explain how to recognize power line communication issues.
- Explain how to connect an IQ Gateway to the Enphase Installer Portal.
- Explain how to perform a noise check using the Enphase Installer App.
- Explain how to reduce noise interference per system type.

Enabling and Disabling meters in the Enphase Installer App



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Learning objectives

- Explain how to enable and disable CTs in the Enphase Installer Portal.
- Explain how to enable and disable CTs in the Enphase Installer Portal.

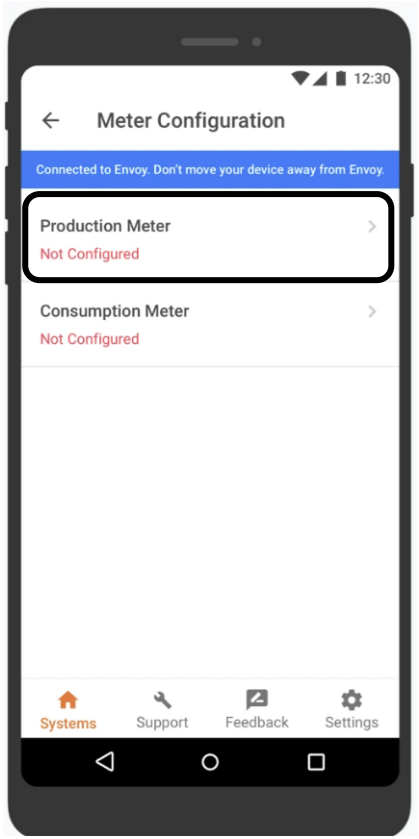
Enabling and Disabling Production CTs in the Enphase Installer App

Often, when troubleshooting or commissioning a system, it will become necessary to enable or disable the Production Meter.

Step 1
Select the system under the **Systems** tab.

Step 2
Confirm that the Installer App is connected to the IQ Gateway on the **IQ Gateway Connectivity** page.

If not connected, please refer to the reconnection instructions.



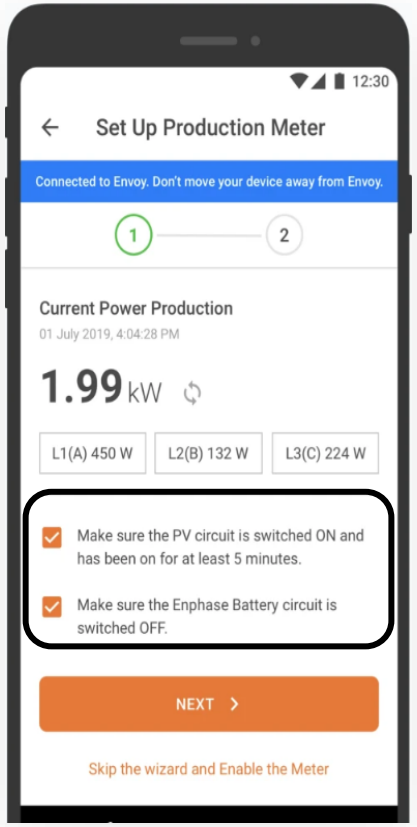
Step 3
Navigate to **Meter Configuration** and select **Production Meter**.

Select **Yes** to use the wizard.

To watch a video version of this information, visit the link below.

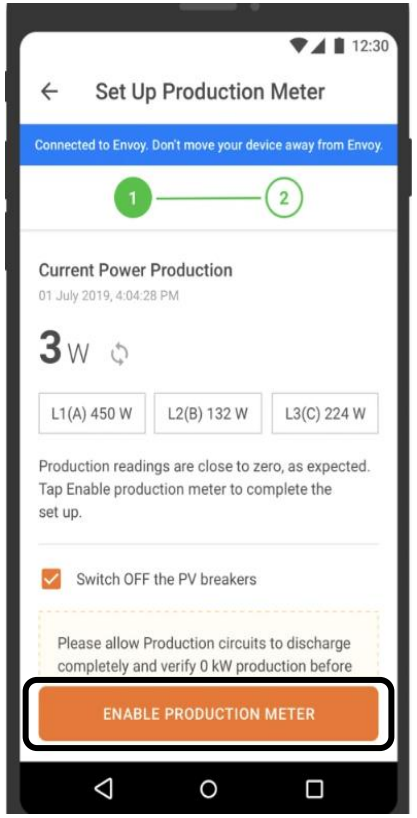
How to enable Production Meter using ITK 3.0

Enabling and Disabling Production CTs in the Enphase Installer App



Step 4
Confirm that the PV circuit and Enphase Battery circuit are switched on by checking the boxes indicated.

Once they are both checked, wait at least five minutes before selecting **NEXT**.



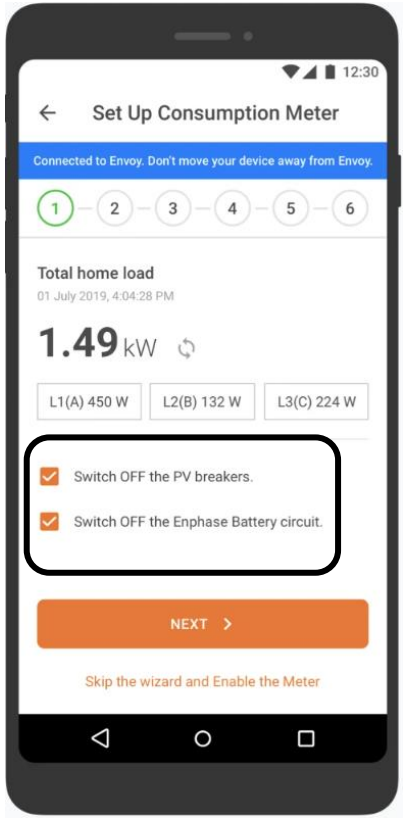
Step 5
Select **Switch OFF the PV breakers** and observe the reading decrease.

When the value reaches zero, select **ENABLE PRODUCTION METER.**

To disable the meter, repeat these steps and select **DISABLE PRODUCTION METER.**

Enabling and Disabling Consumption CTs in the Enphase Installer App

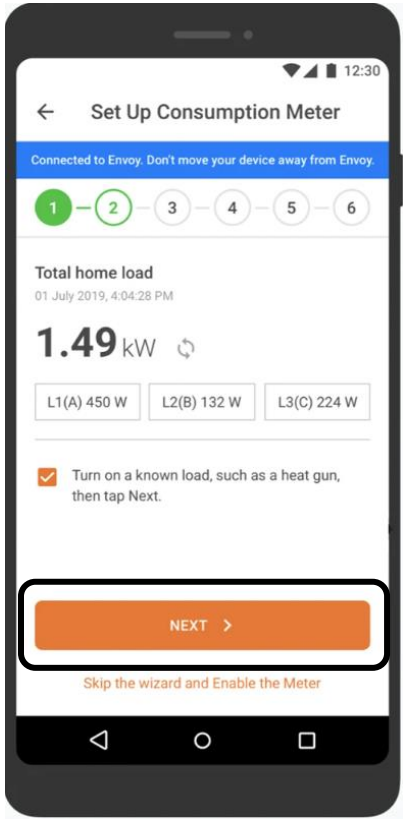
The below steps provide instructions on configuring the Consumption Meter.



Step 1
Select the **Set Up Consumption Meter** option.

Confirm that the System/PV breakers are turned off by checking the boxes indicated.

Once both boxes are checked, wait at least five minutes before selecting **NEXT**.



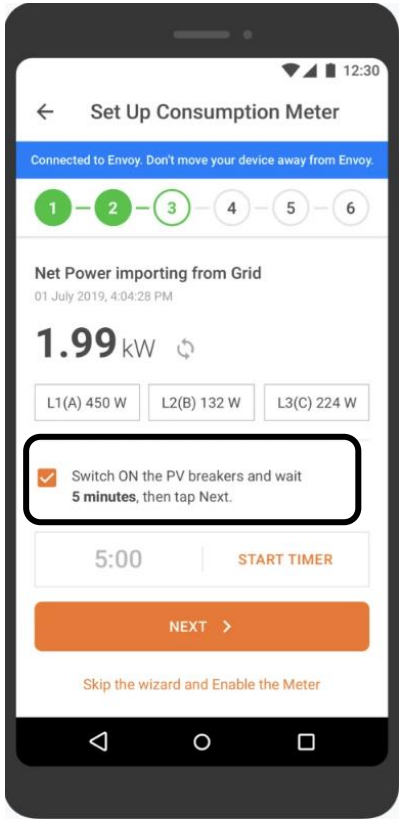
Step 2
Turn on a known load by checking the indicated box.

A pop-up will appear.

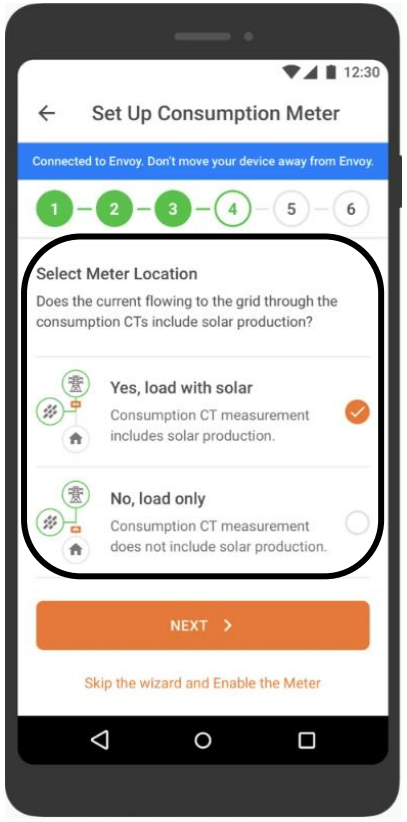
Select **Yes.**

Select **NEXT**.

Enabling and Disabling Consumption CTs in the Enphase Installer App

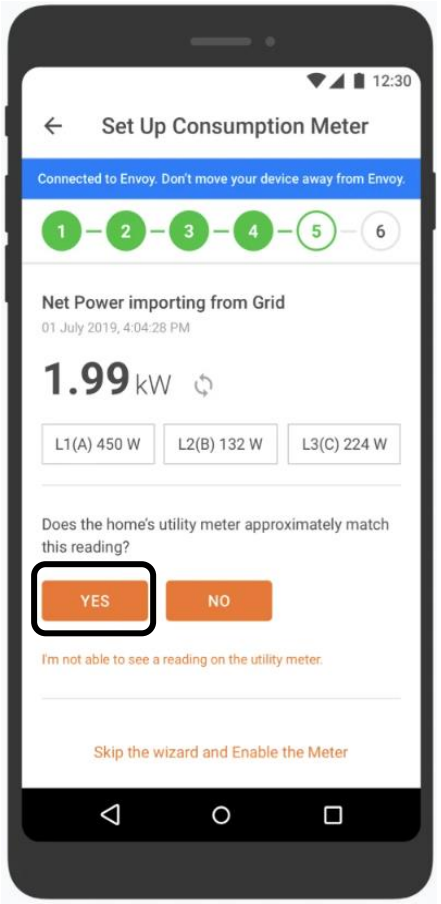


Step 3
Turn on power production by checking the box indicated.



Step 4
Select the meter location and load type setting.

Enabling and Disabling Consumption CTs in the Enphase Installer App



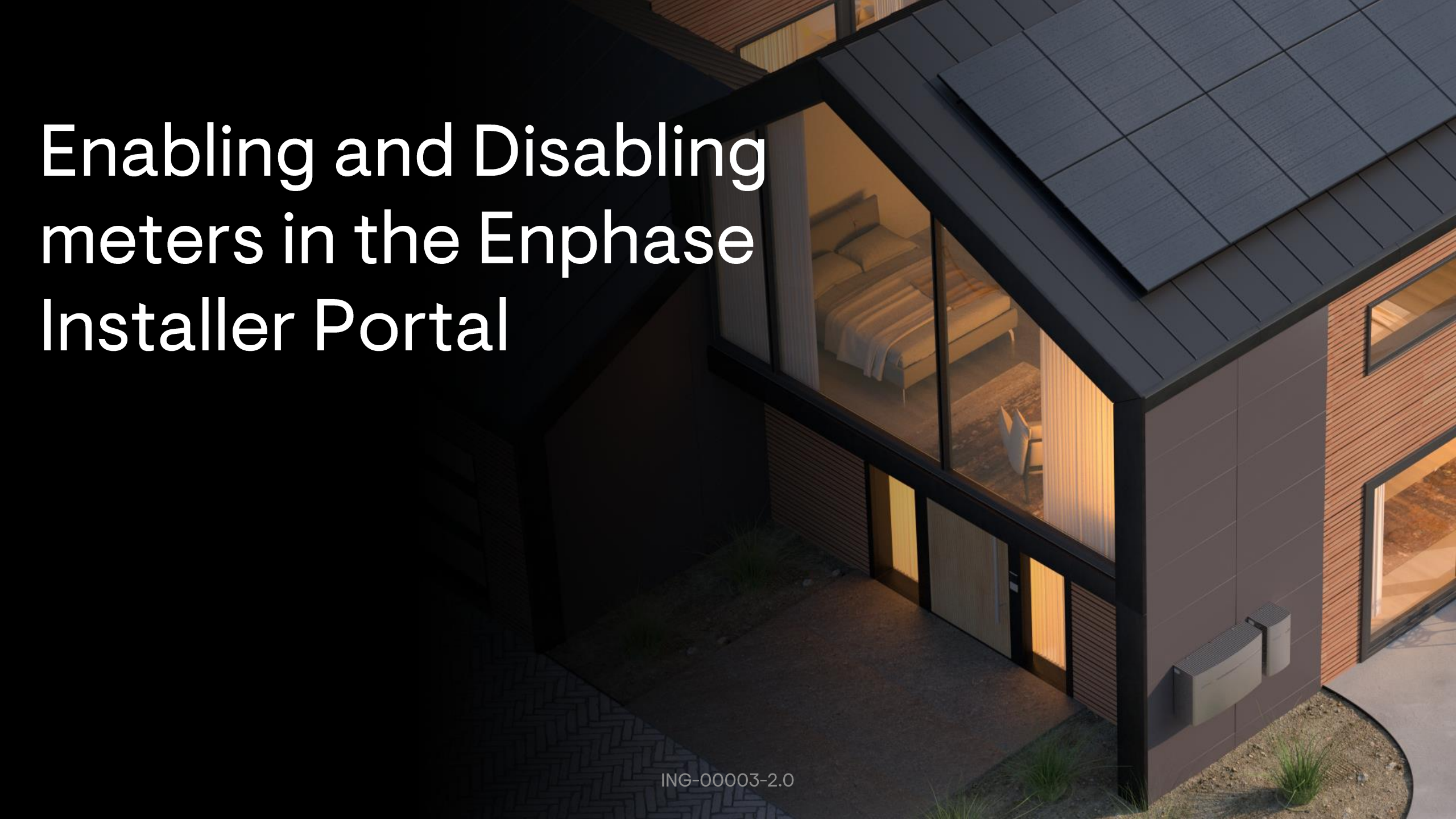
Step 5
Verify that the readings match.

Select **Yes.**

Select **ENABLE CONSUMPTION METER.**

To disable the meter, repeat these steps and select the **DISABLE CONSUMPTION METER** option.

Enabling and Disabling meters in the Enphase Installer Portal



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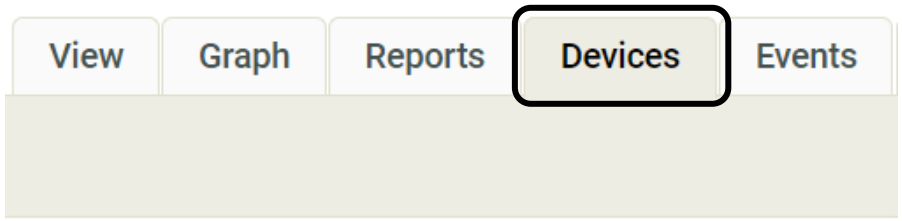
Enabling and Disabling Consumption CTs in the Enphase Installer Portal

An installer can enable and disable meters in the **Devices** tab from the main page of the Enphase Installer Portal.



Production Meter

Meter Type	Part Number	Serial Number	Lifetime Energy	Last Report	Status
Enphase Integrated Production Meter Single-Phase (L-L)			21.3 MWh	03/28/2023 11:25 AM PDT	Normal

Consumption Meter

Meter Type	Part Number	Serial Number	Config Type	Lifetime Energy	Last Report	Status
Enphase Integrated Consumption Meter Single-Phase (L-L)			Load with Solar production	204 MWh	03/28/2023 11:25 AM PDT	Normal

If a meter is already enabled, its status will show as **Normal**.

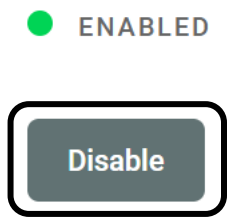
Select the meter link that is being enabled or disabled.

Enabling and Disabling Consumption CTs in the Enphase Installer Portal

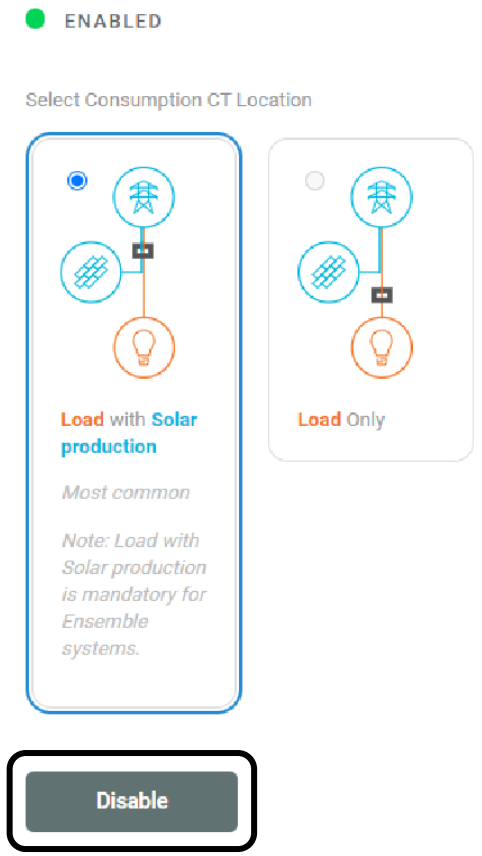
The installer can now change the CT setting in the window that appears.

The installer will see the option to either **Disable** or **Enable.**

Production Meter View



Consumption Meter View



Learning check

- How can an installer enable and disable CTs in the Enphase Installer App?
- How can an installer enable and disable CTs in the Enphase Installer Portal?

Reverse CT polarity

To watch a video version of the following instructions, visit the links below.

How to change the CT polarity using the Installer Portal

Learning objectives

- Explain how to identify meter reporting issues.
- Explain how to check and switch the load type setting.
- Explain how to check and update the software version.
- Explain how to remotely reverse CT polarity.

CT polarity

Sometimes the Production and Consumption Meters are inadvertently reversed when commissioned. This results in the meters giving negative readings.

To resolve this problem, installers can reverse the polarity of the meters from the Enphase Installer Portal to ensure correct readings are observed.

Polarity reversal can only be completed in the Enphase Installer Portal.

- This feature applies to both Production CTs and Consumption CTs.
- Polarity reversal can be done on either or both lines of the CTs.

This feature allows installers to remotely change the polarity on the CTs if:

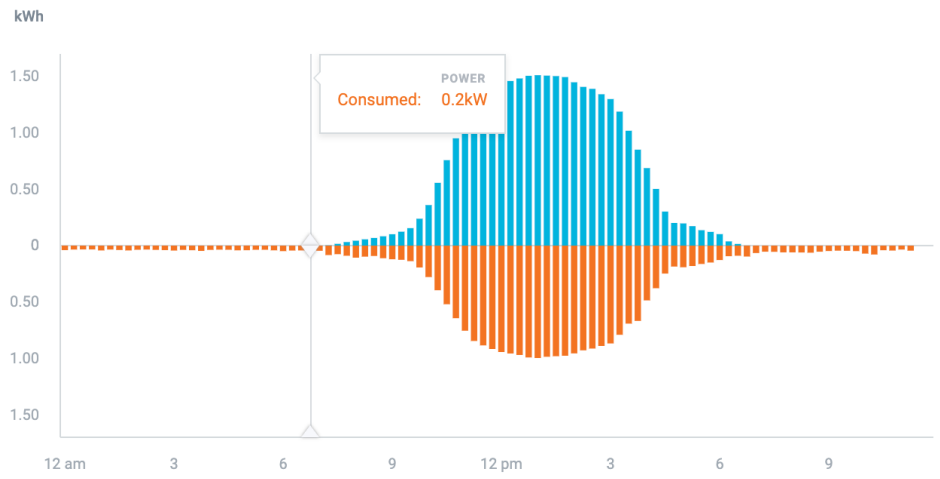
- They have been installed incorrectly.
- The phase lines have been wired incorrectly.
- A CTs' polarity sticker has been incorrectly labeled.

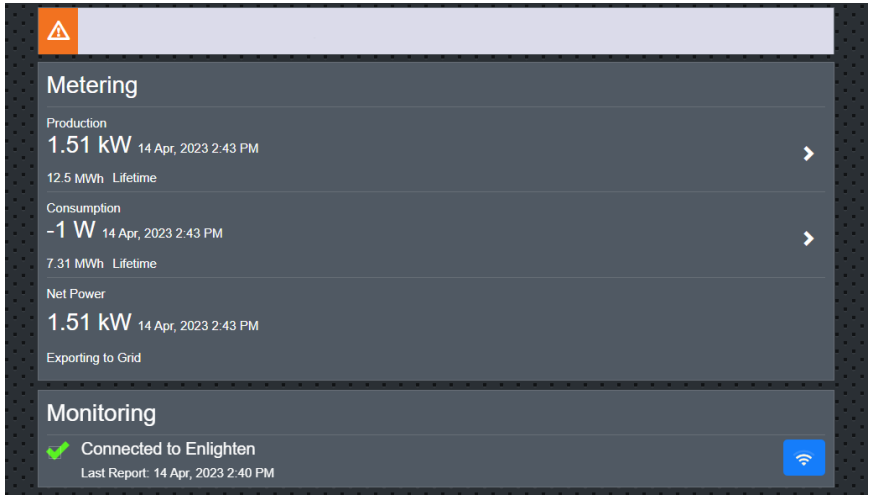
CT polarity reversal: Preparation

Identify meter issues

If a customer notices consumption mirroring production during the day in the Enphase App, this indicates an issue with the CT installation or phasing.

The metering will show negative consumption, even when there is no production.



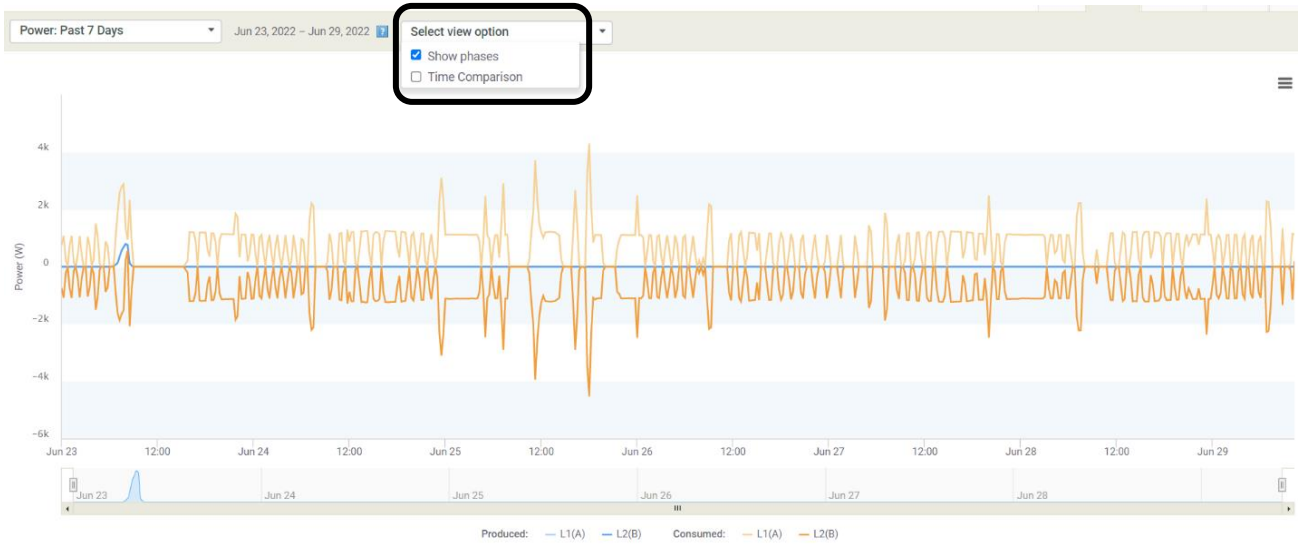


Meter reporting issues indicate that meters may be reporting from the wrong setting, or the polarity on the CTs may need to be reversed.

Consumption is the most incorrectly installed meter.

Check CT polarity

To confirm that there is an issue with CT polarity, log in to the Installer Portal and follow these instructions.



If you cannot see the **Show phases** option, follow these instructions:

1. Select **Settings.**
2. Select **Overview.**
3. Select **Energy and Power Display.**
4. From the options shown, switch the readings from **Microinverter Measurements** to **Meter Measurements.**

Step 1
From the **Systems** tab, select the relevant system.

Step 2
Select the **Graph** tab.

Step 3
Select **Show phases** from the **Select view option** drop-down and check for negative readings.

If the production or consumption readings are consistently negative, this is an indication that one or both lines may be incorrectly installed.

Check load type setting

Before reversing the CT polarity, it is key to make sure the system is on the correct load type setting.

Load Only provides only the consumption details of the home.

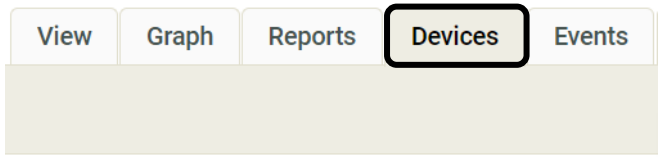
Load with Solar provides load consumption of the home, minus solar energy generation.

For sites with batteries, the system **MUST** be set to **Load with Solar** for accurate measurements.

Check load type setting

Log in to the Enphase Installer Portal to check the load type setting.

Step 1
Select the **Devices** tab.



Step 2
Select the relevant Production or Consumption Meter.

The **CT Summary** page will now open.

Production Meter

Meter Type	Part Number	Serial Number	Lifetime Energy	Last Report	Status
Enphase Integrated Production Meter Single-Phase (L-L)	800-00555-r03		21.3 MWh	03/28/2023 11:25 AM PDT	Normal

Consumption Meter

Meter Type	Part Number	Serial Number	Config Type	Lifetime Energy	Last Report	Status
Enphase Integrated Consumption Meter Single-Phase (L-L)	800-00555-r03		Load with Solar production	204 MWh	03/28/2023 11:25 AM PDT	Normal

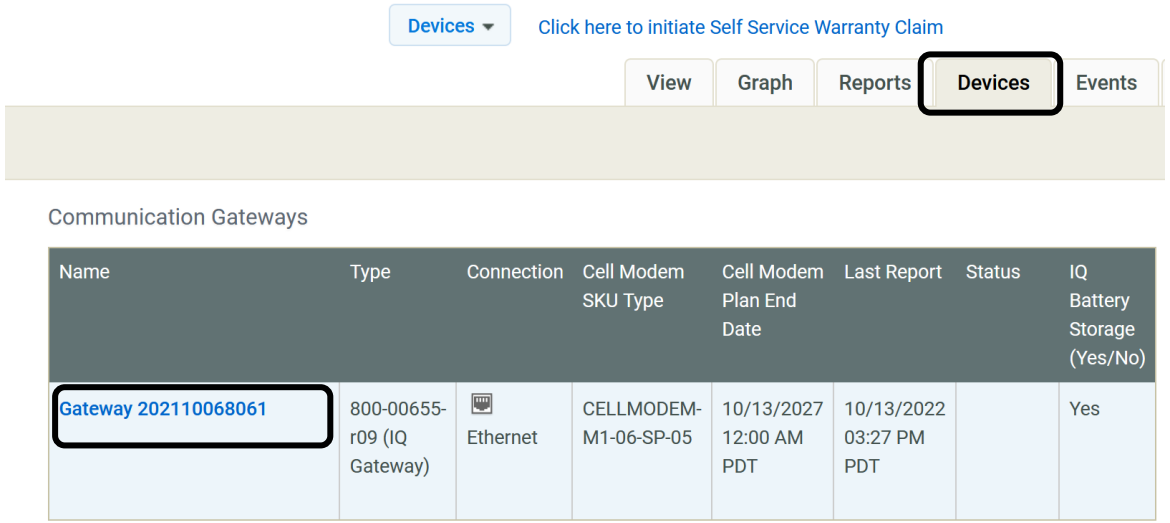
Step 3
Confirm that the correct Consumption CT Location is selected.

Check software version

Before reversing polarity on the CTs, the installer must first confirm that the software version on the IQ Gateway is updated to version **7.01.04** or later.

To check the current software version on the IQ Gateway, open the Enphase Installer App, connect to AP Mode, and follow the instructions on the next page.

Check software version



Step 1
Select the **Devices** tab.

Step 2
Select the IQ Gateway.

A new page will appear. The IQ Gateway version will display as below:

Reversing CT polarity

Reverse CT polarity

Step 1
Select the **Devices** tab.

Production Meter

Meter Type	Part Number	Serial Number	Lifetime Energy	Last Report	Status
Enphase Integrated Production Meter Single-Phase (L-L)	800-00555-r03		21.3 MWh	03/28/2023 11:25 AM PDT	Normal

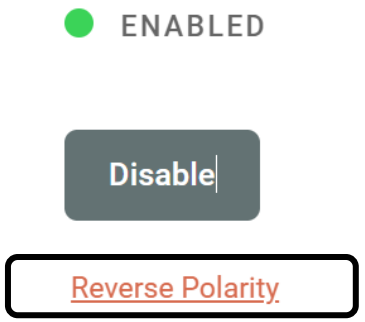
Consumption Meter

Meter Type	Part Number	Serial Number	Config Type	Lifetime Energy	Last Report	Status
Enphase Integrated Consumption Meter Single-Phase (L-L)	800-00555-r03		Load with Solar production	204 MWh	03/28/2023 11:25 AM PDT	Normal

Step 2
Select the relevant Production or Consumption Meter, as shown on the left.

The **CT Summary** page will now open.

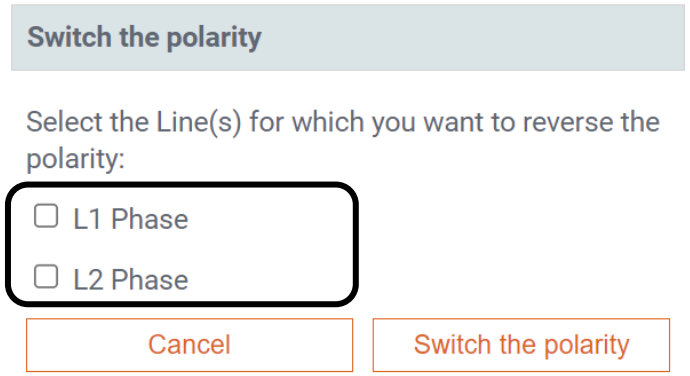
Reverse CT polarity



Step 3

Select **Reverse Polarity.**

A pop-up will appear.



Step 4

Select the relevant phase, then select **Switch the polarity.**

The polarity of the selected CT will now reverse.

After reversing CT polarity in the Enphase Installer Portal, all recorded data is no longer valid.

Make sure to change the meter start date to the day following the reversal. For example, if the CT polarity is reversed on January 1, 2023, the start date should be set to January 2, 2023.

Learning check

- Explain how to identify meter reporting issues.
- Explain how to check the load type setting.
- Explain how to check the software version.
- Explain how to remotely reverse CT polarity.

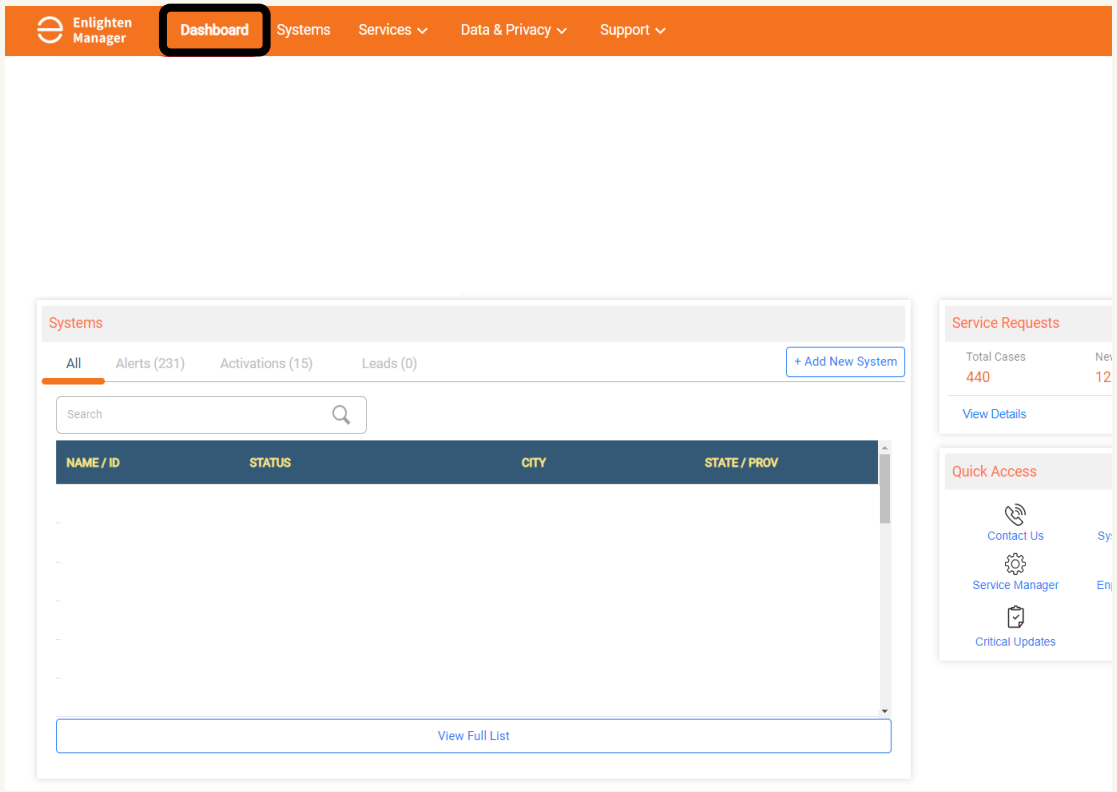
Enphase Installer Portal: Functions

Learning objectives

- Understand the five primary Enphase Installer Portal tabs and the features they contain.
    - Alerts
    - Activations
    - Systems
    - Services
    - Support

The Enphase Installer Portal displays an overview of the installer's customer sites.

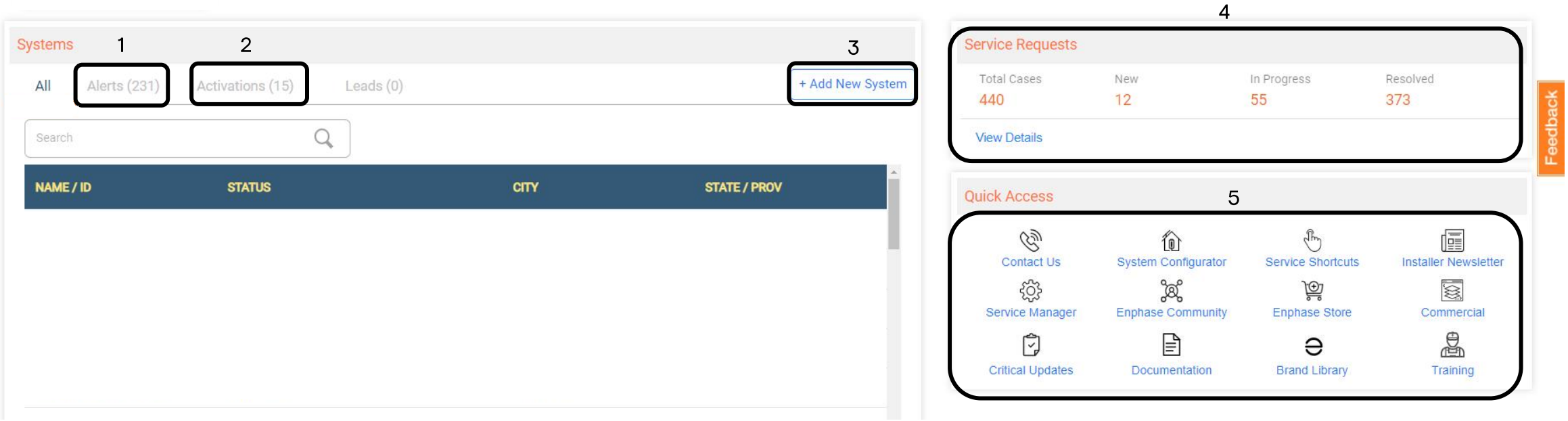
The main landing page is called the **Dashboard.**



Functions of the Enphase Installer Portal

From the Dashboard, installers can view different site functions.

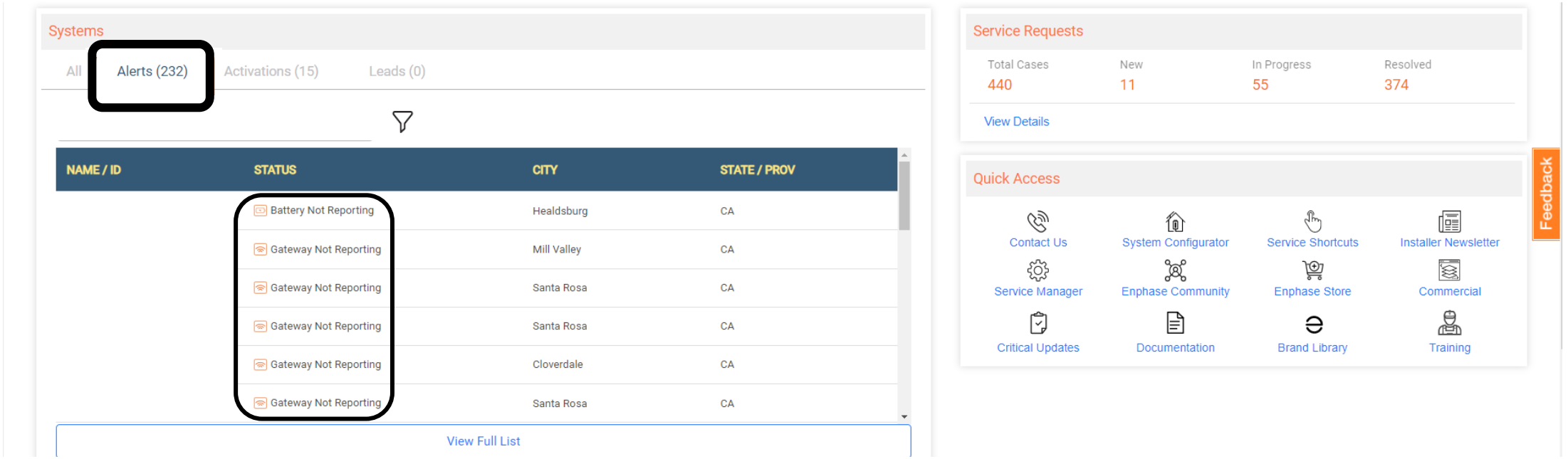
The screenshot below shows available functions:



1. View alerts
2. Verify the status of pending activations
3. Add new systems
4. View service requests
5. Navigate to Quick Access hyperlinks

Enphase Installer Portal: Alerts

Alerts indicates which sites are currently affected and the types of alert impacting the site.



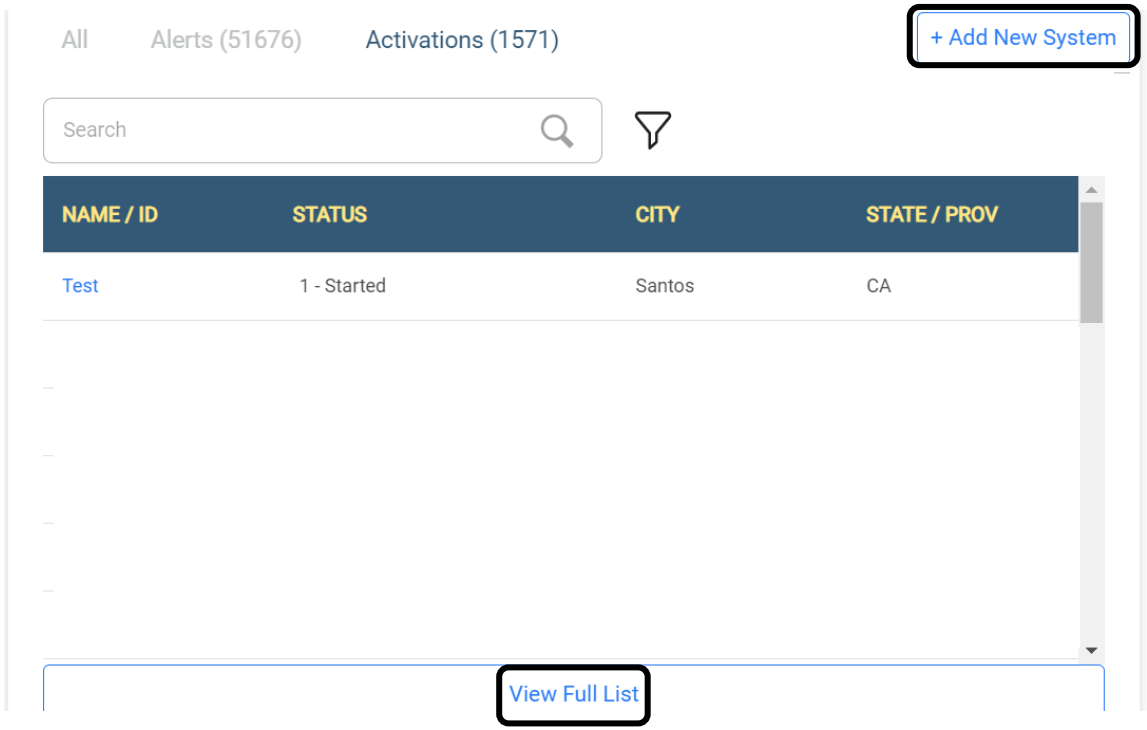
Enphase Installer Portal: Activations

The **Activations** tab allows installers to choose which stage of activation to view, as well as what steps are needed to complete commissioning.

To watch a video version of this information, visit the link below.

Functions: Activations

Enphase Installer Portal: Activations



To add a new system, select **Add New System.**

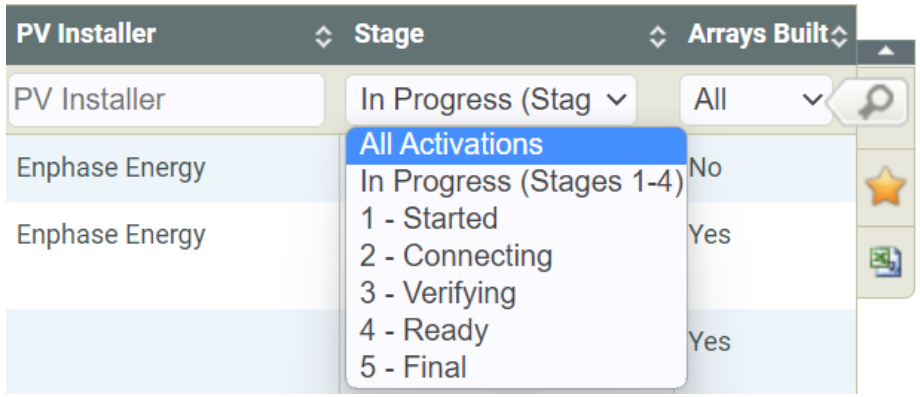
To view the full list of activations, select **View Full List,** where an installer can view or amend an existing activation.

The **Activations** page will open.

Enphase Installer Portal: Activations

In the Activations page, select from the list of activations or use the search tools to view more details.

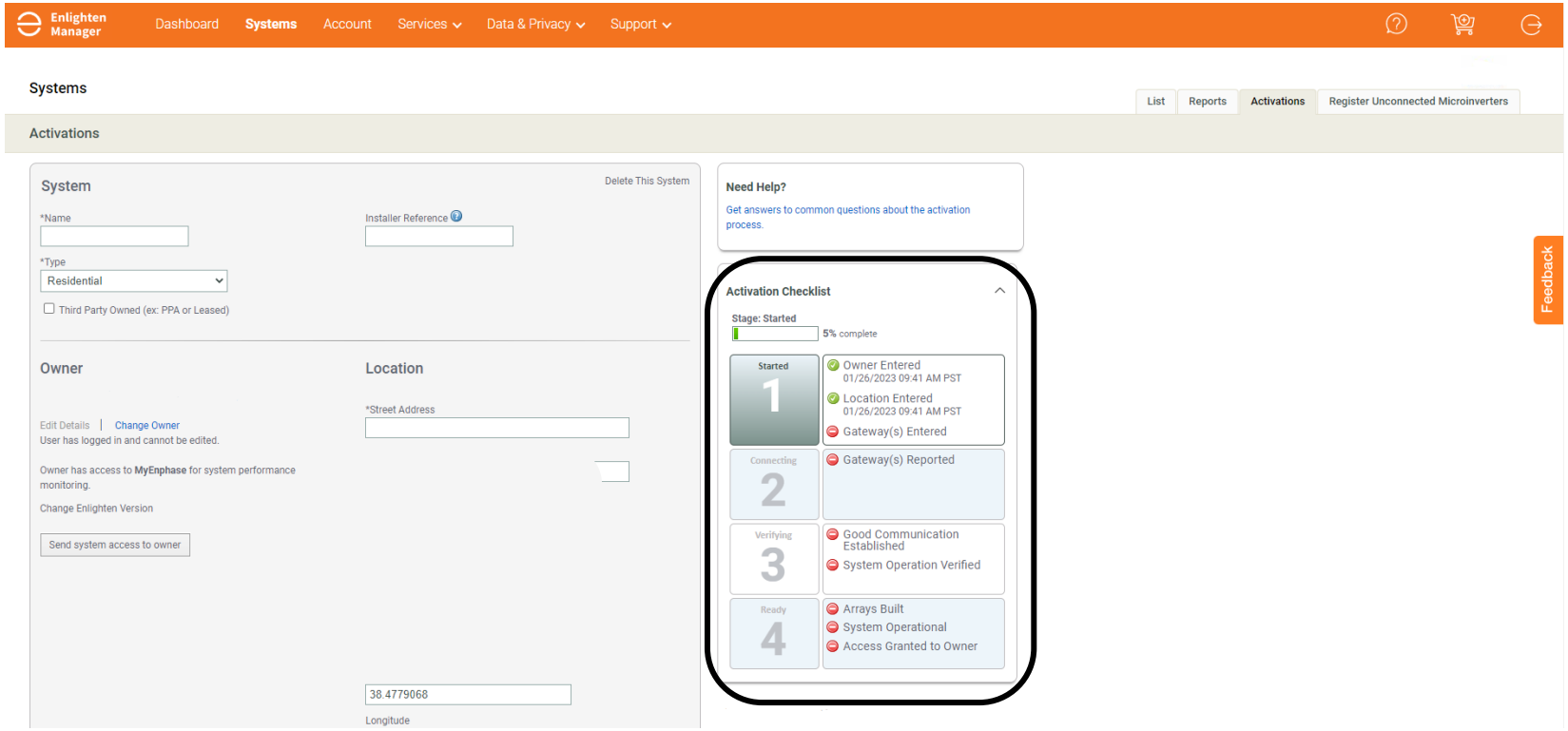
Use the **Stage** drop-down menu to help filter the search.



Once a site is selected, a new page will appear.

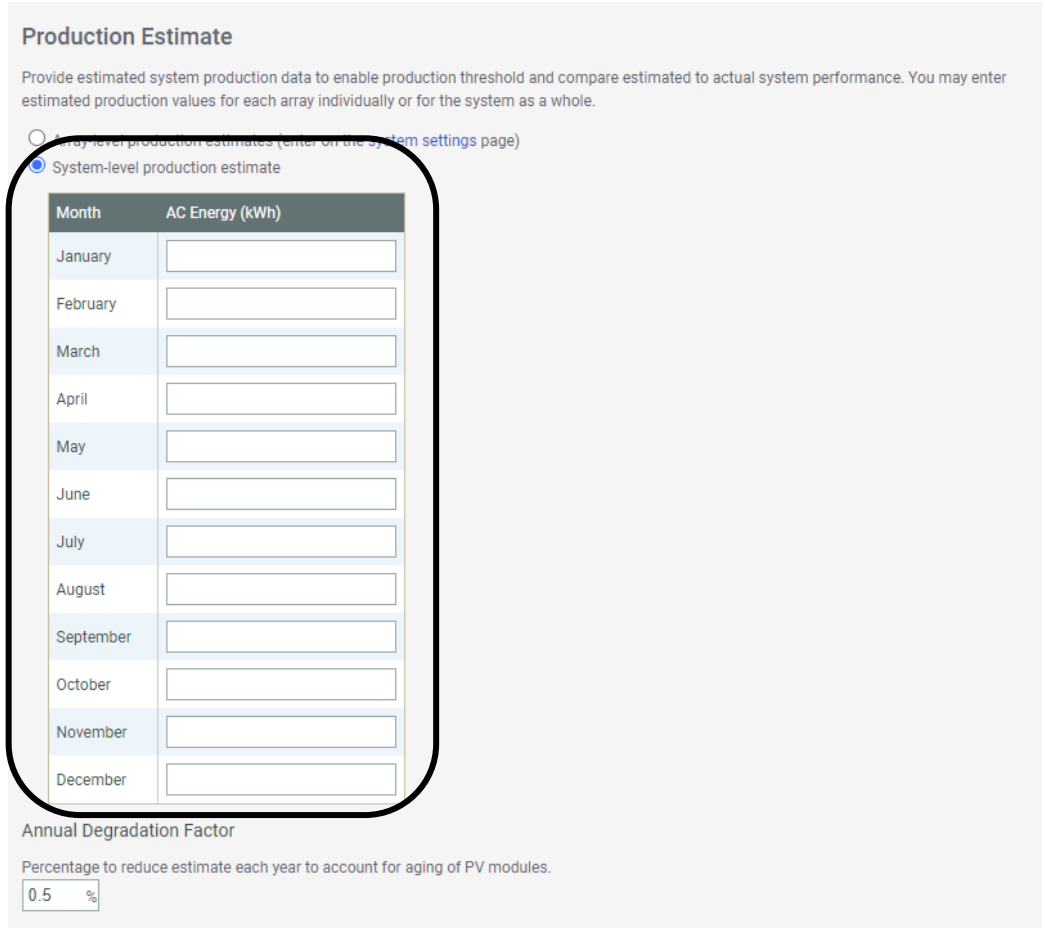
Enphase Installer Portal: Activations

The selected site's time, date, and last update will be displayed in the Activation Checklist.



Enphase Installer Portal: Activations

Installers can enter a site's production estimates in the **Activations** tab.



Step 1

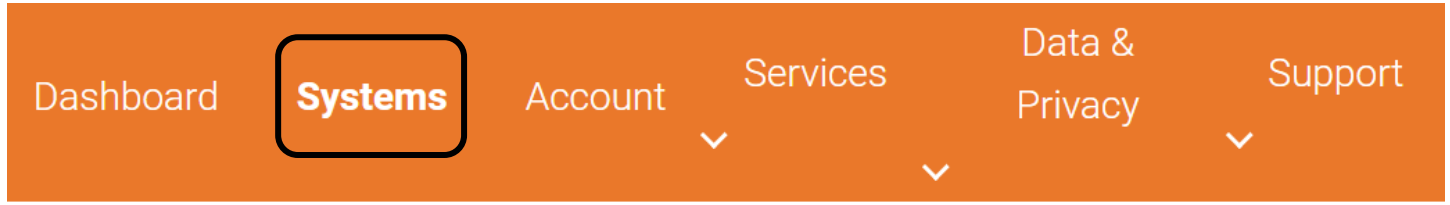
Scroll down to the **Production Estimate** section and select **System-level production estimate.**

Step 2

Type the kWh estimates for each month to set the production estimates.

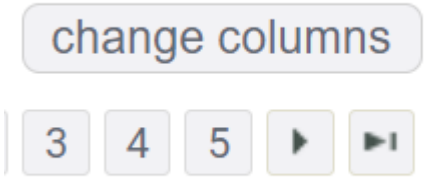
Enphase Installer Portal: Systems

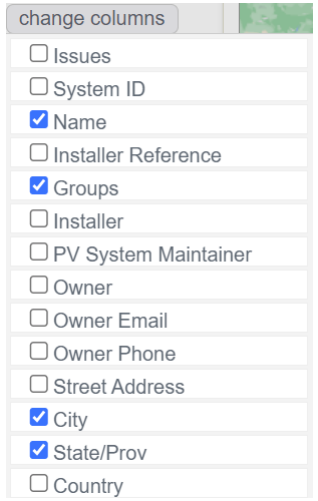
The **Systems** tab allows the installer to view all systems.



The **change columns** tab includes many options to assist in viewing system location, status, and production output.

A drop-down menu allows the installer to display or hide information by selecting or deselecting the checkboxes.



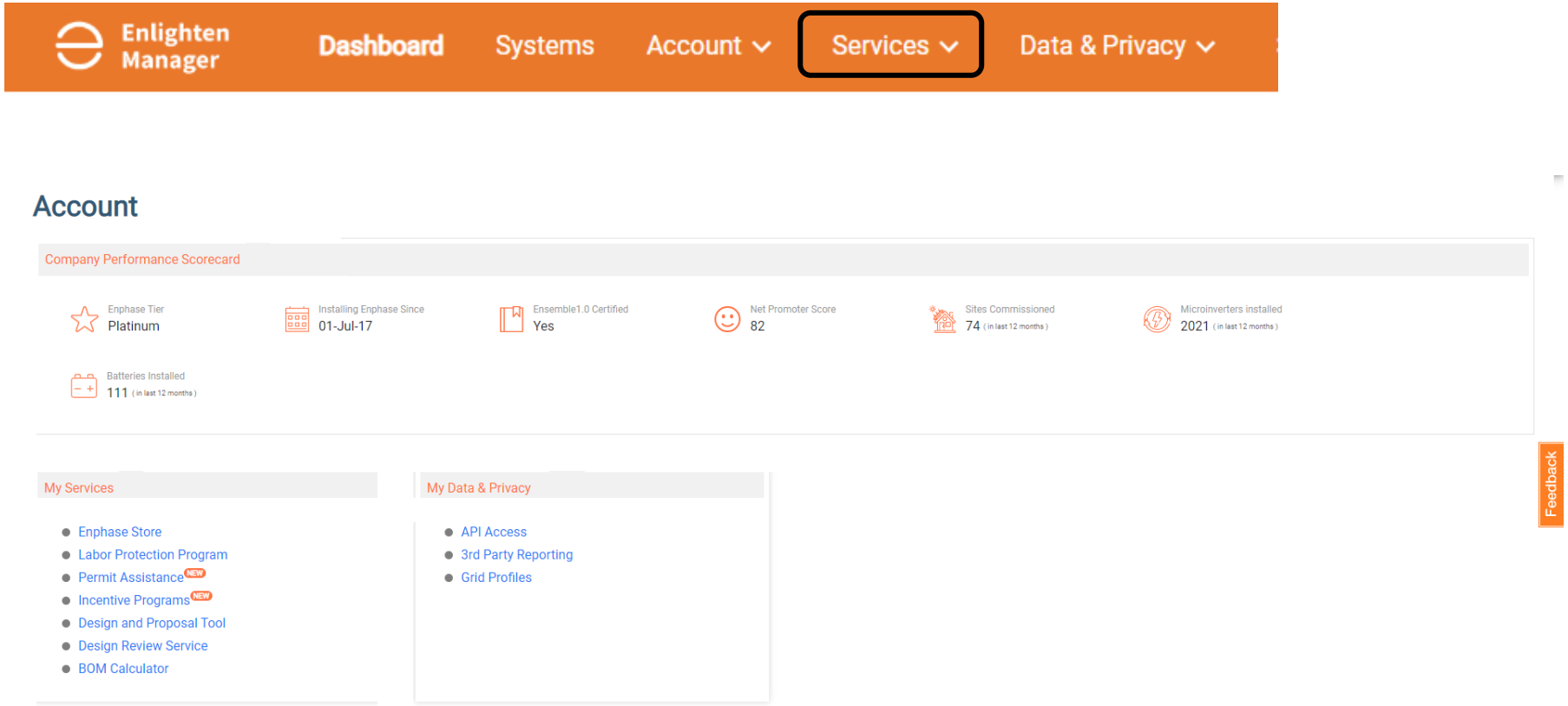


This feature greatly improves the fleet view for the installer, which is accessible by selecting the site name.

To watch a video version of this information, visit the link below.
Functions: Systems

Enphase Installer Portal: Services

The **Services** tab allows admin installers to access company performance, service, and data and privacy tools.



Enphase Installer Portal: Support

The **Support** tab provides access to the Enphase Community page, which addresses FAQs and installer question submissions.

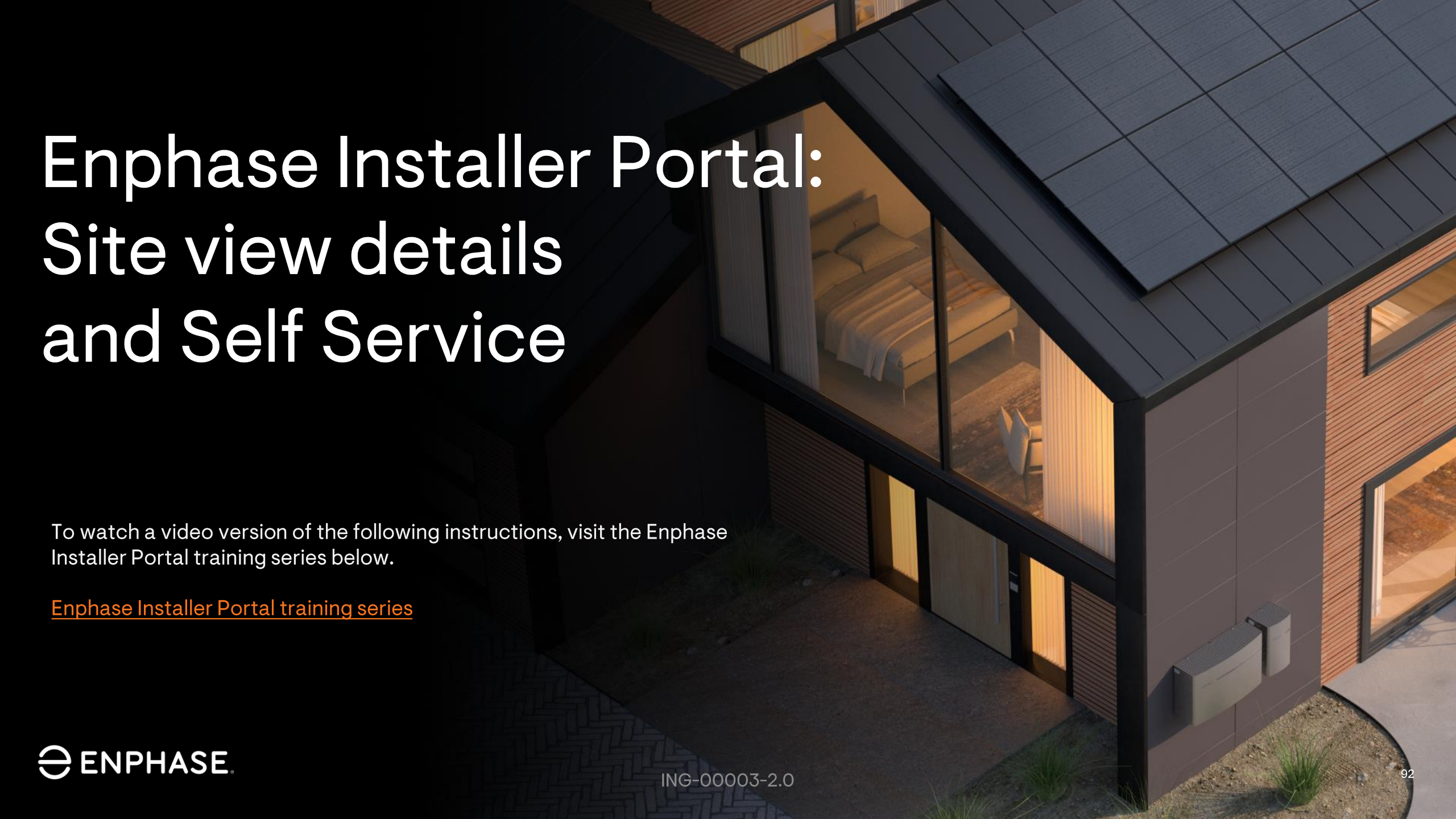
The Enphase Community page also provides new product updates and information.

To watch a video version of this information, visit the link below.
Functions: Support

Learning check

- Explain the features within each of the five primary Enphase Installer Portal tabs.
  - Alerts
  - Activations
  - Systems
  - Services
  - Support

Enphase Installer Portal: Site view details and Self Service



To watch a video version of the following instructions, visit the Enphase Installer Portal training series below.

Enphase Installer Portal training series

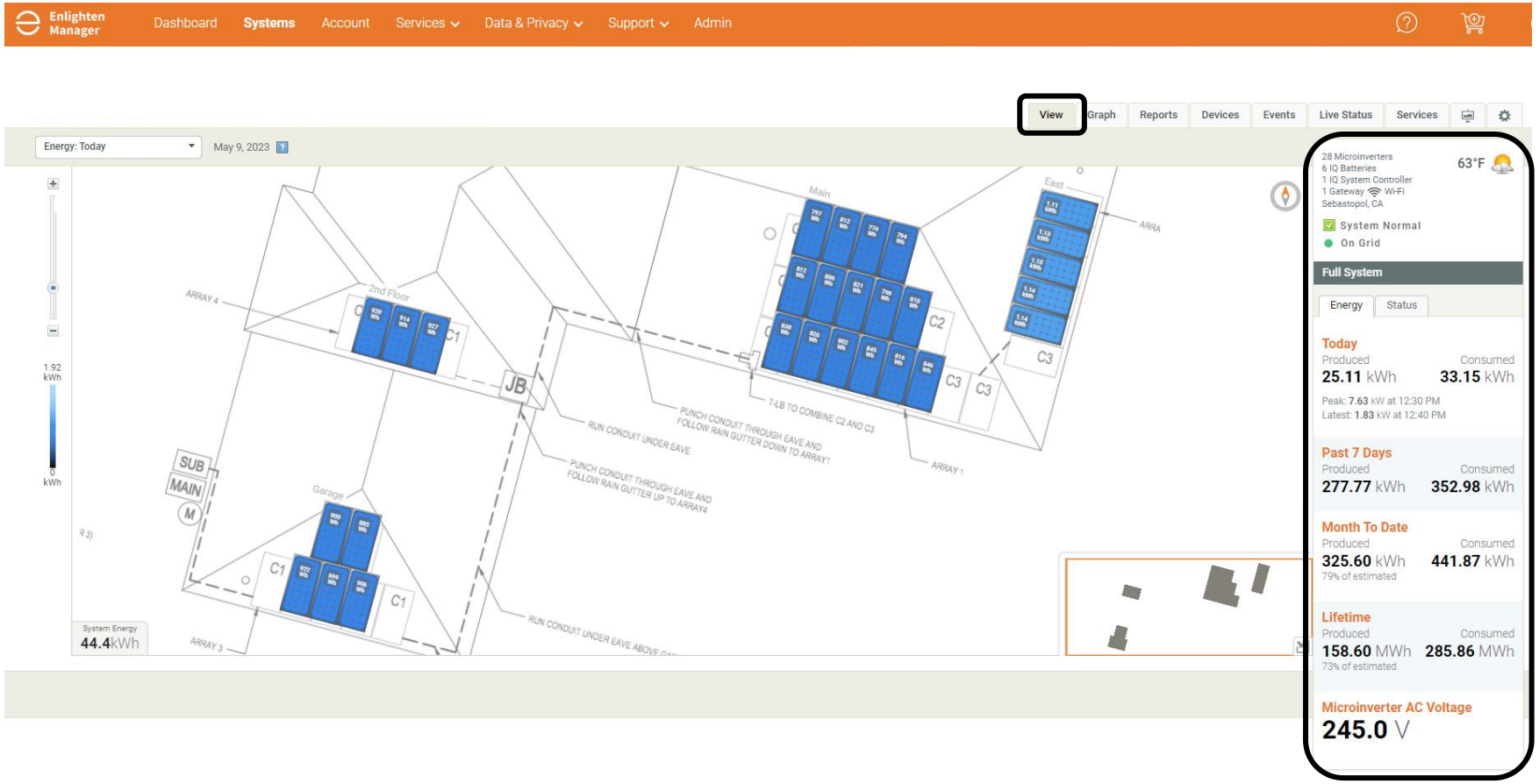
Learning objectives

- Understand the information available in each Site view.
    - Array panel
    - Graph
    - Reports
    - Devices
    - Events
    - Live Status
    - Services
    - Kiosk view
- Understand the settings options.
    - Labor Reimbursement
    - Installer Reference
    - Production Estimate & Threshold
    - Array Details
- Understand the Self Service options.
    - Request Return
    - Install Replacement
    - Gateway Replacement

Enphase Installer Portal: View

From the **Systems** page, select the **View** tab to view a site's current energy information.

The Array panel will appear, displaying an overhead rendering of the site.

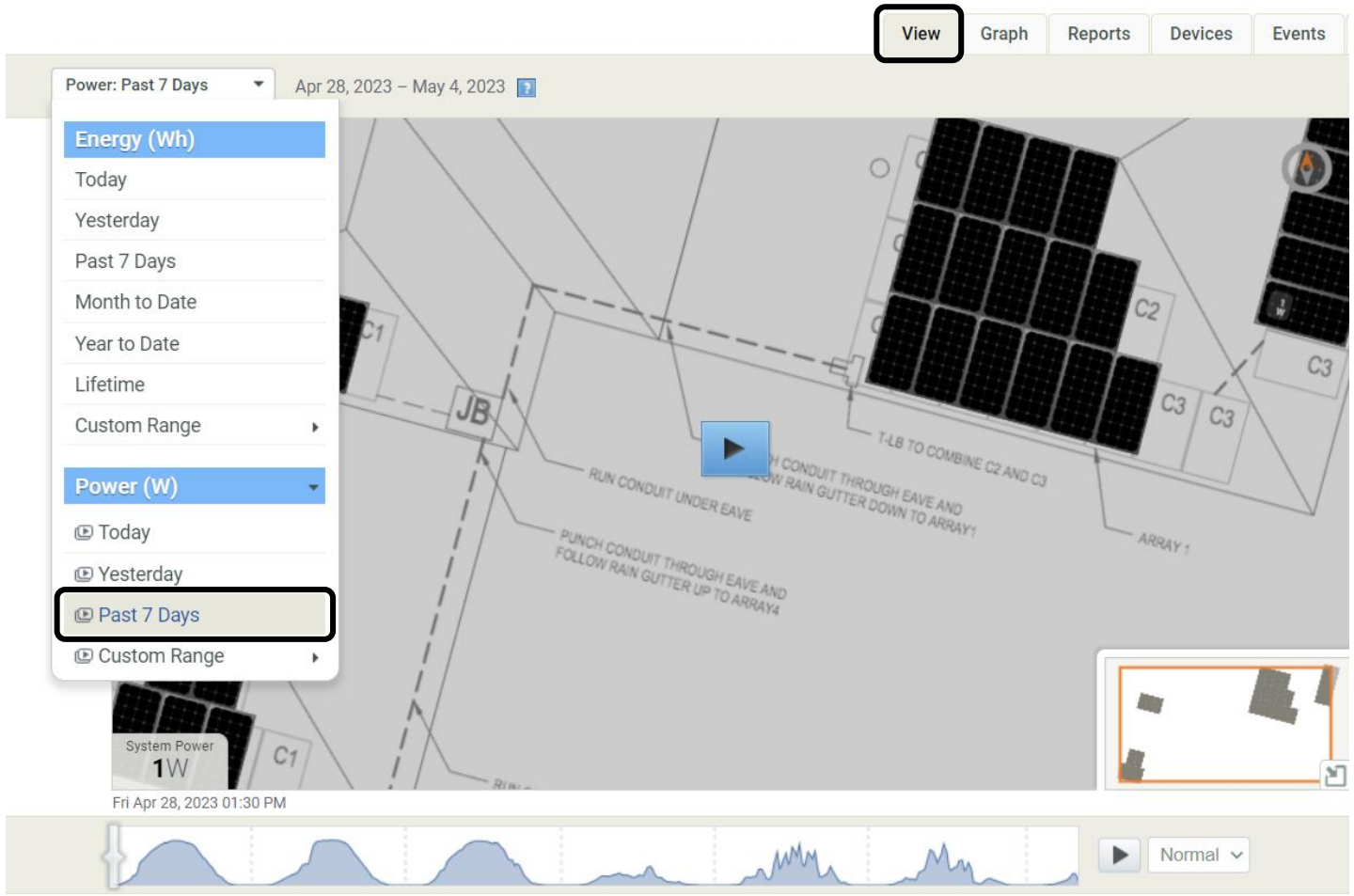


The side taskbar displays the following site information:

- Microinverter count
- IQ Battery count
- IQ Gateway count
- IQ Gateway connection type
- Site location
- Weather
- System status
- Energy produced

Enphase Installer Portal: Array panel

From the **View** tab, installers can select the drop-down menu for Energy and Power.



These options display a 7-day playback or custom ranges in the Array panel.

This feature helps identify specific events, shade, or production/reporting flags.

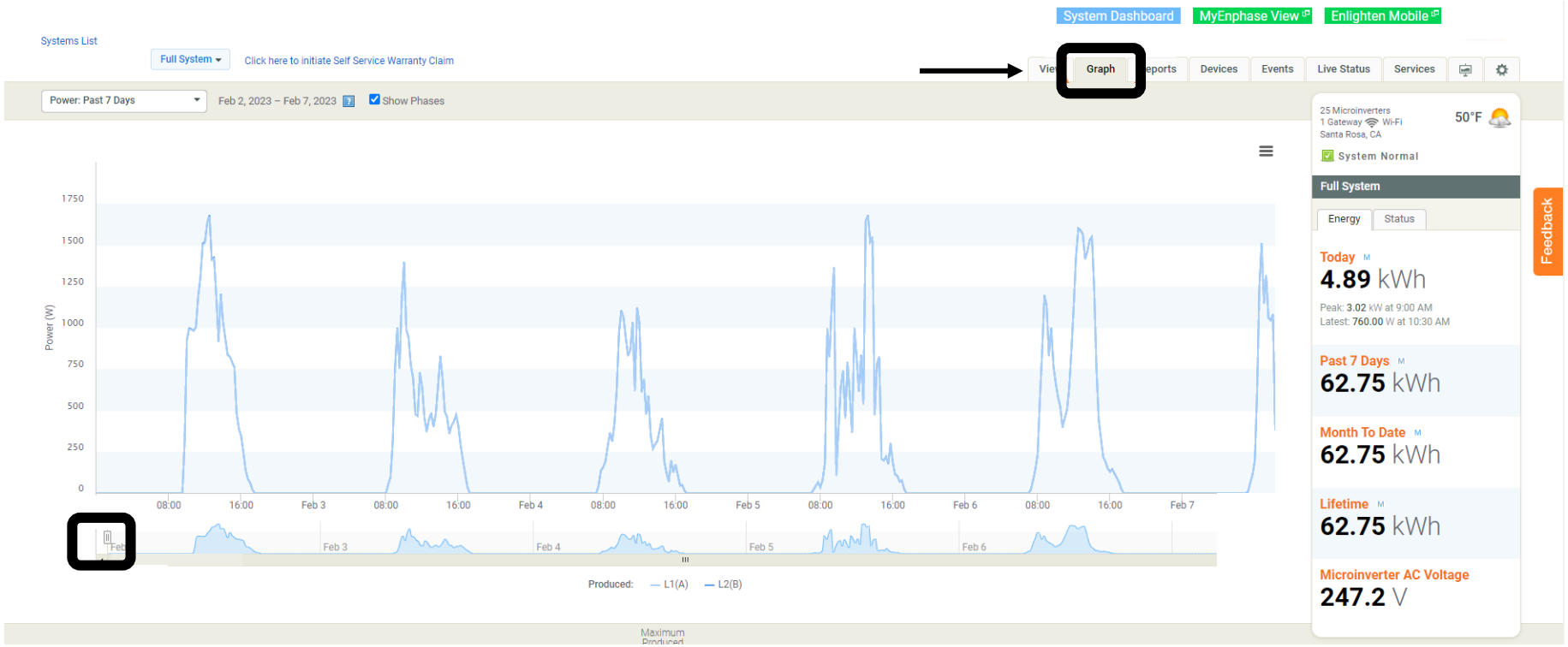
installers can also select and isolate individual microinverters to gain function details from this view.

To watch a video version of this information, visit the link below.

Enphase Installer Portal: Array panel

Enphase Installer Portal: Graph

The **Graph** tab allows installers to view production in detail.



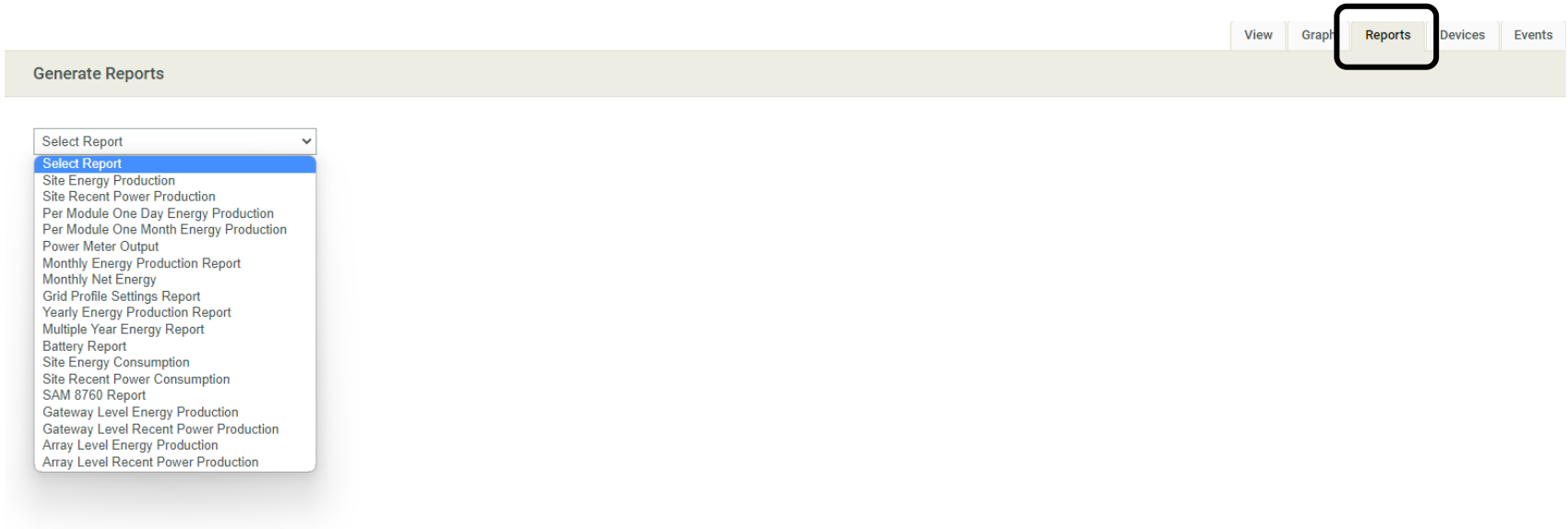
Installers can select the sliders (indicated above) to sample a specific day in a close-up view. Hovering the mouse over the graph lines will indicate to installers the production details specific to the exact time.

To watch a video version of this information, visit the following link:
Enphase Installer Portal: Production graph

Enphase Installer Portal: Reports

The **Reports** tab allows installers to select specified report details, verify system production continuity, and view consumption trends.

There are options to download, save, or email reports in the drop-down menu.



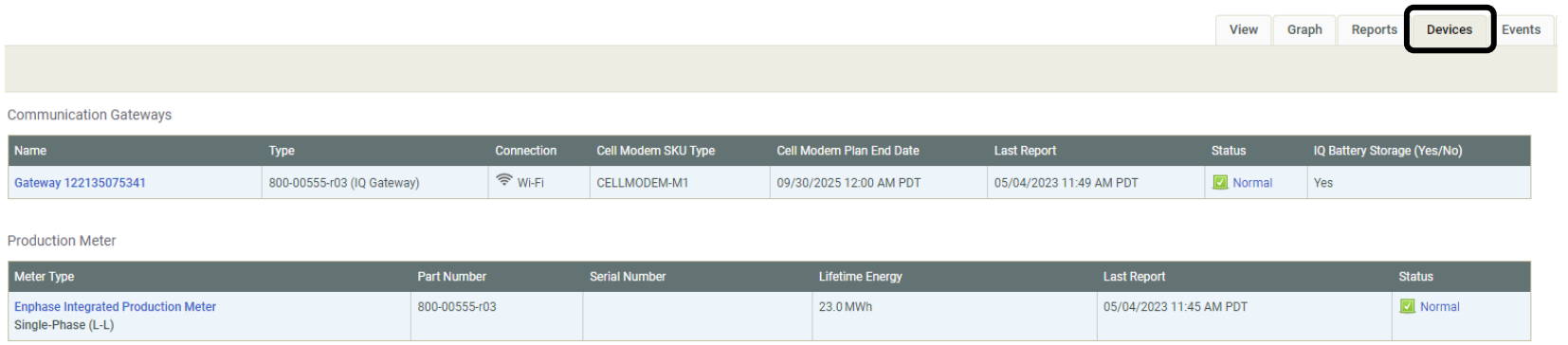
These are some of the most used reports:

- Site Energy Production
- Site Energy Consumption
- Power Meter Output
- Monthly Energy Production Report

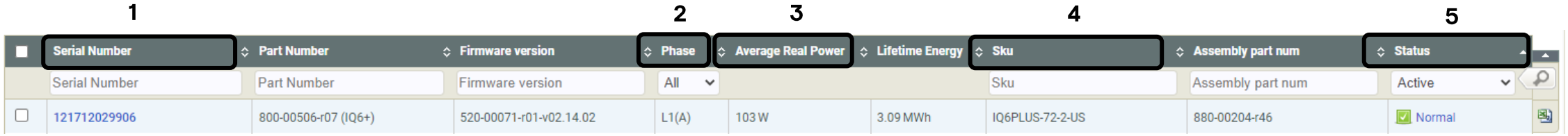
To watch a video version of this information, visit the following link:
Enphase Installer Portal: Reports

Enphase Installer Portal: Devices

The **Devices** tab allows installers to view active devices and their current status.



The installer can view each device's in-depth reporting details by selecting the blue hyperlinks.



The installer can also view microinverter details:

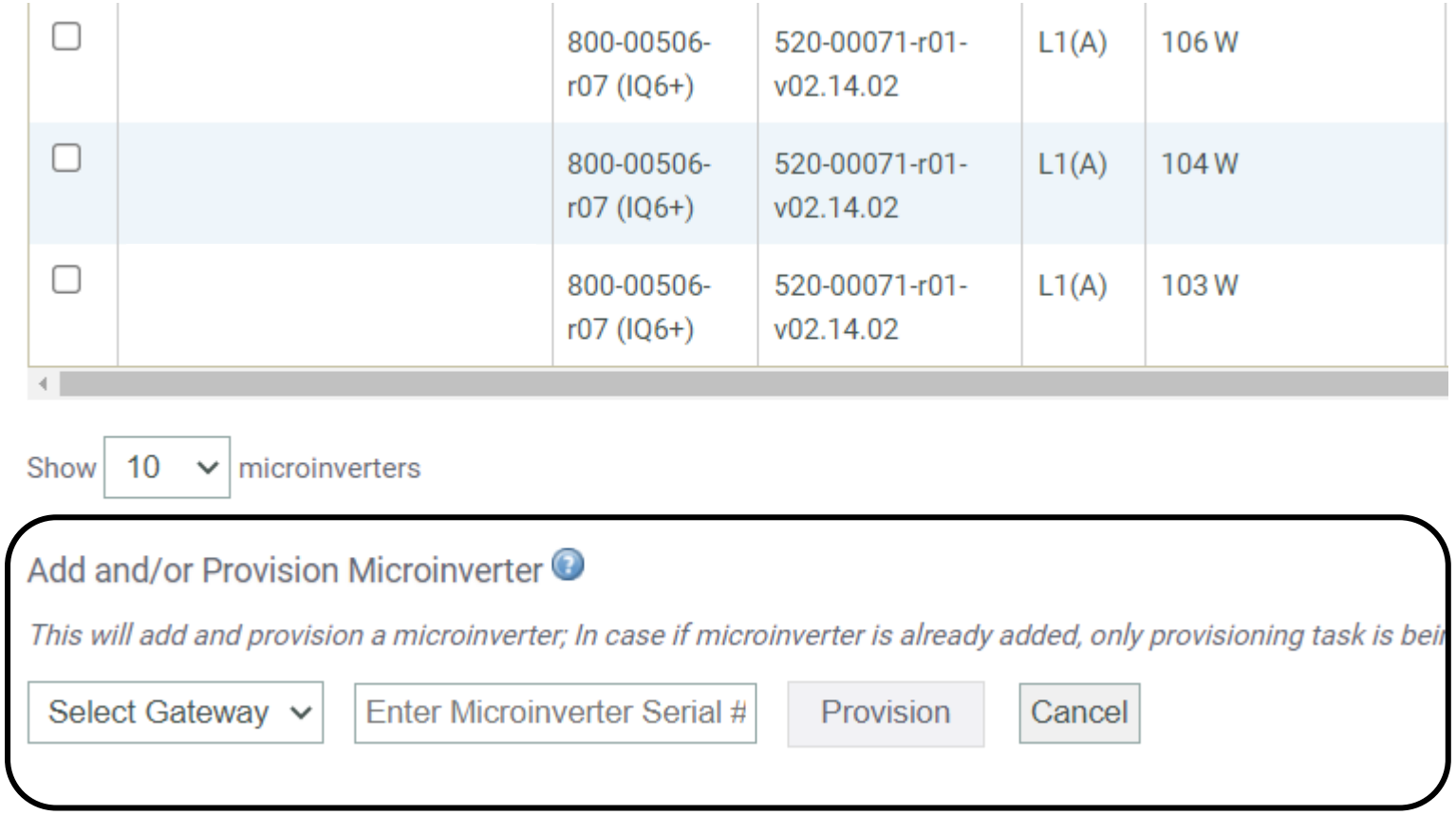
1. Serial numbers
2. Phasing details
3. Power info
4. SKUs and part numbers
5. Current status

To watch a video version of this information, visit the following link:

Enphase Installer Portal: Devices

Enphase Installer Portal: Devices

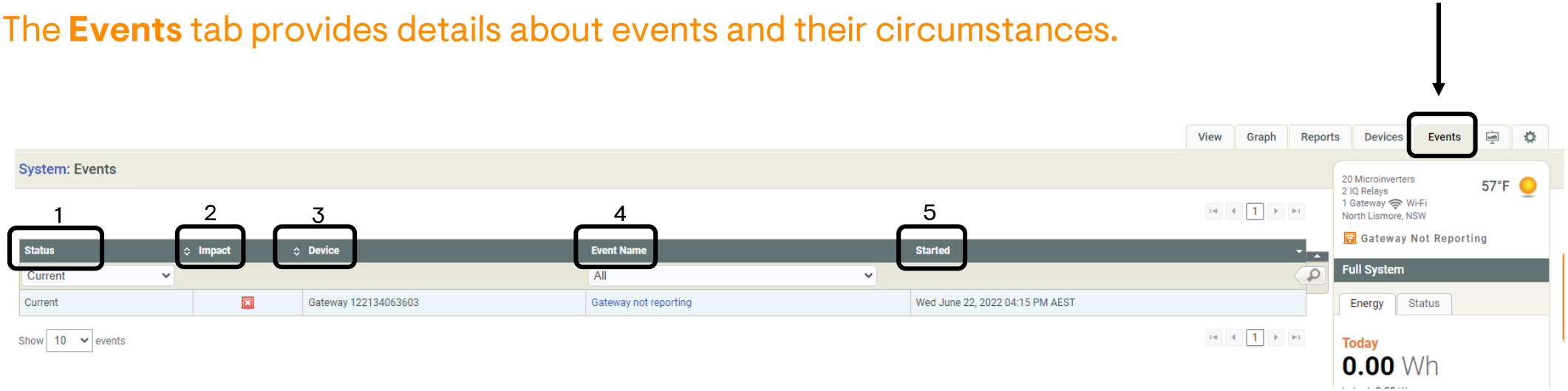
The **Devices** tab also features the **Add and/or Provision Microinverter** section.



The serial number is the only information the installer should input.

Enphase Installer Portal: Events

The **Events** tab provides details about events and their circumstances.



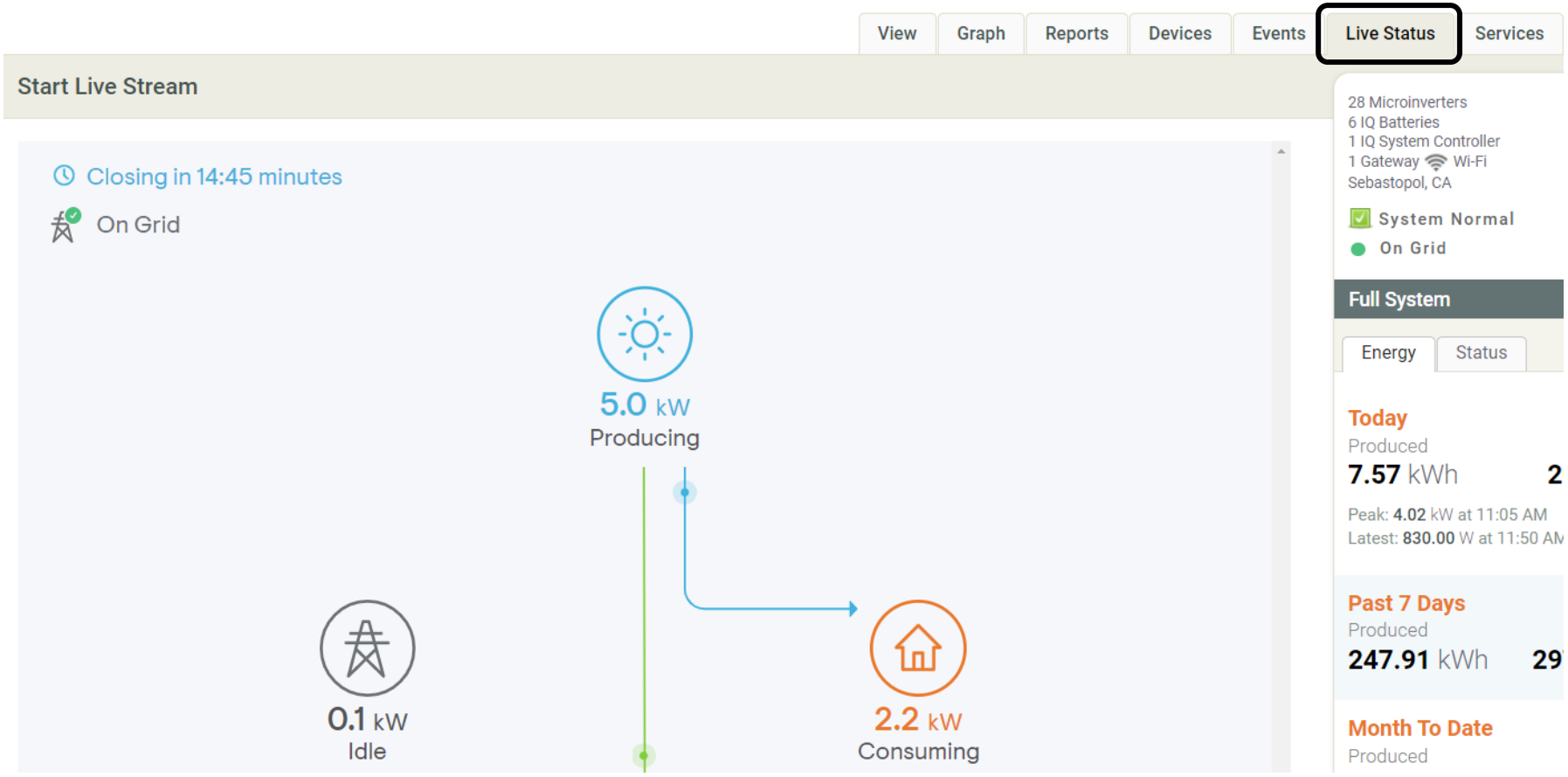
Event details and circumstances

1. Status: Type of event (production-related, reporting-related, etc.)
2. Impact: Importance of alert
3. Device: Which device is impacted
4. Event Name: Type of event (ACVOOR, ACFOOR, etc.)
5. Started: Timestamp of flagged event

To watch a video version of this information, visit the following link:
Enphase Installer Portal: Events

Enphase Installer Portal: Live Status

Live Status allows the installer to verify real-time production of a system in versions 7.0.104 and above.



If Consumption CTs are installed, installers can see export details in real time.

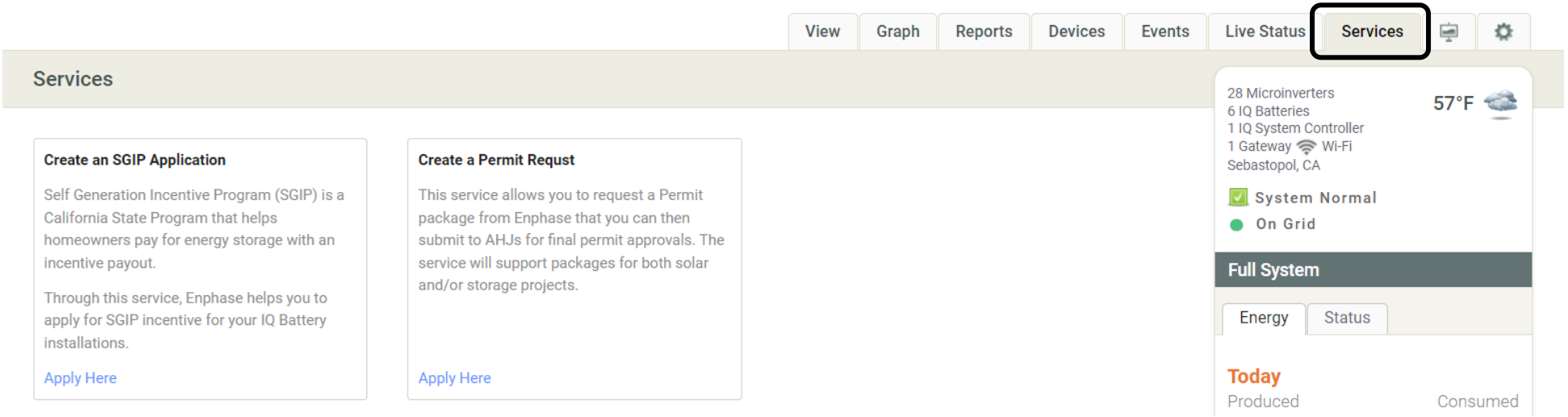
If the system has batteries, installers can verify charge and discharge in real time.

To watch a video version of this information, visit the following link:

Enphase Installer Portal: Live Status

Enphase Installer Portal: Services

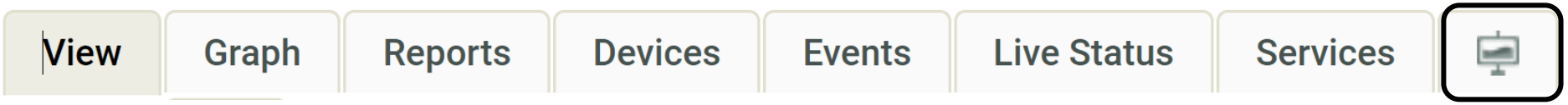
The **Services** tab details the Self Service options an installer can access.



installers can create SGIP applications and create permit requests.

Enphase Installer Portal: Kiosk view

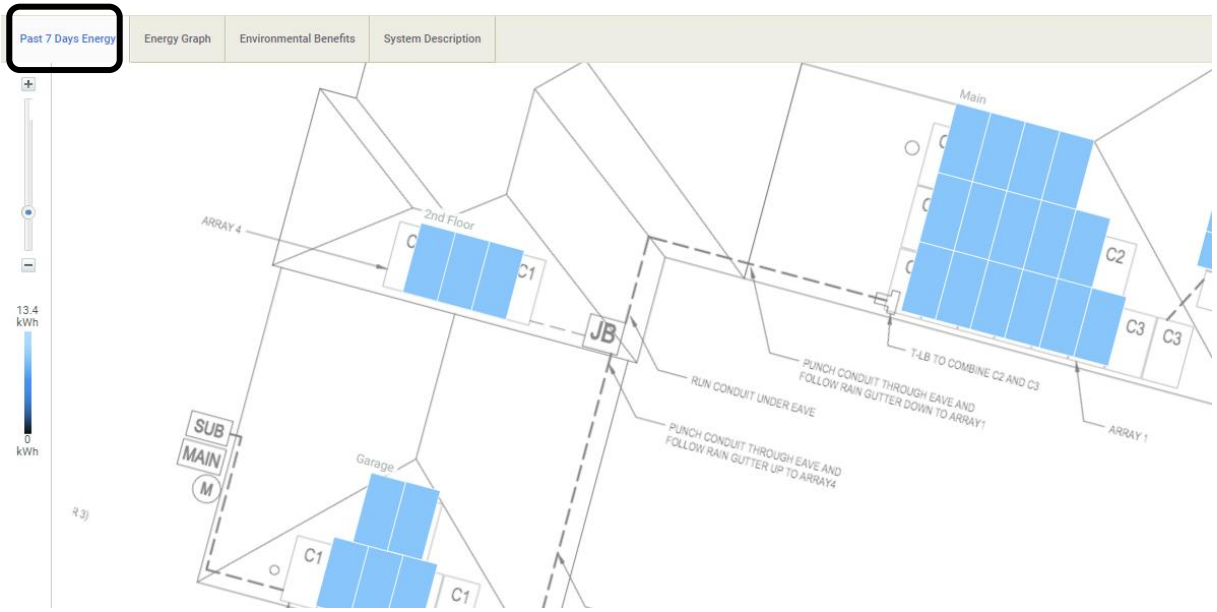
The **Kiosk view** is accessed by selecting the icon shown below, on the right of the screen.



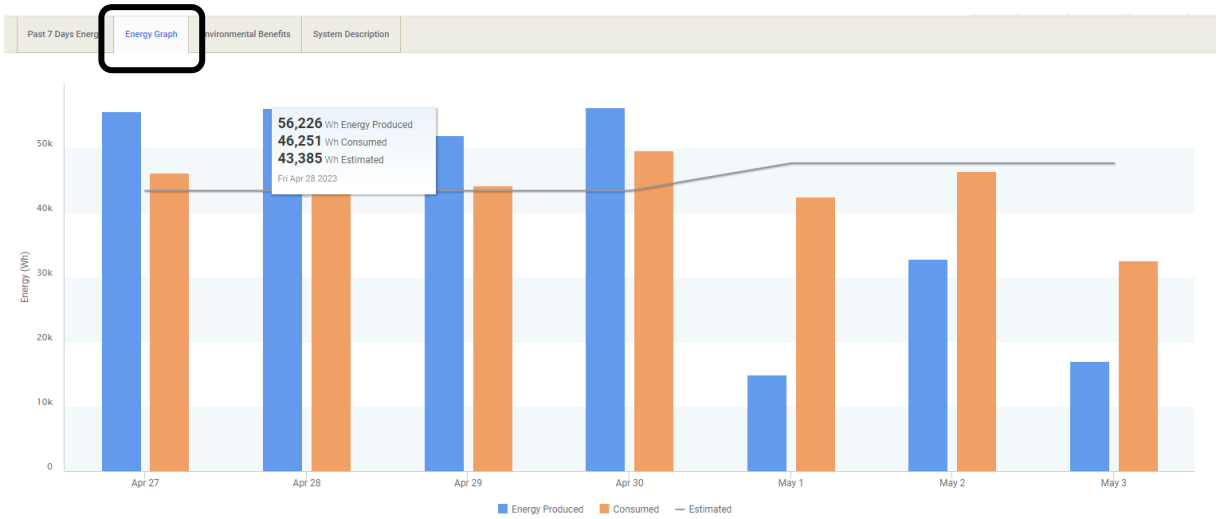
Once selected, a new screen will display system details under four sub-tabs:

- Past 7 Days Energy
- Energy Graph
- Environmental Benefits
- System Description

Enphase Installer Portal: Kiosk view

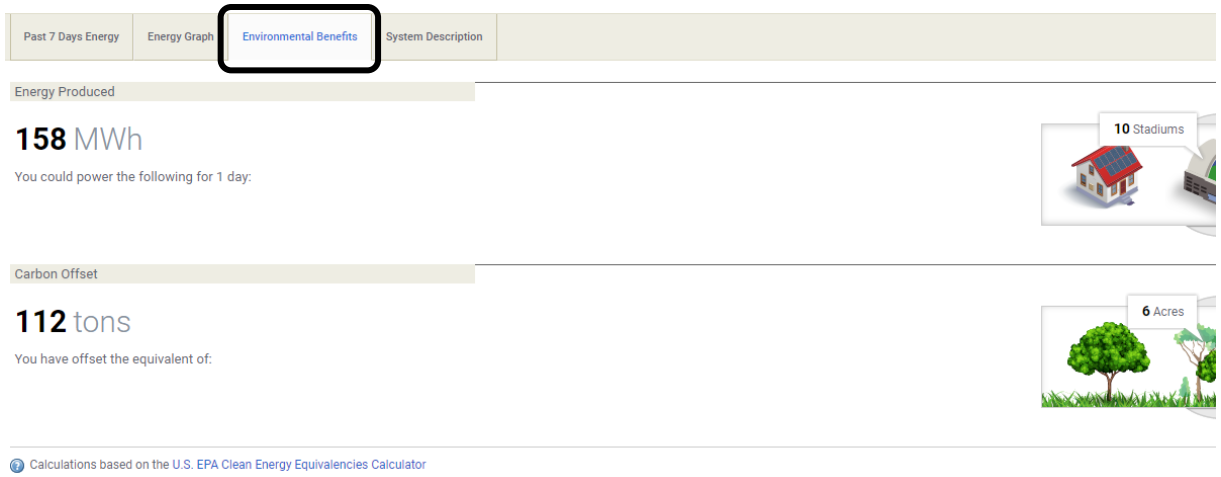


The **Past 7 Days Energy** tab provides a seven-day energy view.

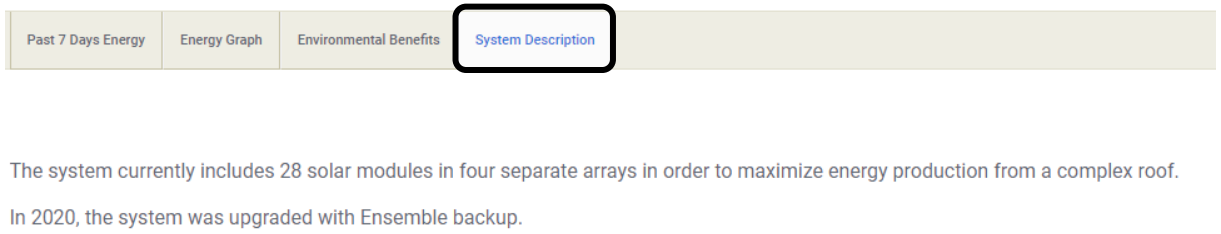


The **Energy Graph** tab displays a graph indicating daily production totals in kWh.

Enphase Installer Portal: Kiosk view



The **Environmental Benefits** tab provides a breakdown of energy output capability and ecological impact.



The **System Description** tab contains a few basic details about the system.

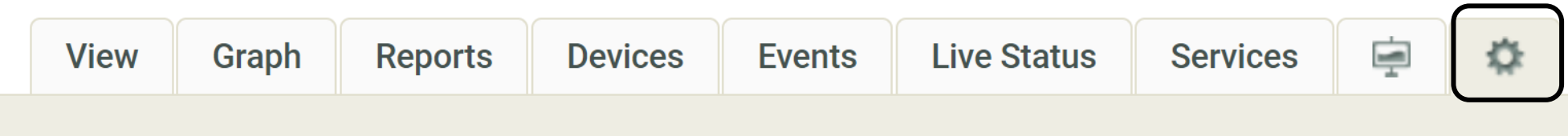
Enphase Installer Portal: Settings

To watch a video version of the following instructions, visit the link below.

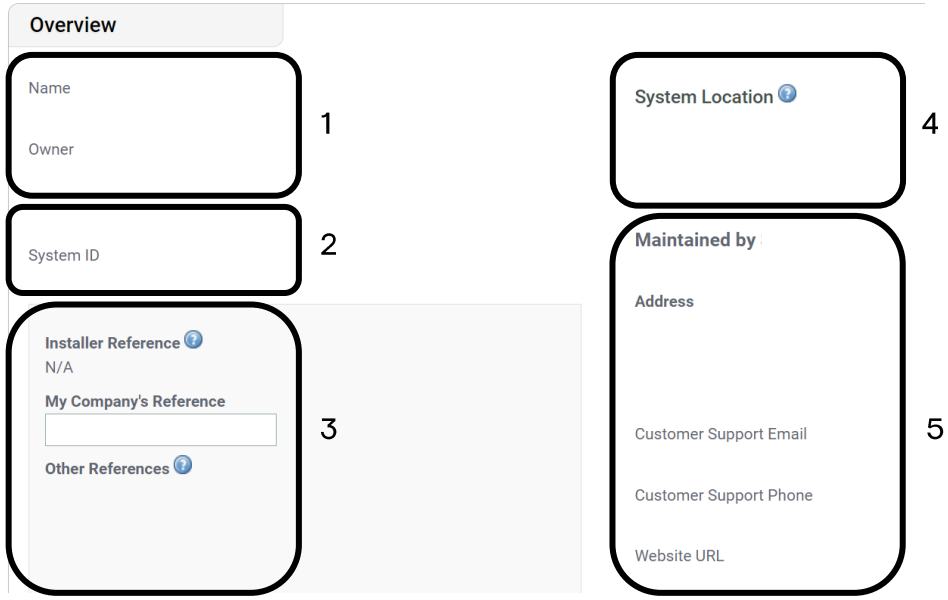
Enphase Installer Portal Summary and Settings

Enphase Installer Portal: Settings

Select the **Settings** gear icon to locate most of the handy Self Service options.



The **Settings** tab provides basic site information relating to the owner, the installer, and system location.



1. System owner information
2. System ID
3. Installer Reference
4. System Location
5. Installer contact information

Settings: Labor Reimbursement

The **Settings** page also provides a Self Service option to apply for labor reimbursement or an extended warranty period.

Labor Reimbursement

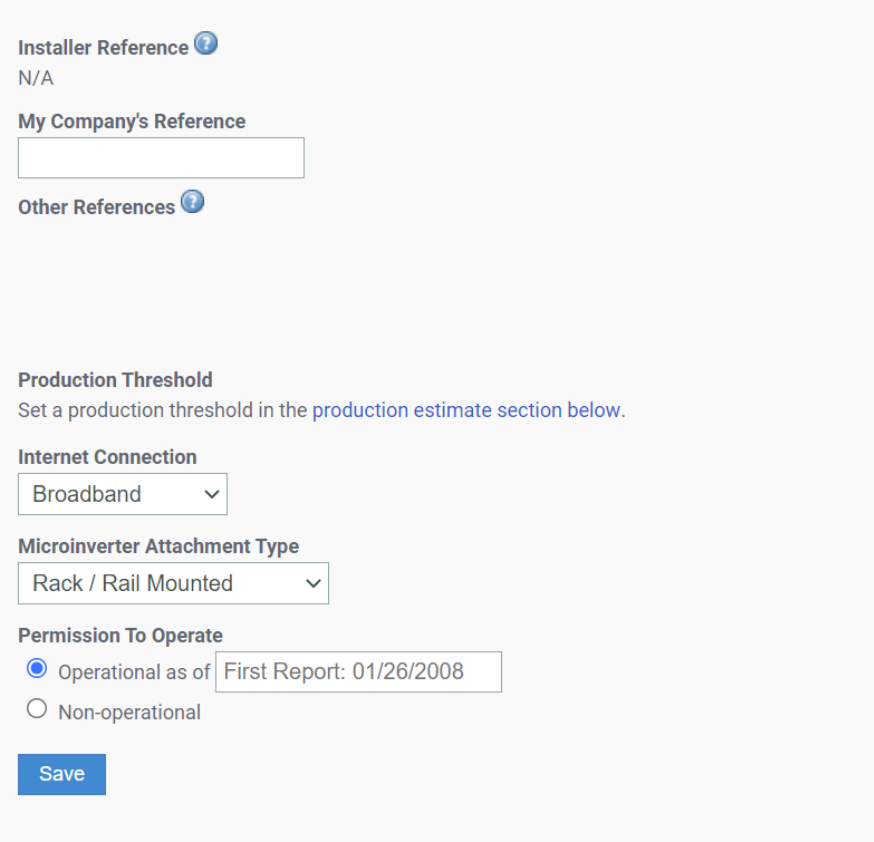
Enphase Energy provides a discretionary reimbursement, payable to solar-installers having to perform onsite labor for the purposes of a product warranty RMA. This labor reimbursement is separate from the written, product warranty itself. Eligibility for the reimbursement is dependent on the date the unit was activated and the specific product(s) installed.

In order to qualify:

- Must be an reimbursement eligible product as determined by Enphase.
- Defective microinverter must have previously been detected and monitored by Enlighten monitoring software.
- The unit installation date must be within two years of the claim date.
- The defective microinverter must be returned to Enphase Energy if instructed to do so per the RMA approval.
- No claims older than 3 months will be approved.

Settings: Installer Reference

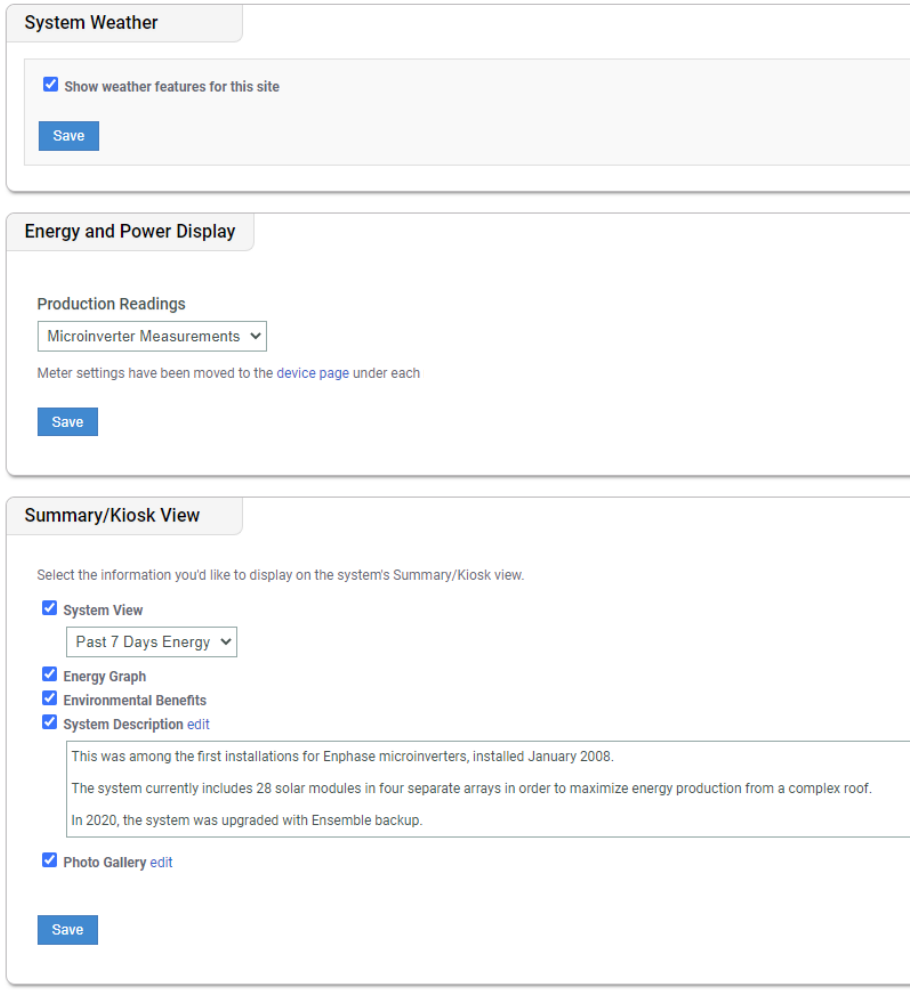
The **Installer Reference** section allows the installer to input **My Company's Reference** for ease of access.



Installer Reference features:

- Set production threshold estimates
- View how the site is connected to the internet
- View microinverter attachment details (i.e. Rack / Rail Mounted)
- See permission to operate status and date

Settings: More features



System Weather

Displays weather for system location, allowing installers to identify environmental production inhibitors.

Energy and Power Display

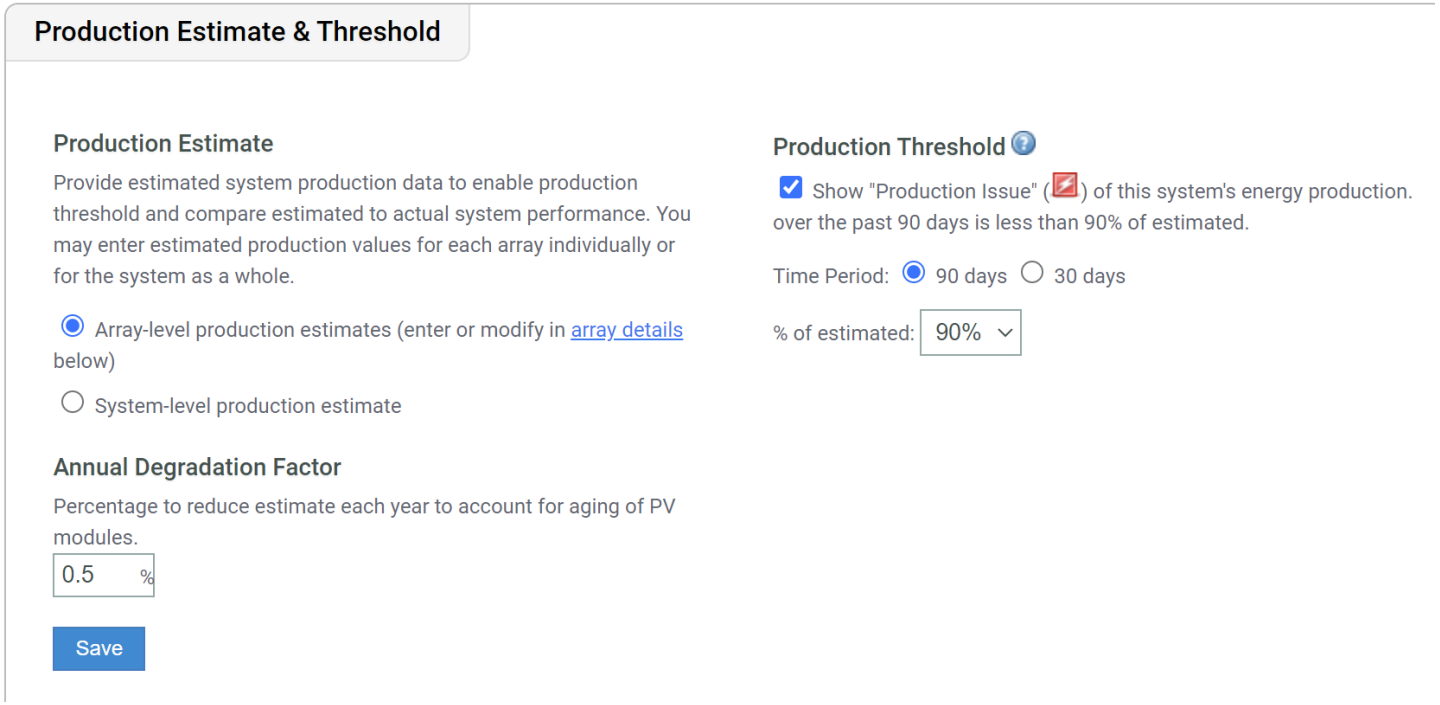
Shows whether production is being measured via microinverter or via Production CT.

Summary/Kiosk View

Allows installers to edit details shown in Enphase Installer Portal tabs.

Settings: Production Estimate & Threshold

Production Estimate & Threshold allows installers to set a a Production Estimate, a percentage-based Annual Degradation Factor, and a Production Threshold.



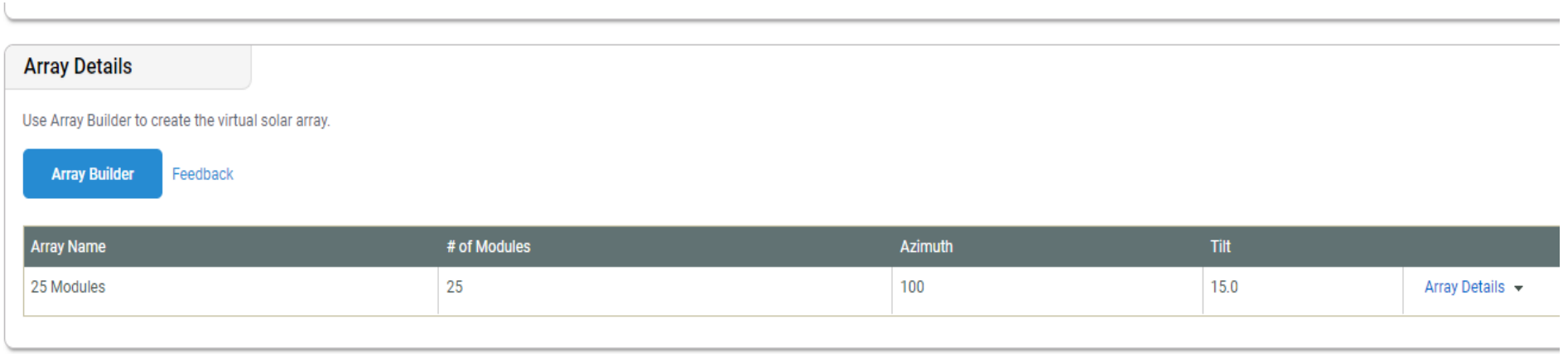
Array-level estimates are based on percentages over time. System-level estimates allow the installer to set monthly benchmarks for expected production.

Enphase recommends recording production for at least one month before setting estimates.

If monthly benchmarks are not met, a production issue alert will display in all platforms.

Settings: Array Details

The **Array Details** section of the **Settings** tab links the installer to the Array Builder.

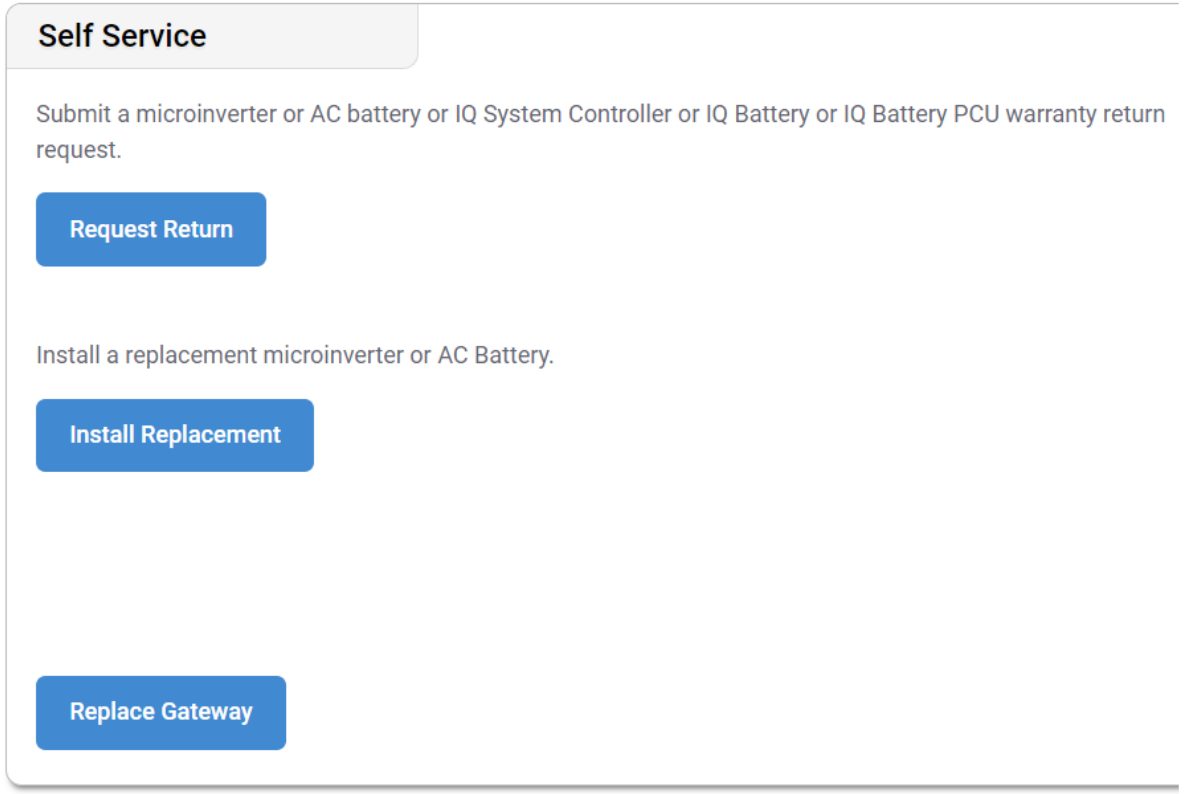


This is where the array map can be built, adjusted, or updated with future equipment installation.

Enphase representatives CANNOT build, adjust, or update array maps for their clients.
This is a critical Self Service feature.

Self Service options

The **Self Service** section allows installers to request returns, replace equipment, or replace an IQ Gateway.



Select **Request Return** to submit a request for replacement equipment.

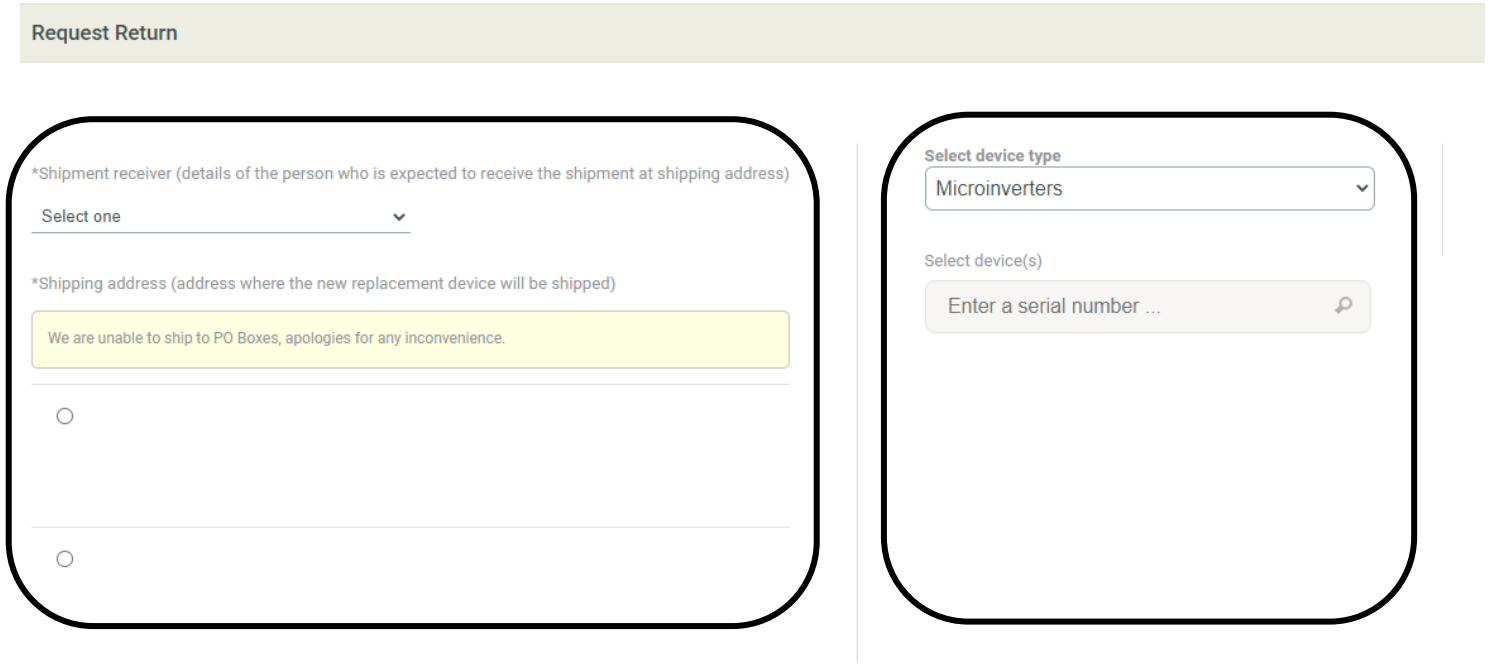
Select **Install Replacement** to retire defective equipment, provision new equipment, and update the array map.

Select **Replace Gateway** to automatically retire an old IQ Gateway and Provision the new IQ Gateway, including transferring /provisioning microinverters to the new IQ Gateway.

To add a new IQ Gateway or new equipment, navigate to the **Activations** page.

Self Service options: Request Return

To use the Request Return option, follow the steps below.



Step 1
Select the shipping address from the list provided.

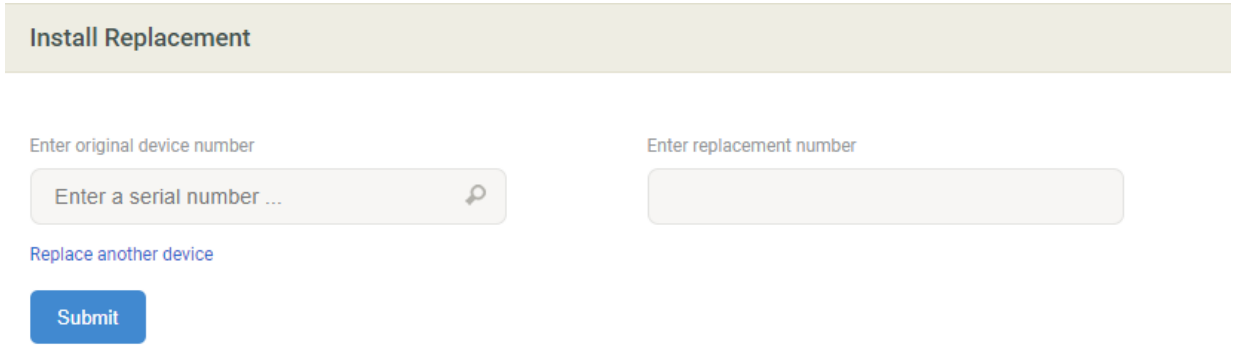
Step 2
Select the device type, enter the device's serial number, and select the device.

Select **Submit**.

An Enphase team member will then process the request and follow up.

Self Service options: Install Replacement

To use the Install Replacement option, follow the steps below.



Step 1

Enter the original equipment device number.

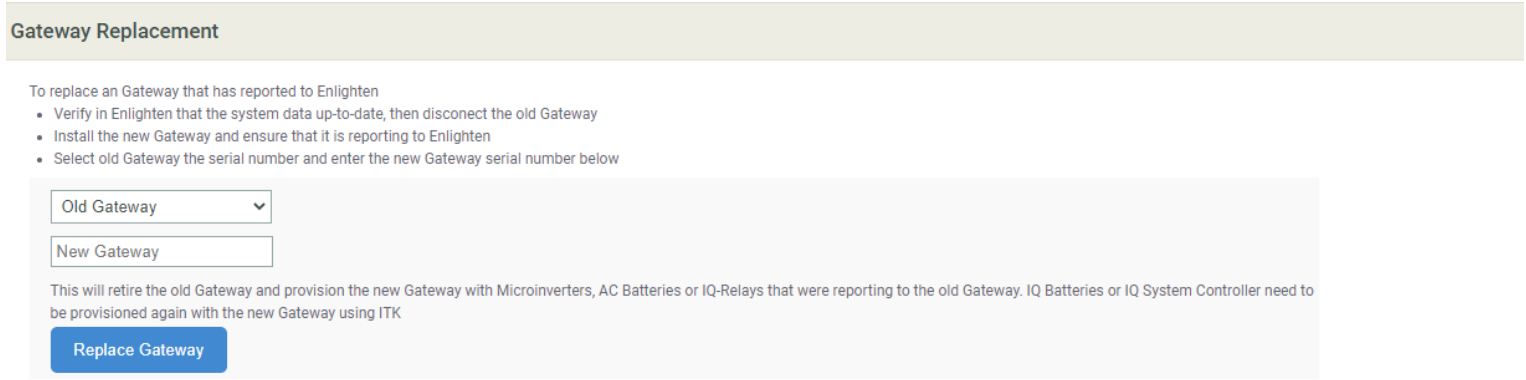
Step 2

Enter the replacement number.

Press **Submit.**

Self Service options: Gateway Replacement

To use the Gateway Replacement option, follow the steps below.



Step 1

Confirm that the new IQ Gateway is online and connected.

Step 2

Select the old IQ Gateway from the drop-down.

Step 3

Enter the new IQ Gateway serial number.

Select **Replace Gateway.**

Learning check

- Explain the information available in each site view.
    - Array panel
    - Graph
    - Reports
    - Devices
    - Events
    - Live Status
    - Services
    - Kiosk view
- Explain the Settings options available.
    - Labor Reimbursement
    - Installer Reference
    - Production Estimate & Threshold
    - Array Details
- Explain the Self Service options.
    - Request Return
    - Install Replacement
    - Gateway Replacement

Enphase Installer Portal: Enable or disable power production

To watch a video version of the following instructions, visit the link below.

Configure power production

Learning check

- Know the steps necessary to enable and disable power production.

Enable and disable power production

With Enphase's one-button standby mode, an installer can remotely disable and enable power production using the Enphase Installer Portal.

For example, an installer may want to prevent the system from producing power prior to receiving permission to operate from the utility.

To disable power production using a mobile device while on the job site, refer to the application note.

To disable or enable power production using the Enphase Installer Portal for microinverters communicating with an IQ Gateway, perform the following steps:

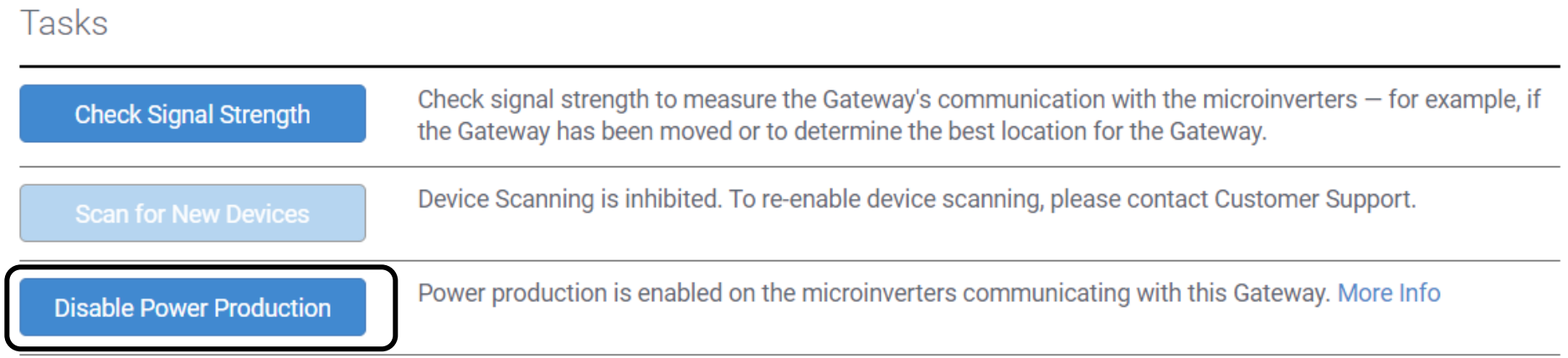
Step 1
Select the **Devices** tab.

Step 2
Under the **IQ Gateway Communication Gateways** list, select the IQ Gateway.

Enable and disable power production

Step 3
Scroll down to **Tasks** to view the power production status.

Select **Disable Power Production** or **Enable Power Production.**



The IQ Gateway will receive and execute the task within 30 minutes.

When enabling or disabling production using a cellular connection to the Enphase Cloud, it will take at least one hour.

If there are IQ Batteries communicating with the IQ Gateway, they will not charge or discharge while power production is disabled.

Learning check

- Explain the steps necessary to enable and disable power production.

Enphase Installer Portal: System diagnostics

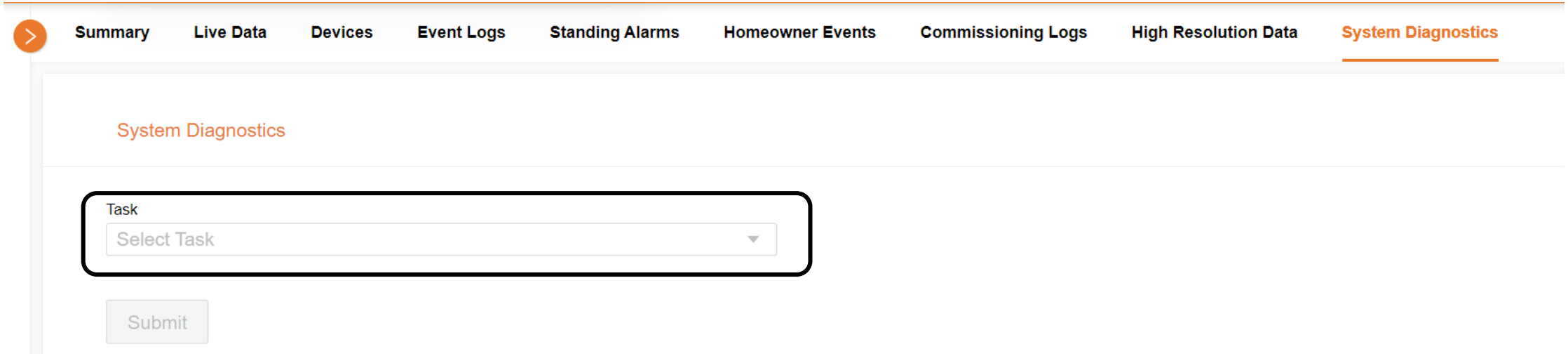
Learning check

- Know the function of each System Diagnostics feature:
    - Provision device
    - Enable or Disable power production
    - Change Consumption Meter State
    - Reboot IQ Gateway remotely

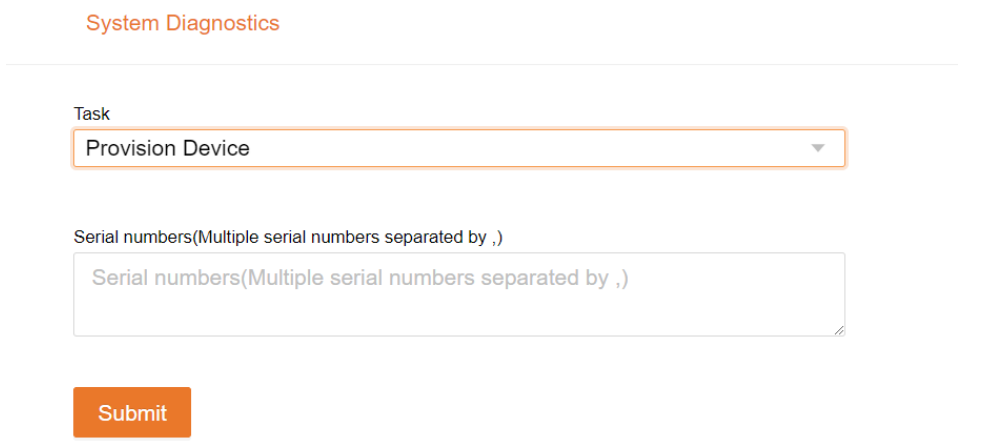
System Diagnostics

The **System Diagnostics** tool, shown below, provides more Self Service options for versions 7.0.93 and up.

Select the **Task** drop-down menu to view the additional options, then select **Submit.**



System Diagnostics

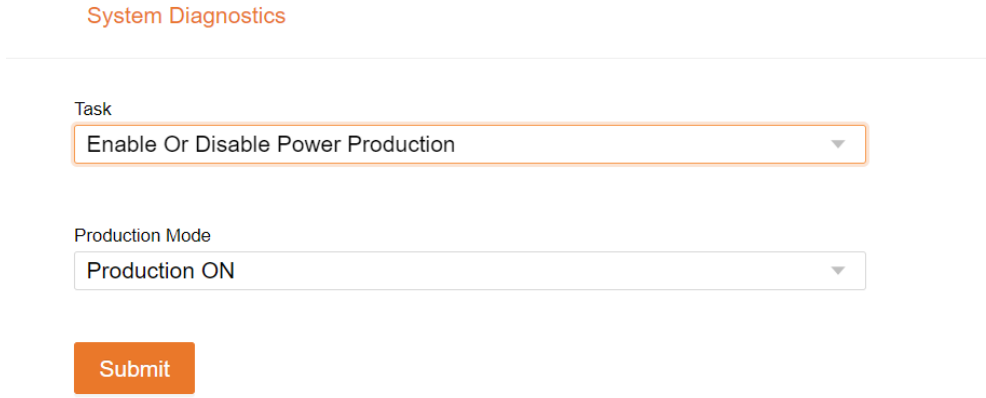


Provision Device

From the drop-down, select **Provision Device.**

Enter the device serial number, separating by a comma if there is more than one serial number.

Select **Submit.**



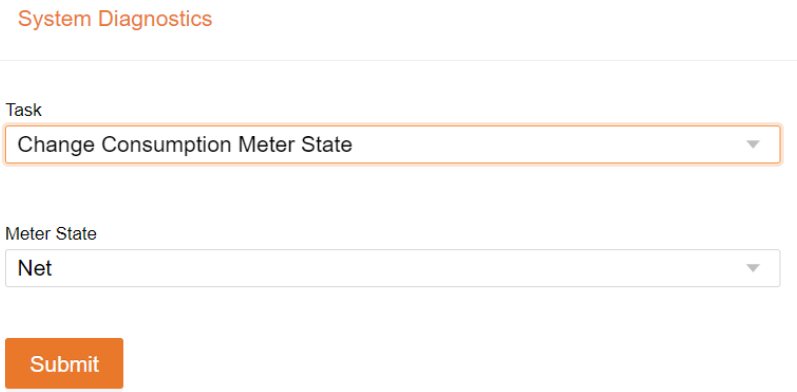
Enable or Disable Power Production

From the top drop-down, select **Enable Or Disable Power Production.**

From the bottom drop-down, select either **Production ON** or **Production OFF.**

Select **Submit.**

System Diagnostics

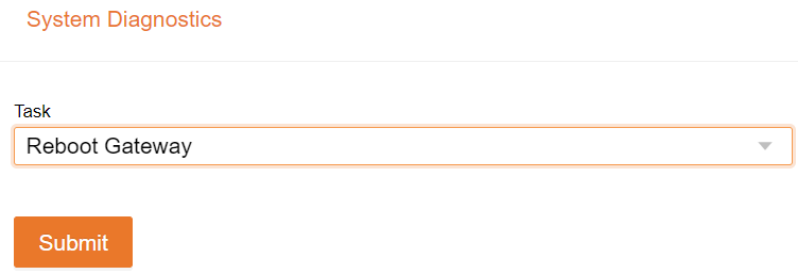


Change Consumption Meter State

From the top drop-down, select **Change Consumption Meter State.**

From the bottom drop-down, select either **Net** for Load with Solar or **Total** for Load Only.

Select **Submit.**



Reboot IQ Gateway remotely

From the top drop-down, select **Reboot Gateway.**

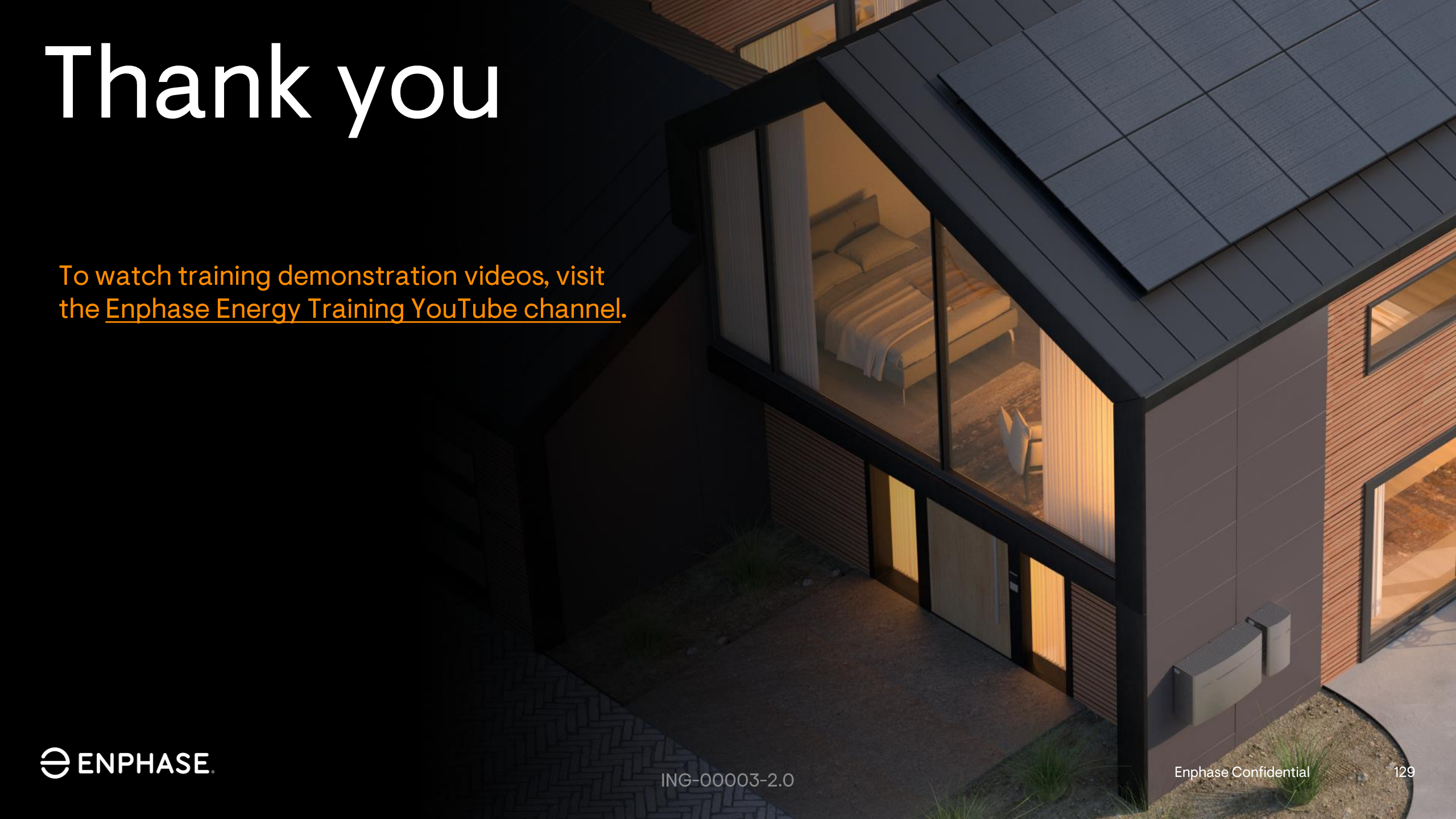
Select **Submit.**

Learning check

- Explain the function of each System Diagnostics feature:
    - Provision device
    - Enable or Disable power production
    - Change Consumption Meter State
    - Reboot IQ Gateway remotely

Thank you

To watch training demonstration videos, visit the Enphase Energy Training YouTube channel.



REVISION	DATE	DESCRIPTION
ING-00003-2.0	September 2023	Added video links
ING-00003-1.0	May 2023	Initial release