

Enphase Energy System commissioning using Enphase Installer App 4.X

Contents

1	App	icable countries	2
2	Over	view	2
3	Prep	aring the Enphase Installer App communications	2
4	Com	missioning instructions	5
	4.1	System Details (Step 1)	5
	4.2	Devices and Configuration (Step 2a)	6
	4.3	Site Configuration (Step 2b)	7
	4.4	IQ Gateway Connectivity (Step 3)	9
	4.5	Device Provisioning (Step 4)	
	4.6	Validation (Step 5)	11
	4.6.1	Meter configuration	11
	4.6.2	Auxiliary contact validation	14
	4.6.3	Functional validation	14
	4.6.4	Permit to operate instruction	16
	4.6.5	Summary report	16
	4.7	Post-commissioning (Step 6)	17
	4.7.1	Homeowner walkthrough	17
	4.7.2	Access to homeowner	17
	4.7.3	Electricity rate structure	17
5	Addi	tional steps	18
	5.1 Aı	ux contact	18
	5.1.1	Aux contact configuration	18
	5.1.2	Aux contact validation	18
	5.2	Generator	19
	5.2.1	Device details page	19
	5.2.2	Validation	
	5.4	IQ Gateway upgrade process	22
6	App	əndix	23
	6.1	Appendix A: Interpreting LED indications for IQ Batteries	23
	6.2	Appendix B: Noise detection over PLC	24
	6.3	Appendix C: Replacing/decommissioning	24
	6.4	Appendix D: Steps to perform a power cycle of the IQ Battery 3T/10T	24
7	Revi	sion history	25



1 Applicable countries

- United States of America
- United States Territories: Puerto Rico and US Virgin Islands
- Canada
- Mexico
- Bermuda

2 Overview

This document is intended for Enphase Energy System certified installation professionals commissioning Enphase Energy System in the field. This document provides steps and requirements to perform system commissioning of the Enphase Energy System. Follow the steps below to establish successful communication between Enphase Energy System components and validate that the system operates as designed.

3 Preparing the Enphase Installer App communications

Prior to commissioning:

- 1. Ensure the system is installed as per the installation manuals.
- 2. Commissioning requires an Enphase-certified installer to provision Enphase devices. For more information about Enphase installer certification, visit <u>Enphase University</u>.
- 3. Ensure that you have the latest version of the Enphase Installer App. You can install the Enphase Installer App using the following links:
 - o <u>iOS</u>
 - o <u>Android</u>



4. Enable Bluetooth communication on the smartphone or tablet you use for commissioning, and turn off your device's auto-lock feature to prevent interruptions in the commissioning process.

4

Last upda

Settings

ed on 13 Feb 2023, 12:08 PM

Default Profile: SMOKE TEST AS/NZS 4777.2: 2020 Australia A Region (1.3.2)

MANAGE PROFILES

IQ Gateway Software Version 05.00.62 @

Version 08.01.04 @ Last updated on 13 Feb 2023, 12:17 PM

Grid Profiles

UP TO DATE

- 5. Download IQ Gateway software version 8.XX (or the latest available version) on the Enphase Installer App.
 - Go to Menu > Settings > IQ Gateway Software. •

ENPHASE.

- Tap the **Update Now** button to begin the IQ Gateway software update process. ٠ The update requires an internet connection. Make sure you have a reliable connection during the update.
- 6. Click + on the bottom right of the dashboard in the Enphase Installer App to create a system activation. We recommend entering the system details before commissioning on-site to save time and avoid mistakes. Alternatively, the site can be created on the Enphase Installer Portal by clicking + Add New System on the system dashboard.

NAME / ID	STAT	us		CITY	STATE / PROV			-	
Search	Q						Systems	Dashboard	Support
All Alerta (54645)	Activations (1551)					+ Add New System	*	22	ع
Systems							Enable AC	31.0/ ACB1.5 Bat	tery installatio
Announcements Learn how to send system	access to your Homeow	mers through Enphase Ins	taller Portal. Click Here						
orsepos	247	4404	103 (18 1994)	430	105		IQ Gateway	/ Software	
tending Capture Seca	Eltes Commissioned	Metrice or installed	Errorics type/led	Net Proveder Source	Theorege Australiantion Correspond		Enable Auto	o Download to ke	ep up to date
Company Performance So	corecard						Auto Dow	nload	
⊖enphase En	phase Ene	rgy							(
							UPT	O DATE	MANAGEF
Enlighten Das Manager Das	ahboard Systems	Account 🛩 Servi	ces 🗸 🛛 Data & Priva	icy 🛩 Support	✓ Admin Admin(New)		Last updated	l on 15 Feb 2023, 1	2:41 PM
							Downloade	d profiles: 53	

- 7. If you are not the original installer of the system, you must be granted access to the activation as a system maintainer. To request system access:
 - Go to Support > Request System Access.
 - Enter the IQ Gateway serial number and submit the request. •
 - An email will be sent to the homeowner to provide access to the site.

8:32 🕇		8:32 7 🕆 🌔	8:35 4
Support		← Request System Access	← Request System Access
FUNCTIONS		(
Support Cases	>	Enter IQ Gateway Serial number or System ID	700459547
Replace IQ Gateway	>	SUBMIT	
Request System Access	>	•	
Range Test	>		
Connect to IQ Gateway	>		Success
HOW CAN WE HELP?			Request for system access sent to
FAQs	>		owner,
Video Library	>		OK
Commissioning Guide Updated on 10 Oct 2022	>		
Commissioning Best Practices Updated on 18 Aug 2022	2		
NEED MORE HELP?			
Systems Dashboard Support	Menu	Systems Dashboard Support Menu	Systems Databoard Support Menu

The access can be given using the Enphase Installer Portal as shown in the following figure.

Enlighten Das Manager –	hboard	Systems	Account A	Service	25 ¥	Data & Privacy 🗸	
	Company	Profile					
Former CC	Branch Of	fices		L GROUP			
Electrical Group	Users						
	Service Ar	eas					
	Leads & E	nphase Ins	taller Network	¢			
Company Performance S	Training						
	Authorized Subcontractor			مم			
Installing Enphase Since	Request S	ystem Acc	ess	stalled	Batteri	- +	Net
04-Jun-13	0 (Initiast 12	I months	6 (in lest 12)	months)	2 Unit	ast 12 months (

NOTE:

- IQ Batteries are shipped with approximately 30% state of charge from the manufacturer.
- The default operational mode is Self-Consumption.
- Enphase Installer App will change the battery mode to *Full Backup Mode* after the IQ Battery is commissioned for the first time till the battery calibration is completed.



Important!

- Always follow the safety instructions given in the Enphase Installation Manual and Quick Install Guide.
- After installation, IQ Batteries must always be connected to the AC supply.
- Once AC power is connected to the IQ Batteries, DO NOT turn on the DC switch until instructed by the Enphase Installer App.

4 Commissioning instructions

To commission the Enphase Energy System, use the Enphase Installer App commissioning wizard. Open the Enphase Installer App and tap the **Systems** tab on the lower left side of the screen.

4.1 System Details (Step 1)

This step is part of an activation creation. This requires the following information:

- System name
- Type
- Installer details
- Owner details
- Address
- Grid connection type (if applicable)

If the site activation is already completed on the Enphase Installer Portal, the site can be searched using the site name, site ID, postal code, city, installer reference, or IQ Gateway serial number.

Tap Next step: Add Devices to continue to the next step.

< Ne	w System	⑦ Time left	Step 1 of 6: System Details Add Details 1	⑦ Time left
Add :	system details		Keep system and owner details at hand	
	System Details Not Added	>	System Name *	
2	Devices and Configuration		Installer Reference ID	G
3	IQ Gateway Connectivity		Type of Installation * Residential	~
4	Device Provisioning		Owner Details	
5	Validation		Third-party owned (eg: PPA or leased) ©
6	Post Commissioning		First Name * Last Name *	
Monitor			Email *	
Щ		Ar	+91 V Mobile Number *	
, és	reas (Cases Divideor	1 and Mercles		
	Add System Details		Next step: Add Devices	

4.2 Devices and Configuration (Step 2a)

This step allows the installer to populate all the devices that should be installed.

- Tap each device and use the "-" and "+" buttons to decrease or increase the total count of the respective devices you are adding. Tap Next: Scan IQ Gateway.
- 2. Based on the devices that are added, you will be shown the respective scanning pages.
- 3. Scan all the devices for the system.
- Scan the microinverters' barcodes [recommended] or use the powerline communication (PLC) scan under the IQ Gateway details page.

Step 2 of 6: Devices and Configuration Add Devices		o T	⑦ ime left	Step 2 of 6: Devices and Configuration Scan IQ Gateway 3 Time left ~37 mins
Add device count				Point your camera at QR code or barcode to scan
IQ Gateway	Θ	1	\oplus	×
Integrator Gateway () <u>View Summary</u>	Ξ	0	۲	Recommended for targeted scanning of barcodes.
IQ Gateway 1 (Primary)				🐥 🖥 💽 Scanned 0/1
IQ Microinverter		0	+	Auto
IQ Relay	Θ	0	+	
IQ System Controller	-	0	\oplus	Scanning
IQ Battery ①	-	0	\oplus	
Range Extender 💮		0	+	
Generator	ė	0	+	
Next: Scan IQ Gate	way			Next: Scan IQ Microinverter

- 5. Follow instructions on how to set the breakers, switches, and disconnect the Enphase Energy System correctly to wire the RSD switch.
- 6. Select **Yes** if the system is powered ON and **No** if the system is not powered ON. If you select **No**, you will be shown steps to follow to power ON the system.
- 7. Tap Next: Site Configuration.

Step 2 of 6: Devices and Configuration Steps to Rapid Shutdown (RSD)	Step 2 of 6. Devices and Configuration System Power On Sequence
() Follow instructions to keep equipment safe.	 Follow instructions to keep equipment safe
Is Rapid Shutdown Switch installed already?	Is the system already powered ON?
O Yes	O Yes
No	No
Please follow the below steps for assistance	Please follow the below steps for assistance
Turn OFF PV Branch breakers in combiner	Turn ON external disconnect or breaker if used
Turn OFF RSD switch (if already wired)	In System Controller, turn ON the
Turn OFF DC switches in all IO Batteries (if	a PV Breaker
applicable)	b. IC Battery Breaker
In System Controller, turn OFF the	o. Generator Breaker (if used)
a DV Brooker	d. Mains Breaker (if used)
a. Py breaker	e. Load Breaker (if used)
c. Generator Breaker (if used)	f. NFT Breaker
d. Mains Breaker (if used)	Turn ON RSD switch (if used)
Turn OFF external disconnect (or breaker)	Turn ON FV branch breakers in Combiner
Wait for 5 minutes	Turn ON Gateway breaker in
Now wire the Rapid Shutdown (RSD) switch	a. System Controller for IQ8 Micros
Next: System Power On Sequence	Next: Site Configuration
Rapid shutdown	System power on
instruction	sequence instruction





NOTES:

- Ensure you have selected the appropriate grid profile for the Enphase Energy System. You can change the grid profile through **Site configuration** > **Grid profile**.
- If retrofitting an existing site, microinverters will be listed in the activation.
- We strongly recommend that you use the barcode scan to add the PV microinverters because a power-line scan can poach an incorrect serial number from a nearby site.
- The LED status indicator and state of charge in the Enphase Installer App will be inaccurate until IQ Gateway software is updated at the end of step 1.
- Refer to the <u>Enphase Energy System Planning Guide</u> for details on PV-to-storage ratios, compatible microinverters, and other aspects of system design.

4.3 Site Configuration (Step 2b)

You can select the settings which you want to configure from the Configuration List. The mandatory configurations are auto-selected and disabled for editing. Based on the site you are commissioning, you may find some optional configurations in the Configuration List. PCS-based limiting features are listed on this page. Details of the configurations are as below.

- Select Backup Configuration: This configuration selects the system as "Whole Home Backup" or "Partial Home Backup" and to indicate the position of the Consumption CT.
- **DER Configuration**: This configuration indicates which IQ Battery is connected to which port
- Installation and PV Details: This configuration updates the permit and PV module-related details
- **Battery Mode (if applicable)**: This feature is applicable for NEM 3.0 geographies. It allows you to set the battery in Import only or Export only mode.
 - a) Choose the Battery mode from the Site Configuration (Additional) page. You can select Import Only or Export Only for the battery mode.
 - b) You can change the battery mode for up to seven days from the day you first set the mode.



- **PCS Based Limiting**: To know more about PCS-based limiting, refer to the <u>Power Control</u> <u>System integration in the Enphase Energy System</u> document. The following configurations are available.
 - o Main Panel Upgrade Avoidance
 - o Battery oversubscription check
 - o Aggregated export limit
- **Auxiliary Contact**: This configuration is needed if you have installed an IQ Load Controller. You can configure contacts of the IQ Load Controller using this setting. Refer to the Aux contact configuration section for more details.
- Site Notes and Pictures: You can add notes and images of the site using the site notes feature.





oversubscription

2. Devices and Configuration C Battery Mode	Step 2 of 6 Devices and Configuration Main Panel Upgrade Avoidance Configuration Configuratio	Step 2 of 6 Devices and Configuration IQ Battery Oversubscription Configuration Configur	Step 2 of 6. Devices and Configuration C Aggregate Power Export Limit Trins wit ~29 mins
Battery mode selected	Enter details to enable Main Panal Upgrade Avoidance	① Enter Bottery breaker details	① Enter Aggregate Power Export firmit
Select the Battery Mode The battery mode should be same as operating mode for the storage device as per the grid interconnection application. (a) Export Only Battery can export to the grid. Charge from grid is not allowed (b) Import Only Battery can charge from the grid. Export to the grid is not allowed	Choose an option to use PCS Contolled Current Export Limiting for Solar. Current Limit with NEC 120% Rule Current exponder fram Solar will be initial to 120% of Mon pond Ruchar Breaker - Man Service Breaker Main Load Panel Buchar Rating (A) *	The below inputs are mandatory for commissioning. Based on the braker size, the Oversubscription will be enabled ONLY if required. IQ Battery Port Number of Batteries on SQ Battery pert 2 Breaker size of IQ Battery Port (4) 20	Appregatz Power Expant Limit (in Watt) *
	Current Limit Directly Entered	Additional Storage Port (DER Port) Number of barturies on Additional Storage Port 2 Braziter size of Additional Storage Port (A) Done	
Next Step: Connectivity	Validate		Enable
Battery mode	Main panel upgrade	IQ Battery	Aggregate power

• If you select **Site Notes and Pictures** in the list of configurations, you can store important notes and installation images, which can be viewed later using the Enphase Installer Portal.

avoidance

• You can update the grid profile from the Grid Profile configuration sub-menu of the Site configuration step.(Step 2b)

4.4 IQ Gateway Connectivity (Step 3)

Step 3 brings up a screen that displays the connectivity status between the IQ Gateway, the internet (or Enphase Cloud), and your smart device running Enphase Installer App.

- At the end of the site configuration, tap **Next Step: IQ Gateway Connectivity** to start the pre-connectivity check for IQ Gateway.
- Enphase Installer App performs an automated check at this step to ensure all relevant permission from the device is received. If any error is shown, tap **Resolve** against the error to provide the permission.
- After the pre-connectivity check is complete, tap **Connect to IQ Gateway** to reach the IQ Gateway connectivity page.
- Select the IQ Gateway you want to connect and tap **Connect to XXXX**. If you are commissioning a site of only one IQ Gateway, the IQ Gateway will be auto-selected.
- Configure Wi-Fi. If it was not configured earlier, select the Wi-Fi network you want to connect to and enter its password.
- If a gateway update is shown, perform the <u>IQ Gateway update process</u>.
- After all mandatory steps are completed for the step, you will be shown the option to start provisioning by tapping **Next Step: Provisioning**.

export limit



Step 2 of & Connectivity Pre Connectivity Check O Time left -27 mms	Step 3 of 6. Connectivity Connect Mobile Device to IQ Gateway Time left ~72 mins	Steel in A Surrecipto Connect Q Gateway to Internet 	Siep 3 of 6: Connectivity Connect IQ Gateway to Internet Tune isf -27 mins
Ensure following semissions are provided. Learn More Instructions Turn on IQ Gateway AP mode Ensure mobile device is close to IQ Gateway Additional Settings Location access	Turn on AP mode. Stay close to N2 Gateway. Room prove		Checking for satiware update
✓ Local network access ✓ Mobile WrFt ✓ Mobile Bluetooth	Select the IQ Gateway and connect IQ Gateway Provisioned Validated © 202315085415 ① ②	Connect gateway to Enonace cloud via	Connect gateway to Enphase cloud via:
		Connect gateway to home WI-Filhetwork WI-Filhetwork Pageword	Disconnect from ID Gateway
Next: Connect to IQ Gateway	Next: Connect to 205415	Cancel	Next step: Provisioning
Pre-connectivity check	IQ Gateway connectivity page	Wi-Fi configuration	Mobile Connected to IQ Gateway in AP mode



NOTE: You can open help for the step by tapping the (?) icon on the top right of the app. On the gateway connectivity page, you have the option to start/stop the remote gateway connection and the diagnostic tools to check connectivity status.

4.5 Device Provisioning (Step 4)

Enphase Installer App performs the following pre-provisioning check before opening the provisioning screen:

- Installer certification: If the installer is certified to commission the system.
- IQ Gateway version: If IQ Gateway software satisfies the minimum version required.
- Devices scanning: To check if any serial number of the device is not scanned.

Prior to provisioning:

- Ensure the Communications Kit is plugged into the left USB port of IQ Gateway.
- Ensure the Enphase Mobile Connect cellular modem is plugged into the correct port of the IQ Gateway (for a backup system). This is not mandatory for a grid-tied storage system.
- For a third-generation system, ensure the CTRL headers are correctly installed. For best
 practices regarding CTRL cable, refer to wiring section of IQ Battery 5P <u>Quick Installation</u>
 Guide.

To start provisioning:

- Press Next: Start Provisioning. The process will run the following steps automatically:
 - ✓ Update grid profile
 - ✓ Update tariff
 - ✓ Provision microinverters
 - ✓ Provision IQ System Controller
 - ✓ Provision IQ Battery



After the provisioning is complete, press the **Next step: Validation**.

NOTE: If you are commissioning IQ Battery 3T/10T and the IQ Batteries are not communicating with the IQ Gateway, power cycle the batteries by following instructions mentioned in the Appendix 6.4

4.6 Validation (Step 5)

In this step, you will be configuring the production and consumption meters, updating the software, and running through the functional validation of the system to ensure it is operating correctly.

4.6.1 Meter configuration

4.6.1.1 Production meter

- Select the correct phase for installing the microinverter branches. Ensure the PV breaker is turned ON and the microinverters are connected to the AC utility grid. Tap Next: Set up Production Meter.
- 2. Power off the PV Breaker.
- **3.** Wait for the PV to curtail the production, and the app detects no production. Tap **Next: Enable Production Meter** to enable production meter.



NOTE: The IQ Microinverters are only powered from the DC supply of the individual solar panels.





Production meter set up check.

Turn OFF the PV breaker

Tap Next: Enable Production Meter after the app detects no production



4.6.1.2 Consumption meter

- 1. Verify that the configuration matches with what is installed (Partial vs. Whole Home Backup, location of the CT) and the number of phases connected to the system.
- Check and confirm if any additional PV (third-party) is installed outside the Enphase system. Turn on a known load. Tap Next: Validate Import from Grid. Check and confirm the wiring of the IQ Gateway and IQ System Controller.
- 3. Switch ON the PV breaker to reduce the net import from the grid. Tap **Next: Enable Consumption Meter** to enable the meter.





Once the production and consumption meters are configured, tap **Next: Storage Meter** to configure the storage meter.

4.6.1.3 Storage meter

- 1. Tap Enphase System Software Update to start the update automatically.
- 2. Wait until all devices show ready for functional validation, then press Next: Storage Meter.
- 3. You will be shown instructions on how to turn on the DC disconnect switch of the IQ Battery if it is not turned ON.
- 4. Tap Next: Validate Storage Meter to perform storage meter validation.

Step 5 of 6: Validation C Enphase System Software Update	Step 5 of 6: Validation C Enphase System Software Update
Consumption meter enabled successfully	
Estimated Time: 4 mins left (640 Bytes/sec) You can leave this page, the update will continue in the background.	IQ Gateway - 202315085415 (v08.02.128)
IQ Gateway - 202315085415 (v08.02.128)	IQ System Controller - 482308036842 Ready for functional validation (v31.13)
IQ System Controller - 482308036842 Ready for functional validation (v31.13)	IQ Batteries (4) 492314000153
IQ Batteries (4)	Ready for functional validation (v31.13)
492314000153 Updating: 72% (v31.13)	 Ready for functional validation (v31.13)
Configuring files to make device ready for Off-Grid support.	492314001394
	 Ready for functional validation (v31.13)
492314000154	
Updating: 72% (v31.13)	492313002229
492314001394	Ready for functional validation (v31.13)
Next: Storage Meter	Next: Storage Meter
IQ Gateway: 202315085415	IQ Gateway: 202315085415
Pre-connectivity check	IQ Gateway connectivity

page





4.6.1.4 Generator meter

If you are commissioning an Enphase Energy System with a generator, refer to the Generator section.

4.6.2 Auxiliary contact validation

If you are commissioning an Enphase Energy System with an IQ Load Controller, refer to the Aux Contact section to configure and validate the aux contact.

4.6.3 Functional validation

Functional validation includes six sub-steps, and you must confirm the condition of each step to proceed to the next step.

- 1. Ensure an active load in the backup circuit and confirm the battery is charging.
- 2. Ensure the load is under the installed IQ Battery capacity, then tap the **Next: Go Off-Grid** button and wait for approximately 45 seconds for the microgrid interconnect device (MID) to open. You will hear a click in the IQ System Controller when this occurs.
- 3. Confirm that the system is now off-grid and that backup loads remain powered.
- 4. Turn on additional backup loads and confirm that the consumption value has increased.
- 5. Tap the **Next: Go On-Grid** button and wait for the MID to resync to the grid. You will hear a click in the IQ System Controller when this occurs.
- 6. Confirm that the system has transitioned to on-grid.





completed

Your system is now functionally validated. The IQ Battery mode will be changed to Full Backup automatically by the Enphase Installer App to bring the state of charge to 100%.

2

NOTE: Charging up to 100% state of charge is critical to ensure that the state of charge reported by the system is accurate.

4.6.4 Permit to operate instruction

ENPHASE.

You will be shown a screen where you can indicate whether or not a permit to operate (PTO) has been received for the system. Select **Yes** or **No** based on whether PTO is received or not. If PTO is not received, the Enphase Installer App will show additional instructions on mandatory steps before leaving the sites.



4.6.5 Summary report

The summary report shows essential information about the system, including system details, device serial number, status, and grid profile.

You can share this report using email, GSM text, or AirDrop. It contains details of each provisioned device and the commissioned status of the system.

Summa	ry Report	_	0 -2n	Gio	
Share or do	ivenioad report				
IQ Gateway	Communication	as Report		1	
Sydem The gran workford	epperty and built WT A	of PH Incides			
No.	In some for the Courses	10000			
TA MIR-ING	100000		Anti-Anterna and		
			10000000000000000000000000000000000000		
Sheet I		Sirmi I			
Chilary Stelle		N.			
0.0		a la v			
Webmint.		Colorida de			
E alberta an		Crarty Tubo (Sea)			
SWI .					
IQ Galaway Social analise	Selvar eras		Rate develops		
80.0845	111100.0489		5167.01		
Contaction Mater	Commission Moor		Kenad SOHE		
Linden (19) 2016 Autophysical	Alterna 461.29 Call (Sec.) For an New of	*	niew 12 set Sam Stand		
Control and Paper Cont	 Exceptions/Sigk Clinit 	* taona	•		
Line.	23 No. 2004 Bull Pro	Pilk-B WEAD	and an end of the second second		
facturely restors	with the out of the				
Earpy Unite Transford	algonalitat		3		
PCB under Lies processo	with conversion with the state by 20				
1)	er melder 2 is 20 million of Q is	and per solution	Lan A + Blanci Sarryy politi() 78 5 cm		
Aggregate Devision for	Laur and but has soon.				
live answer appear	- 11- 11- 11- 11- 11- 11- 11- 11- 11- 1				
151Q Microlesi	men, 410 Batterios	110 Sourn	Controller		
		Comm	issioning		
	xt step: Posi				
Ne	C Cateway	20231608	5415		

© 2024 Enphase Energy Inc. All rights reserved.



4.7 Post-commissioning (Step 6)

In this step, you will be able to provide the homeowner with a walkthrough and access, set the tariff, and make changes to the IQ Battery operating modes. These settings do not require your device to be connected to the IQ Gateway AP mode, but it must be connected to the internet.

4.7.1 Homeowner walkthrough

In this step, you must verify each item on the checklist with the homeowner.

- Check all the tick boxes to acknowledge that you have communicated this information to the homeowner.
- Tap **Confirm** to complete this step and proceed to the next.

4.7.2 Access to homeowner

Tap **Yes** to provide homeowner access to the system.



the Homeowner

4.7.3 Electricity rate structure

There are two tariff settings in the Electricity Rate Structure feature.

- Electricity Import Rate
- Electricity Export Rate
 - Follow the prompts to set up the Import Rate.
 - Check the tariff structure with the customer and enter the information accordingly.
 - Check Add Electricity Export Rate.



5 Additional steps

5.1 Aux contact

To control load by using the IQ Load Controller, perform the following steps:

5.1.1 Aux contact configuration

- In the site configuration screen, select the Aux contact that needs configuration and select all the contact types that you want to configure. IQ System Controller comes with two pairs of NO and NC contacts that can be used to control the contactors in IQ Load Controller. Opening or closing the contactors powers off or powers on the loads connected to the contactors.
- 2. Configure each of the contacts by entering the required details and using the Smart Control feature for each of the contacts.
- 3. Enable **Homeowner can override** option to let the homeowner change the load name and smart control for each contact.



NOTE: The choice of feature under Smart Control determines the way the load is controlled. The type of contact, i.e., NO or NC is not relevant for this configuration.



5.1.2 Aux contact validation

After meter validation is completed, you will be guided to the Auxiliary Contact Validation page.

- 1. Tap each of the contacts to validate the contact.
- 2. Tap **Yes** to turn off the load contact.
- 3. Verify if the contact is turned Off.
- 4. Continue the validation for all NO and NC contacts.



Step 5 of 6: Validation Auxiliary Contact Validation	Step 5 of 6: Validation C Auxiliary Contact Validation	Step 5 of 6: Validation Validate Auxiliary Contact NC1 Time left f
() Validate Auxiliary Contact NC1	Validate Auxiliary Contact NC1	Validate Aux Contact NC1
😻 Puli to Refresh	₩ . Pull to Refresh	waterial of an international states
Auxiliary Contact NC1	Auxiliary Contact NC1	Did the Load turn off successfully
Closed, Load Control (Air Conditioner)	Closed, Load Control (Air Conditioner)	O No
Auxiliary Contact NC2 Closed, Load Control (Custom device used for testing th	Auxiliary Contact NC2 Closed, Load Control (Custom device used for testing th	
Auxiliary Contact NO1 Closed, Load Control (Electric Dryer)	Auxiliary Contact NO1 Closed, Load Control (Electric Dryer)	
Auxiliary Contact NO2	Auxiliary Contact NO2	
Closed, Load Control (Others)	Closed, Load Control (Others)	
	Shed the Load	
	Are you sure that you want to shed the load (Air Conditioner)?	NC1 Status: Closed
Next: Validate Auxiliary Contact NC1	Cancel Yes	Continue
IQ Gateway: 202230109593		IQ Gateway: 202230109593
Select the auxiliary contact	Confirm to shed the load	Confirm if the load is turned off

NOTES:

- The auxiliary contact can be revalidated if any settings are changed on-site.
- You can see the auxiliary contact state on the Auxiliary Contact Validation page to provide better assistance during commissioning.

5.2 Generator

If you are commissioning a generator in the Enphase Energy System, complete the following steps.

5.2.1 Device details page

- 1. Add the generator count to the device details page; you will be shown a generator details page in the guided flow.
- 2. Update the generator details, i.e., manufacturer name, type, and smart profile.



5.2.2 Validation

When you have a generator, you would need to wire and validate the generator meter.

- 1. Tap Next: Go Off-Grid. This disconnects the system from the grid.
- 2. Tap **Next: Turn ON Generator**. This turns on the generator, and it will start supplying power to the home.
- 3. Turn OFF the PV breaker in the combiner box and tap **Next: Validate Generator Reading.**
- 4. Turn ON the PV breaker after you reach the next step. Tap Next: Turn OFF Generator.
- 5. Tap Next: Go On-Grid to connect to the grid.
- 6. Tap Next: Enable Generator Meter to complete generator meter validation.





Tap "Next: Go Off-Grid"



Go on-grid



Turn on generator



Enable generator meter





Validate generator reading

Turn off generator

5.4 IQ Gateway upgrade process

ENPHASE.

Connect to the IQ Gateway using AP mode. Retry connecting if the connection fails. The Enphase Installer app will recommend that a mandatory IQ Gateway upgrade is required for the system's functioning.

- 1. Tap Next: Update IQ Gateway software to start the update process.
- 2. The phone automatically disconnects after the packages are applied, and the IQ Gateway will undergo multiple restarts.
- 3. Reconnect to IQ Gateway when the LEDs on the IQ Gateway are solid green for 10 seconds.
- 4. Verify the IQ Gateway software to confirm if the update happened successfully. You will be shown the button to start provisioning.



0

Time left 25 mins

6





6 Appendix

6.1 Appendix A: Interpreting LED indications for IQ Batteries

State	Description	
Un-commissioned		
Flashing blue	After booting up, when IQ Battery has paired with an IQ Gateway but has not passed the commissioning three-way handshake to confirm that it is an Enphase device	
Flashing green	After passing the three-way handshake with the IQ Gateway	
After commissioning (normal operation)*		
Rapidly flashing yellow	Starting up/establishing communications	
Red double flash	Error	
Solid yellow	It is not operating because of the high temperature.	
Solid blue or green	Idle. The color transitions from blue to green as the state of charge increases. You can check Enphase Cloud for charge status.	
Soft pulse blue	Discharging	
Soft pulse green	Charging	
Soft pulse yellow	Sleep mode activated	
Off	Not operating	

* IQ Batteries have a one-hour orphan timer. If the IQ Gateway stops communicating with them after one hour, the IQ Batteries return to an "un-commissioned" state.



6.2 Appendix B: Noise detection over PLC

You can now monitor the quality of power-line communication between IQ Gateway and the microinverters. The PLC Noise Detection feature provides real-time data on the noise detected when communicating with IQ Gateway.



Refer to the latest <u>Enphase Storage Best Practices document</u> to learn more about troubleshooting steps in Enphase Energy Systems.

6.3 Appendix C: Replacing/decommissioning

For the replacement/decommissioning of IQ System Controller and IQ Battery, refer to the <u>Enphase</u> <u>Installer Portal self-service return and replacement technical brief</u>.

6.4 Appendix D: Steps to perform a power cycle of the IQ Battery 3T/10T

To power cycle IQ Battery 3T/10T, perform the following steps.

- 1. Turn off the IQ Battery DC switches.
- 2. Turn off the IQ Battery AC Breaker feeding.
- 3. Wait for five minutes.
- 4. Turn on the AC breaker feeding.
- 5. Verify the flashing red light in the IQ Battery for three seconds.
- 6. Wait for two minutes.
- 7. Turn on the IQ Battery DC switches.

7 Revision history

Revision	Date	Description
TEB-00020-5.0	June 2024	Added battery mode image in "Site Configuration (Step 2b)" section.
TEB-00020-4.0	June 2024	Enphase Installer App 4.x release updates.
TEB-00020-3.0	March 2024	Added NEM 3.0-related changes.
TEB-00020-2.0	October 2023	Enphase Installer App 3.32.0 release updates.
TEB-00020-1.0	July 2023	Initial release.

2024 Enphase Energy. All rights reserved. Enphase, the e and CC logos, IQ, and certain other marks listed at <u>https://enphase.com/trademark-usage-guidelines</u> are trademarks of Enphase Energy, Inc. in the U.S. and other countries. Data subject to change.