

# Growatt PV-Only Commissioning (Shiner) (INS-SOP-0264-01)








## Overview










[Link to CURRENT version of this SOP](#)

This SOP describes the commissioning of PV-only Growatt inverters using the Shiner App.



## Legend

General	
	Ensure all Arc Flash PPE is worn during the shown portion of the Installation SOP.
	This symbol indicates a safety-specific call out
	Photo or screenshot required for the Foreperson Installation Checklist (FIC).
	Pro Tip to help the installation procedure.
	Indicates to Tap on a screen or device within an application or website.

Safety Hazards		
 Health Hazard	 Explosive Hazard	 Environmental Hazard
 Acutely Toxic	 Oxidizing Hazard	 Flammable
 Pressurized Gas Hazard	 Corrosive Hazard	 Eye irritant, skin irritant, or both
See the Safety Data Sheet in the Related Documents list for additional information relating to OSHA Hazard Pictograms.		

## Tools & Materials Required

Estimated Time:	20 minutes
Tools	<ul style="list-style-type: none"> <li>• Multimeter</li> <li>• Electrical PPE</li> </ul>

Materials:	<ul style="list-style-type: none"> <li>• Iphone</li> <li>• The most recent version of the Shiner App</li> </ul>
Resources:	<ul style="list-style-type: none"> <li>• Growatt Customer support: <b>1(866)686-0298 ext. 2, then ext. 2</b> (Sunrun dedicated line)</li> </ul>

## Step 1: Turn on the Inverter/Open App

1. Turn on the inverter, then all associated AC breakers and disconnects



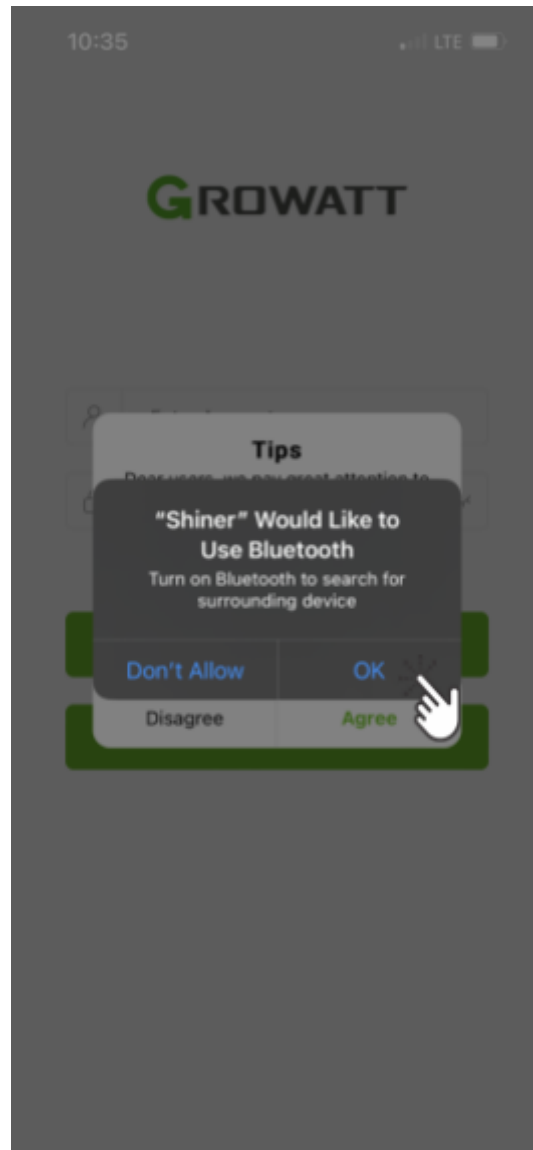
**IMPORTANT:** The inverter must be powered fully by both AC and DC for firmware updates to successfully load.

DC voltage shall be at least 80v or greater to complete commissioning.

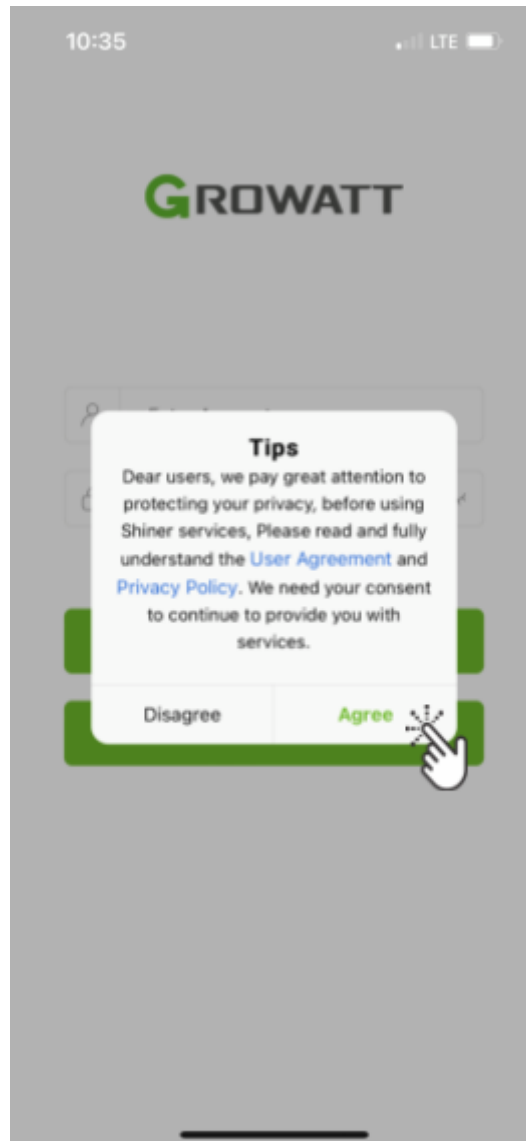
If the remote rapid shutdown trigger has been installed, ensure the green band is visible, indicating it is on.



2. Open the Shiner App and allow access to Bluetooth



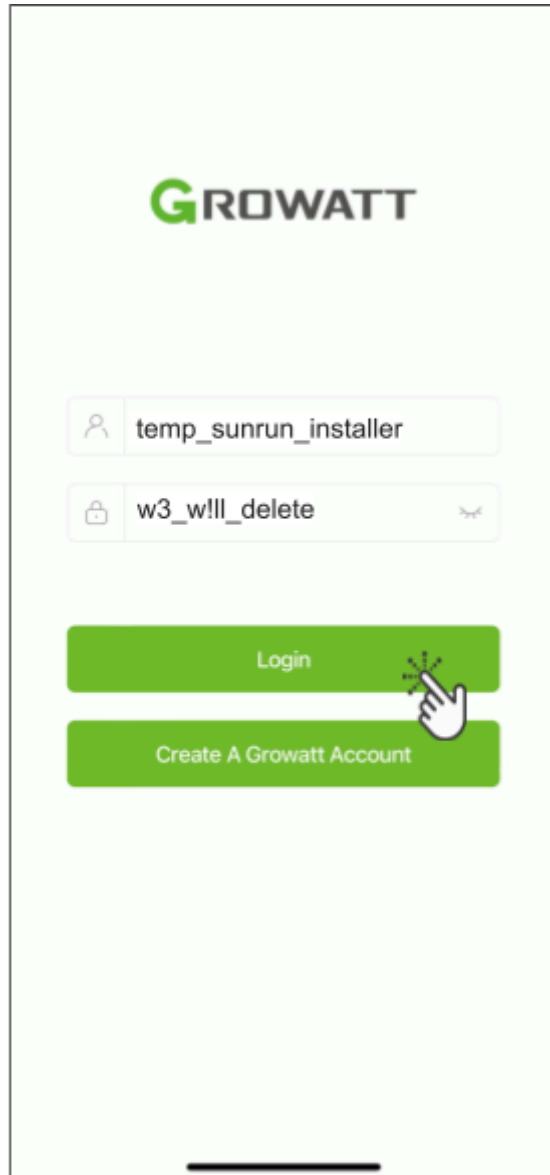
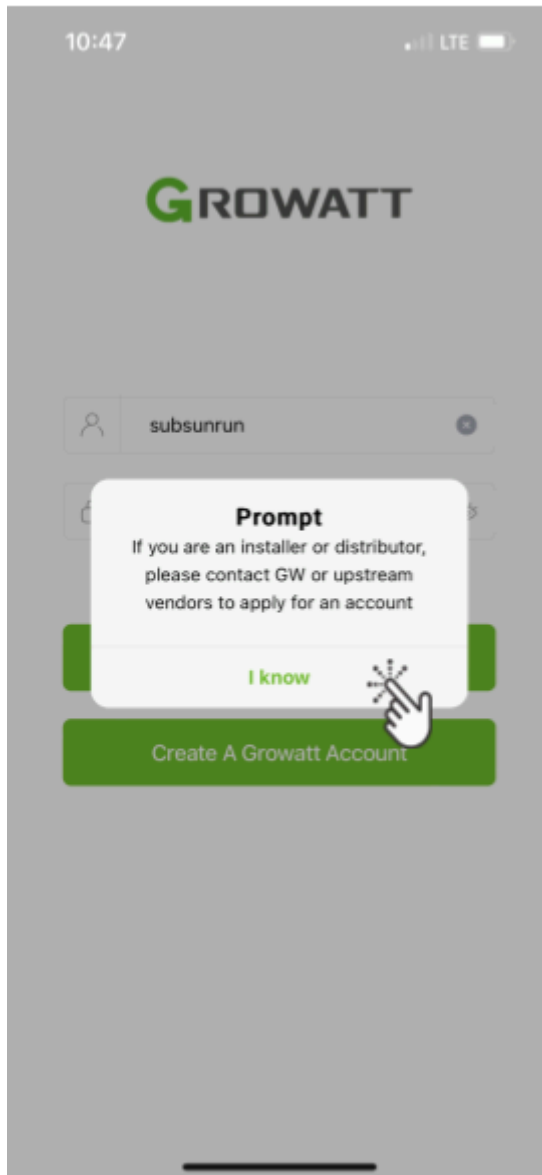
3. Read and agree to the user agreement/privacy policy



4. Enter login credentials:

**Account:** temp\_sunrun\_installer

**Password:** w3\_w!!l\_delete





## Step 2: Connect to the Inverter, Update FW

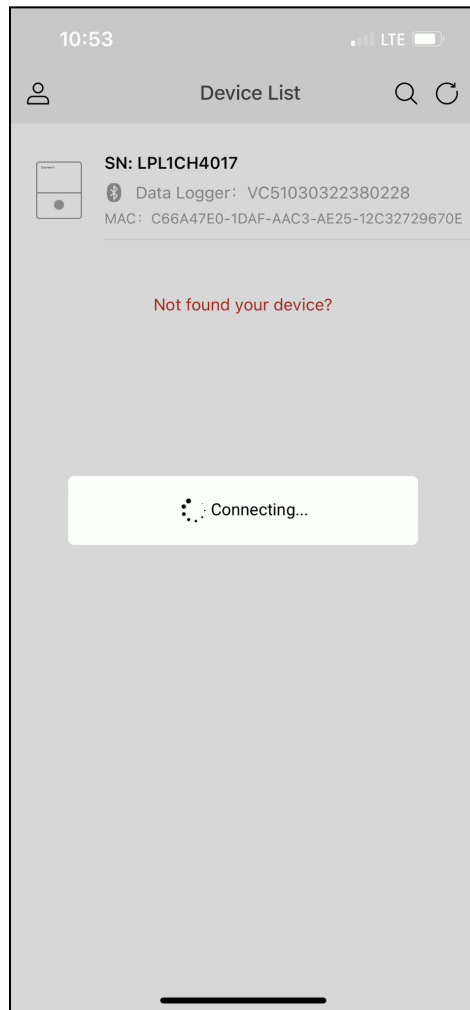
1. Tap the **inverter** to connect via bluetooth. Tap the **Refresh button** to scan for new devices if the inverter does not show up automatically.



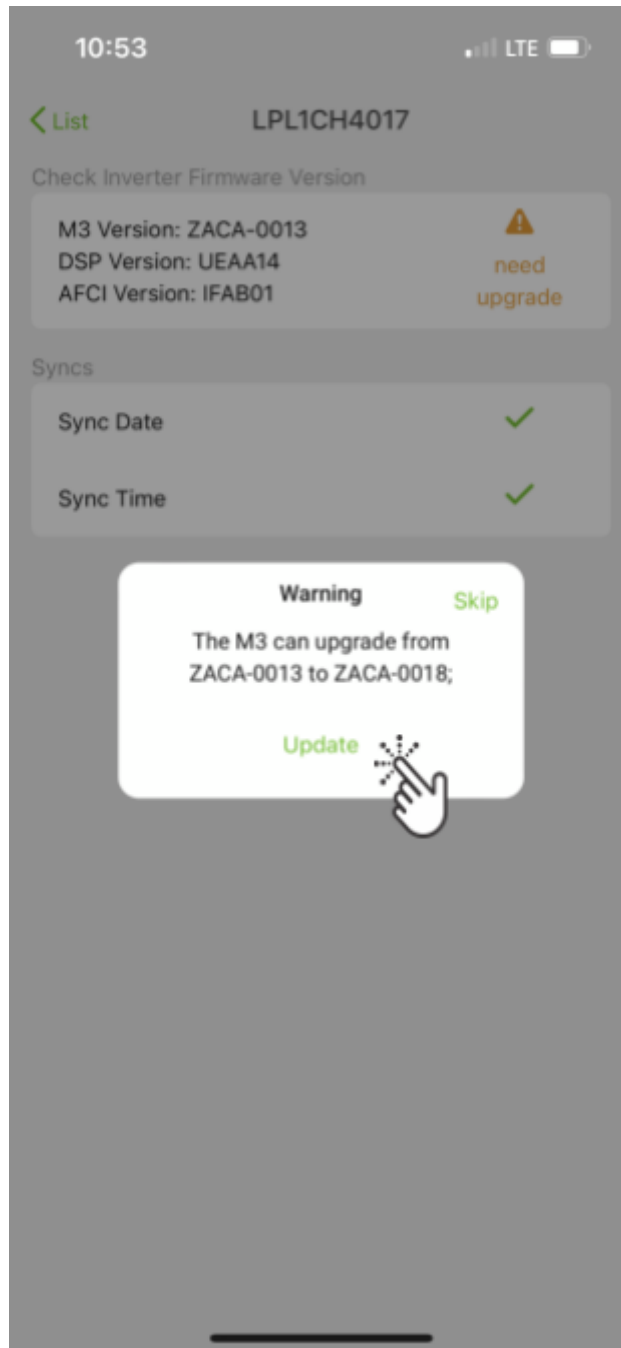
2. Input the CC found on the side of the inverter



3. Allow the app to connect

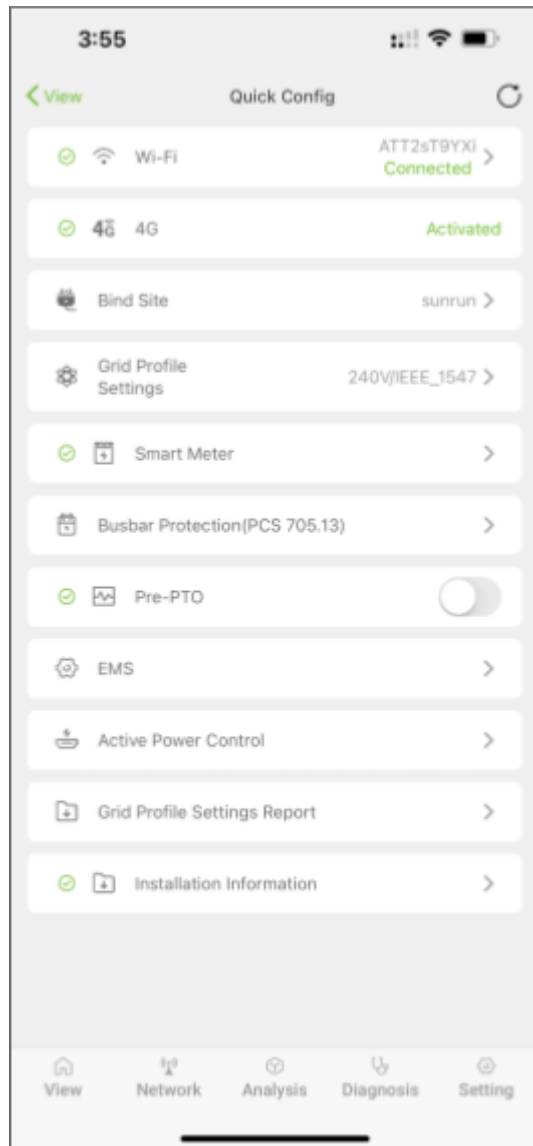
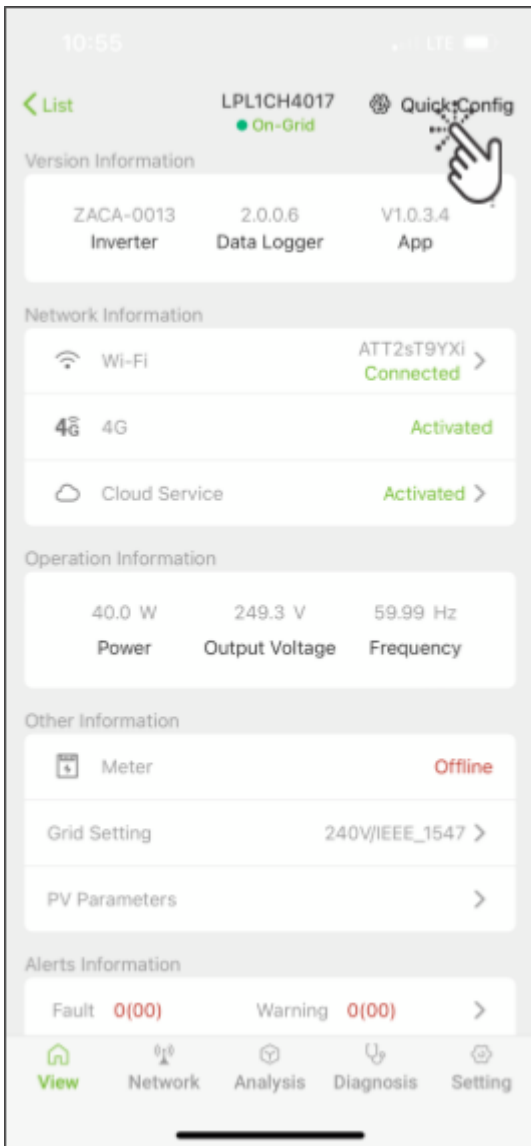


4. If prompted, tap **Update** to update the inverter firmware.



### Step 3: Quick Configuration

1. Tap **Quick Config** to enter the configuration menu.



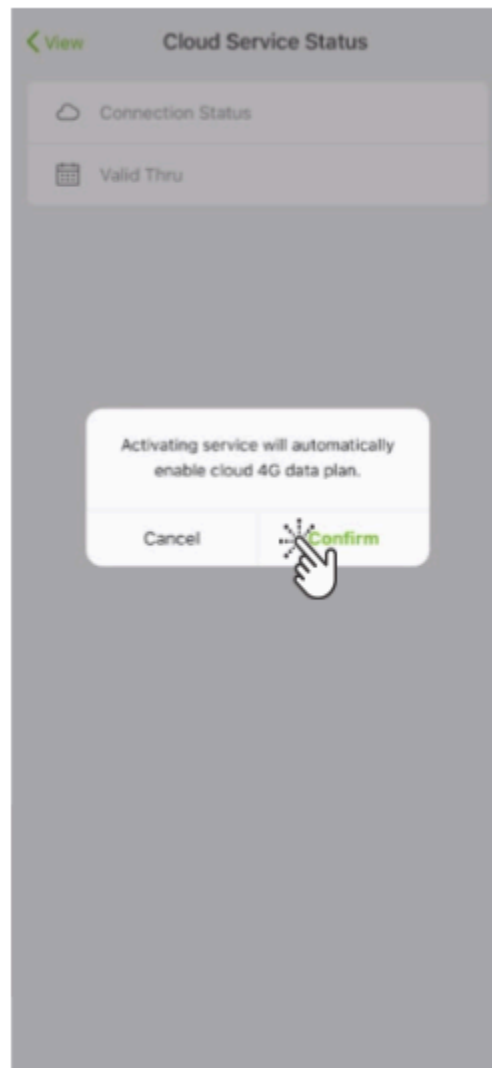
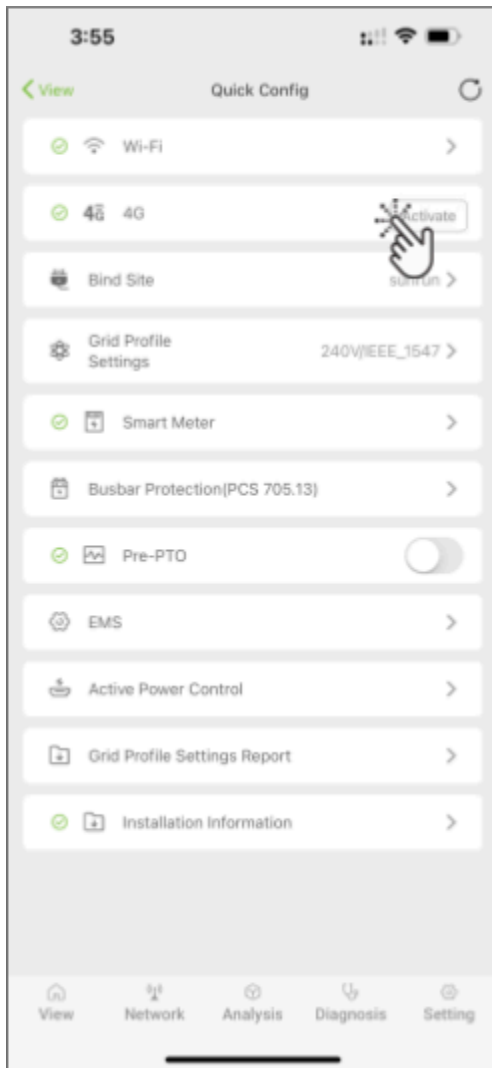
## Step 4: Network Communication

**IMPORTANT:** 4G is the preferred connection. Customer WiFi shall only be used if 4G signal is weak.

Customer WiFi must be a 2.4ghz network. 5ghz networks are not supported.

### 4G

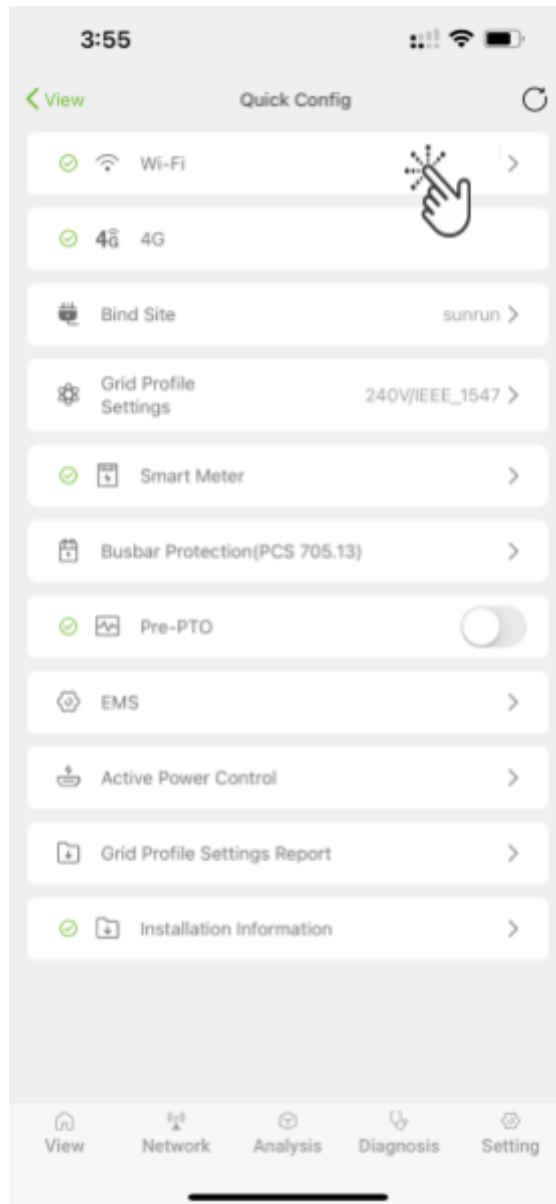
1. In **Quick Config**, Tap **4G** > **Activate** > **Confirm**



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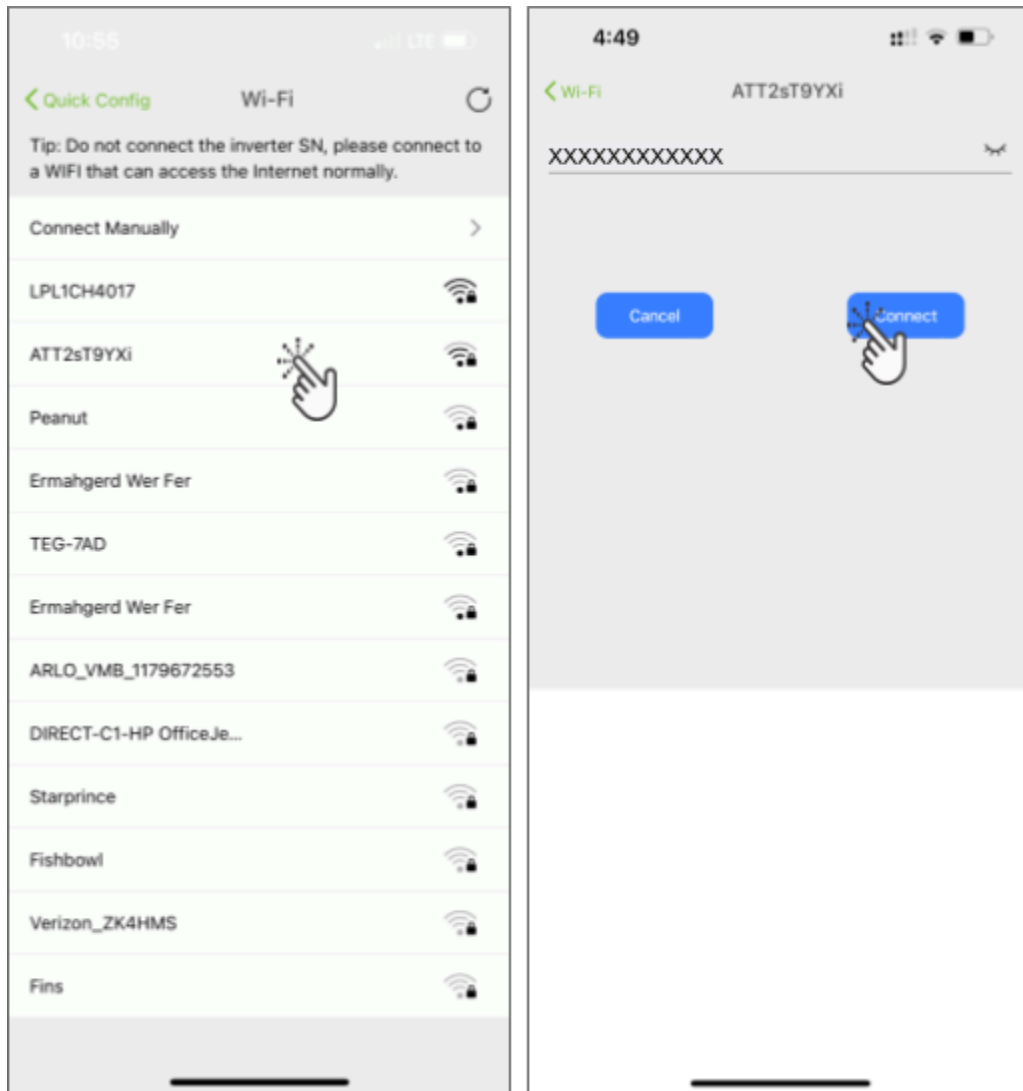
## WiFi

1. Tap **Wi-Fi**



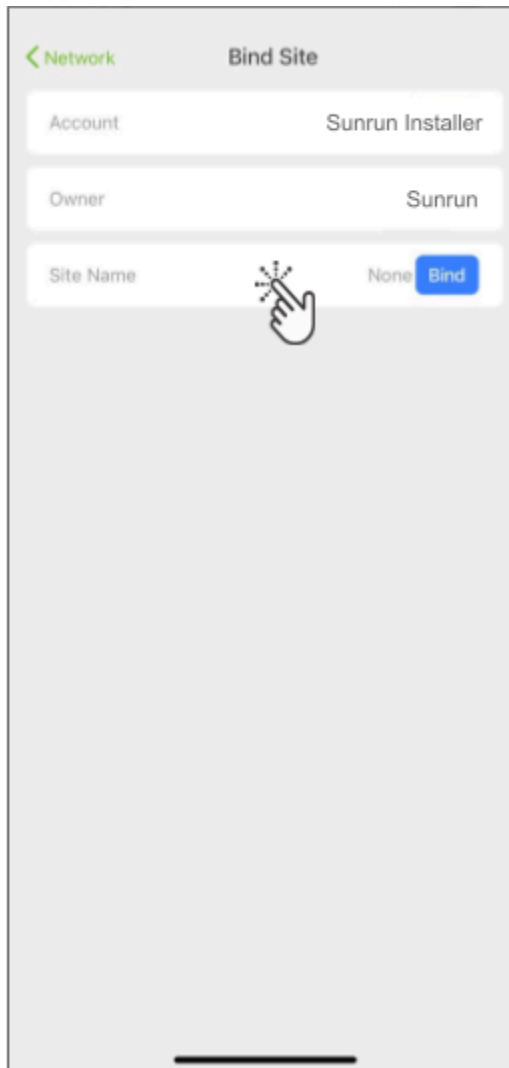
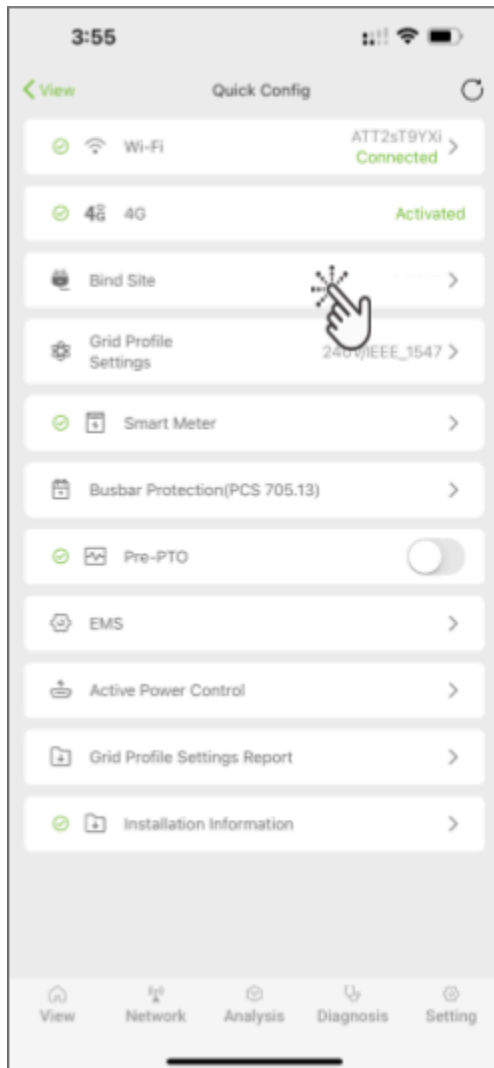
2. Select the customer WiFi, enter credentials, and tap **Connect**.





## Step 5: Bind Inverter

1. Tap **Bind Site**, Tap **Site Name** and Search for the job code. Once selected, tap **Bind**.



**IMPORTANT:** In this example a test site is used. If the job code is not listed, email [vendorsites@sunrun.com](mailto:vendorsites@sunrun.com)

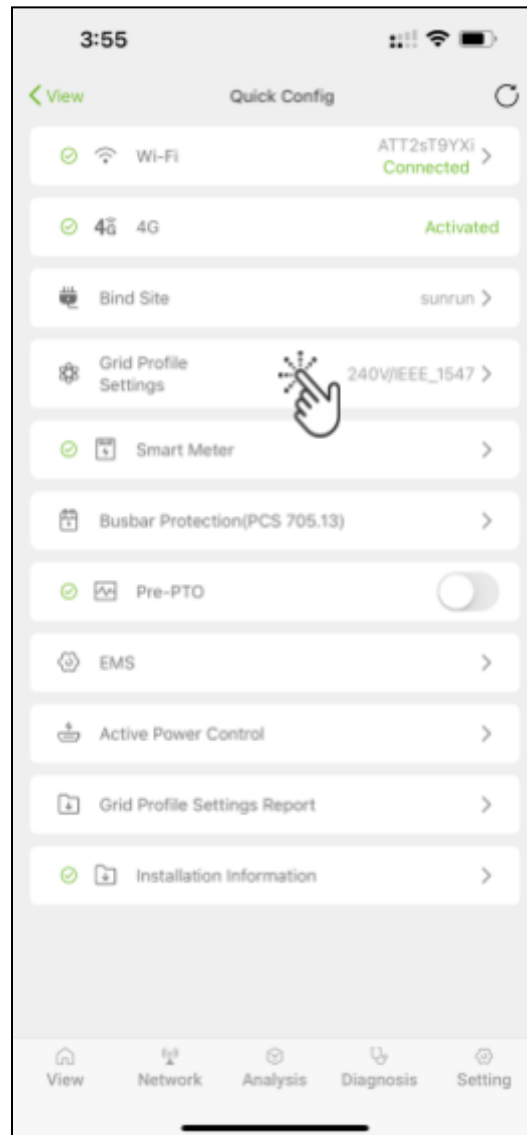
## Step 6: Grid Code

**NOTE:** A list of available codes will open, default is set to IEEE1547-240.

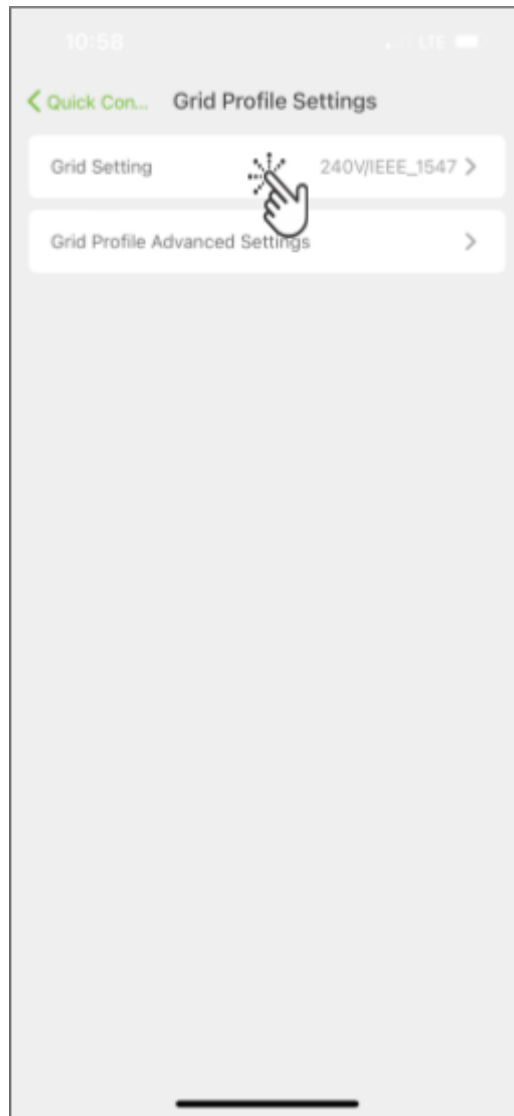
Contact the local utility company for the region's grid code.

If the Grid code is changed, the inverter will place itself into standby and begin a grid sense timer before returning to On Grid mode. The timer countdown length varies depending upon grid code.

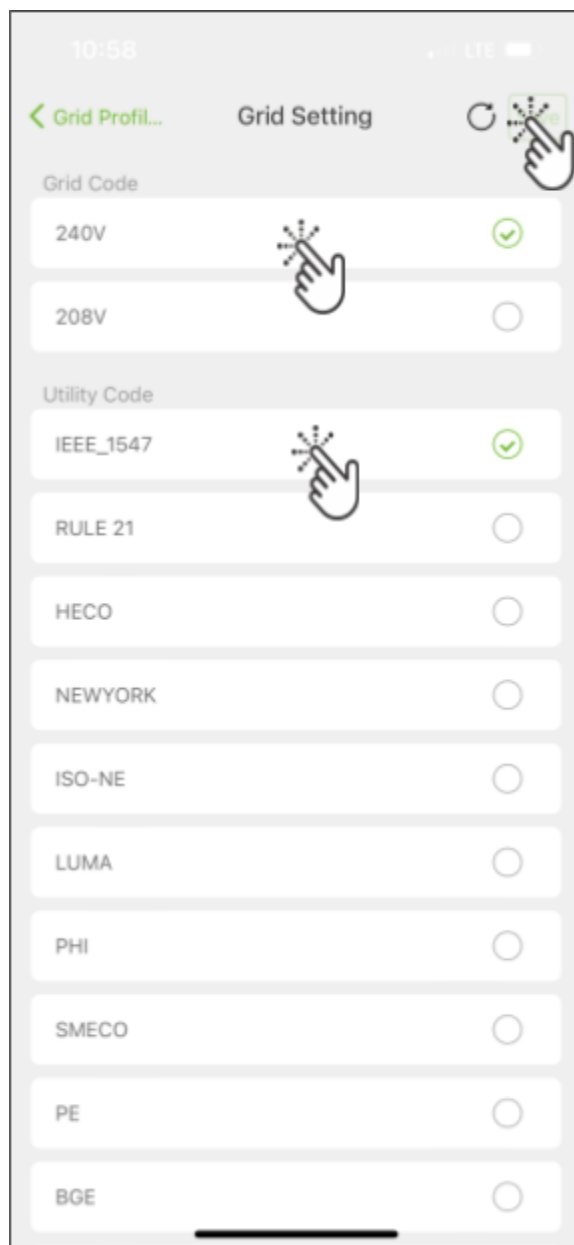
1. Tap **Grid Profile Settings**



2. Tap **Grid Setting**



3. Select the proper voltage and grid code for the region, tap **Save**.

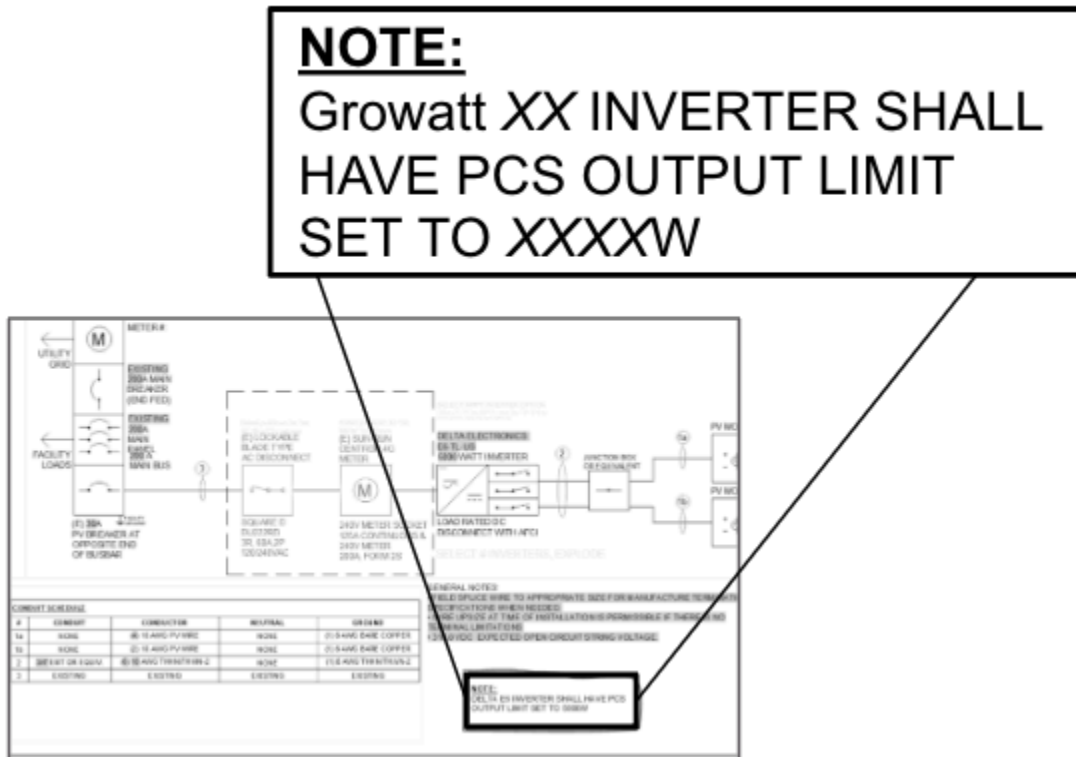


## Step 7: PCS: Output Limit/Busbar Protection

**NOTE:** This step is only required for setting output limits or busbar protection. If the plan set does not indicate setting these, skip this step.

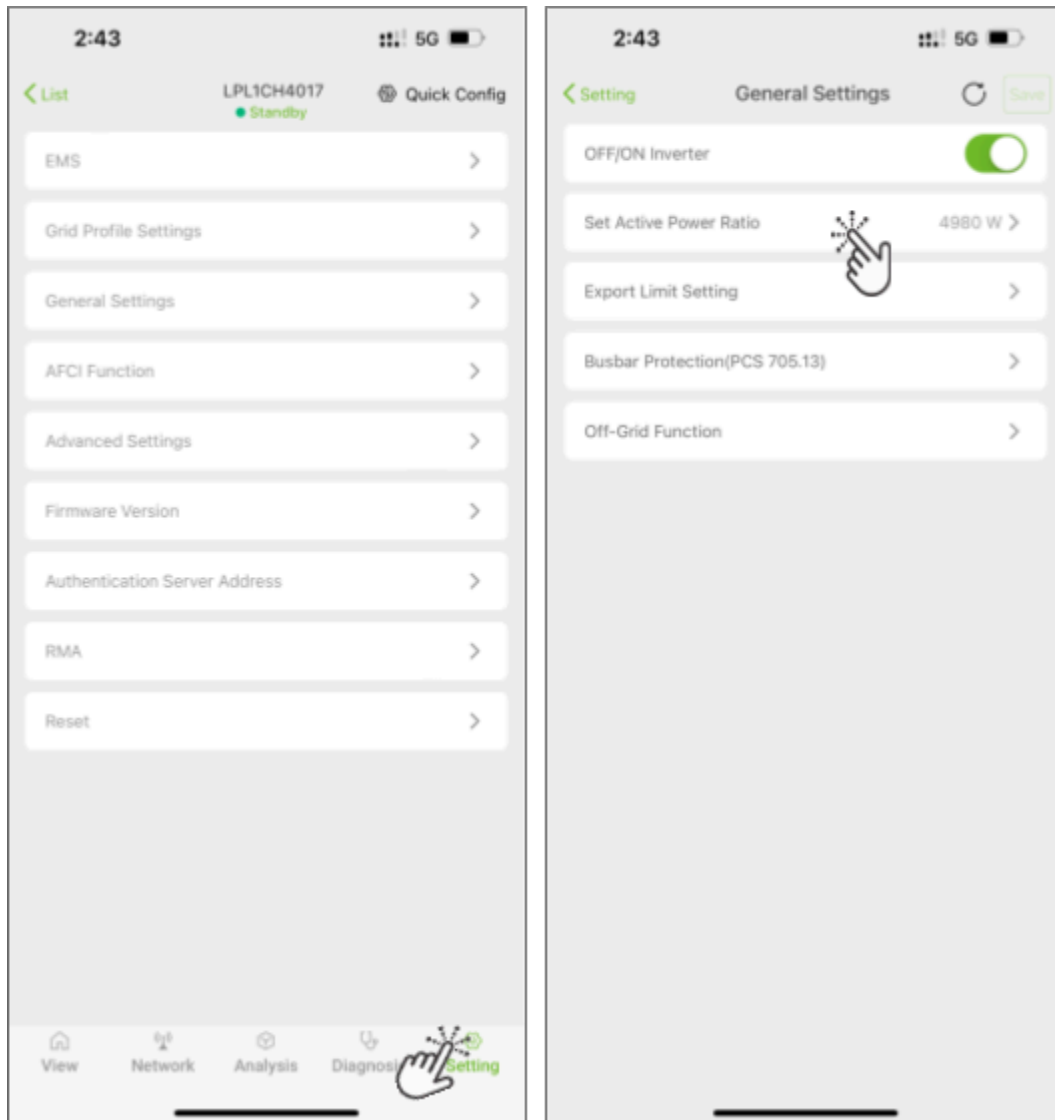
## Output Limit

Output limit settings will be noted on the ELECTRICAL page of the plan set.



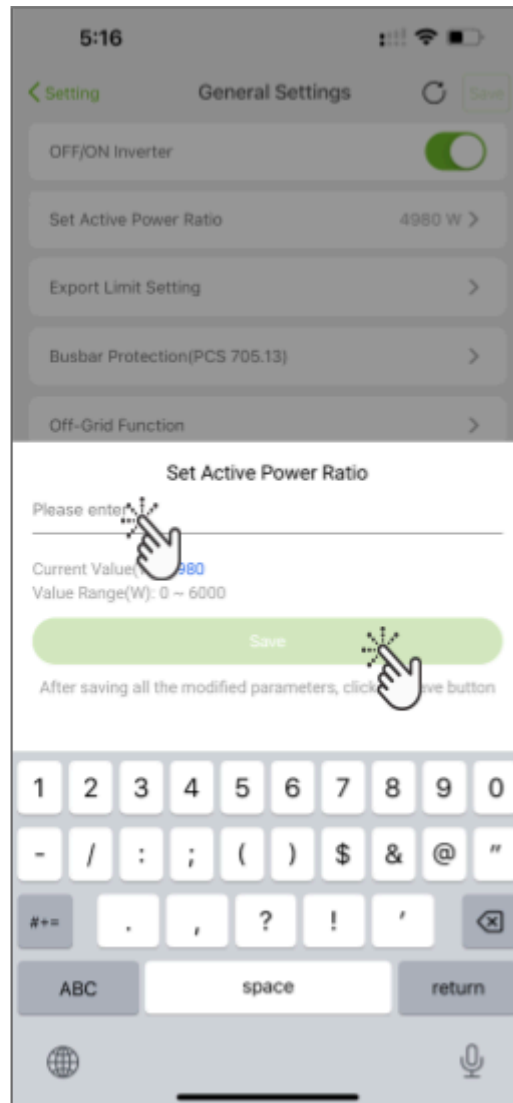
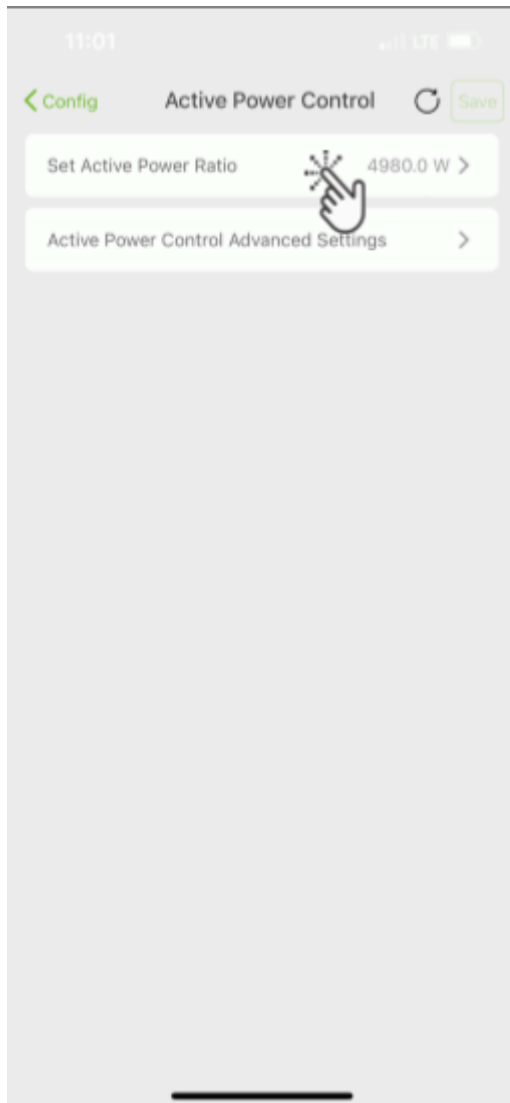
**NOTE:** A meter and CTs are not required for setting output limits.

1. From the main **View** page, tap **Setting > General Setting**.



2. Tap **Set Active Power Ratio**, enter the value and tap **Save**.

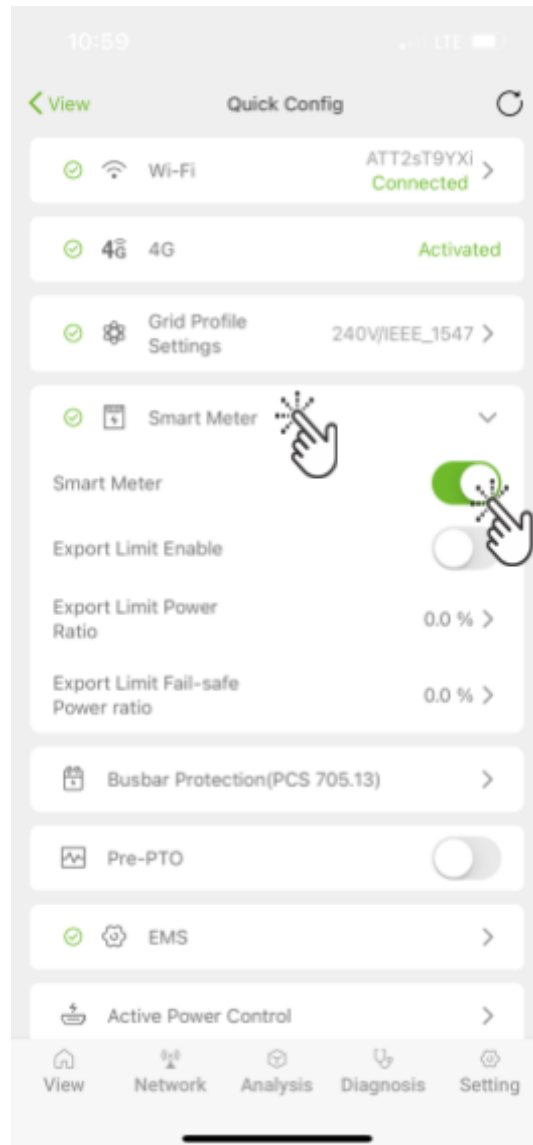




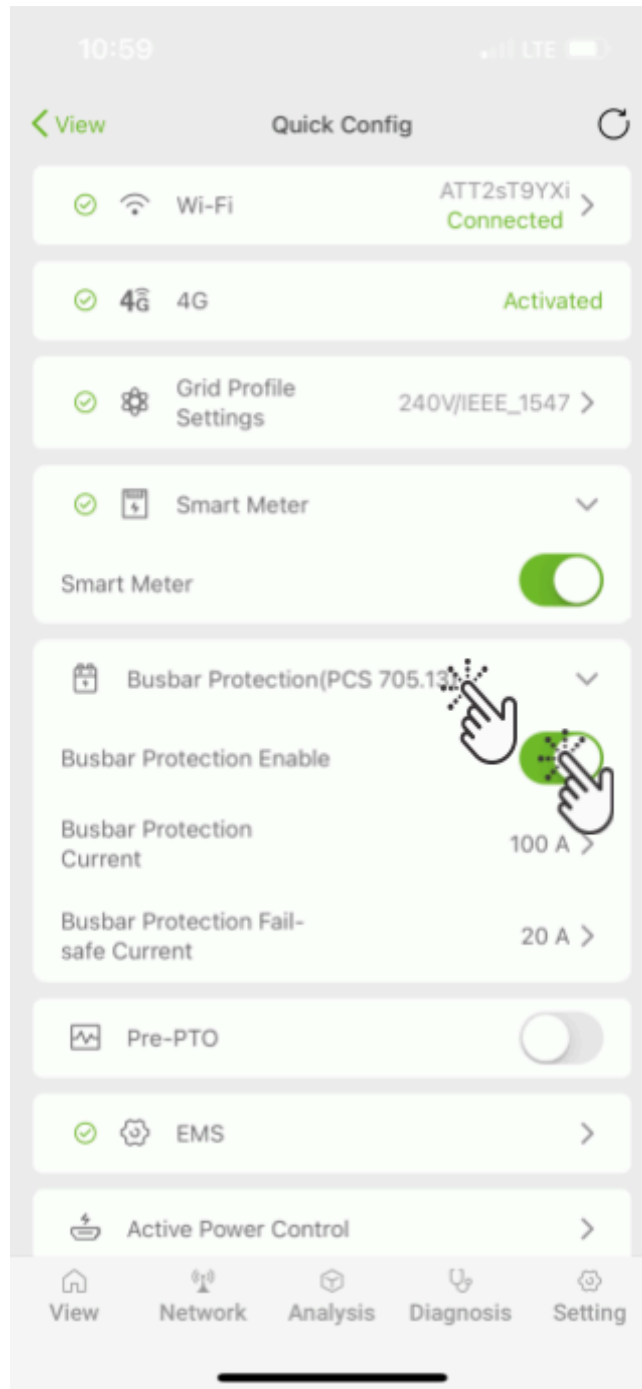
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## Busbar Protection

1. From the Quick Config screen, Tap **Smart Meter**.
2. Tap the slider to enable the meter.



2. Tap **Busbar Protection** and tap the slider to enable.



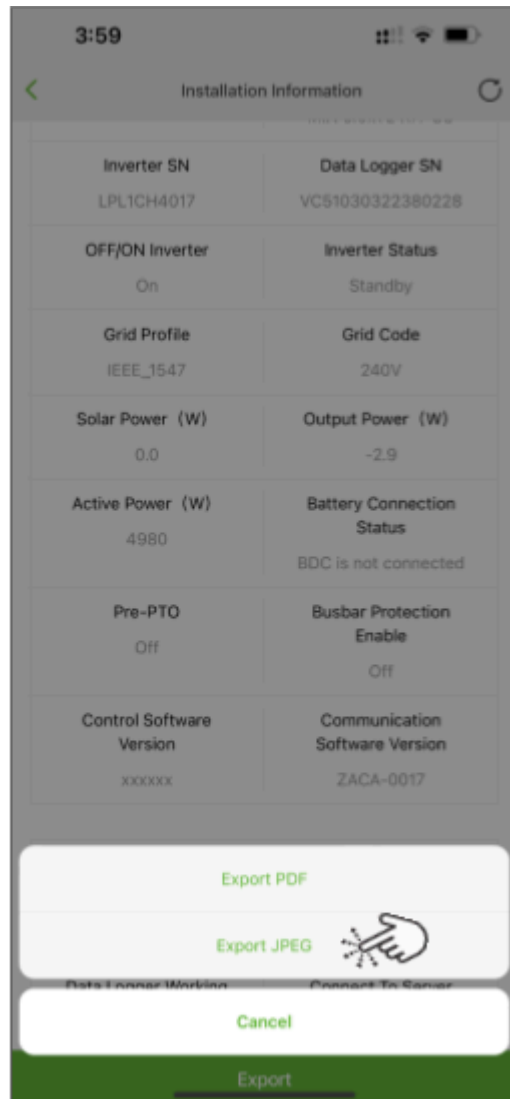
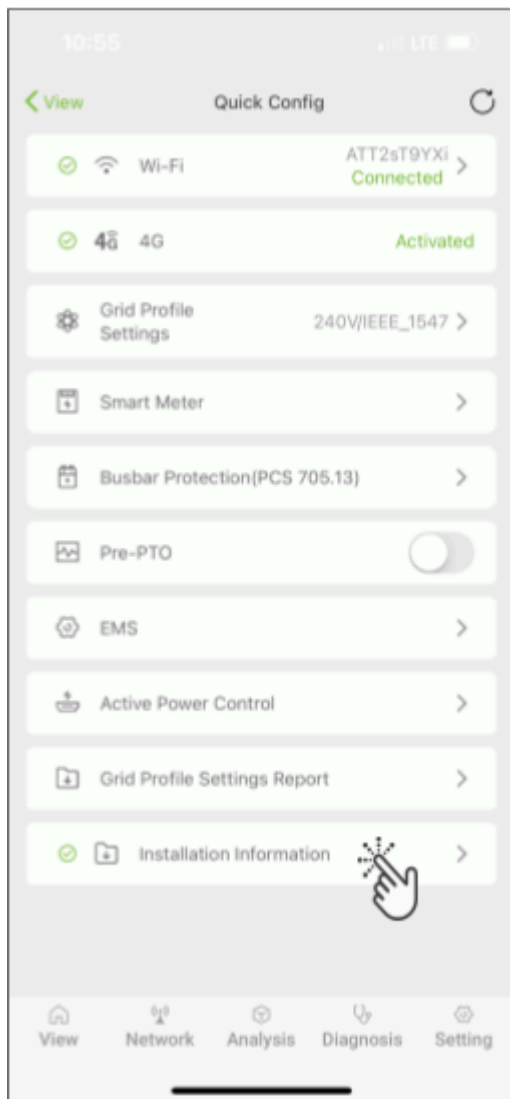
3. Enter the values listed on the plan set, tap **Save**.

Shiner App Description		Plan Set Description
Busbar Protection Current	=	XXA MAXIMUM TOTAL CURRENT ON THE CONTROLLED PANEL
Busbar Protection Fail-safe Current		XXA FAIL SAFE GENERATION BACKFEED CURRENT SUPPLY

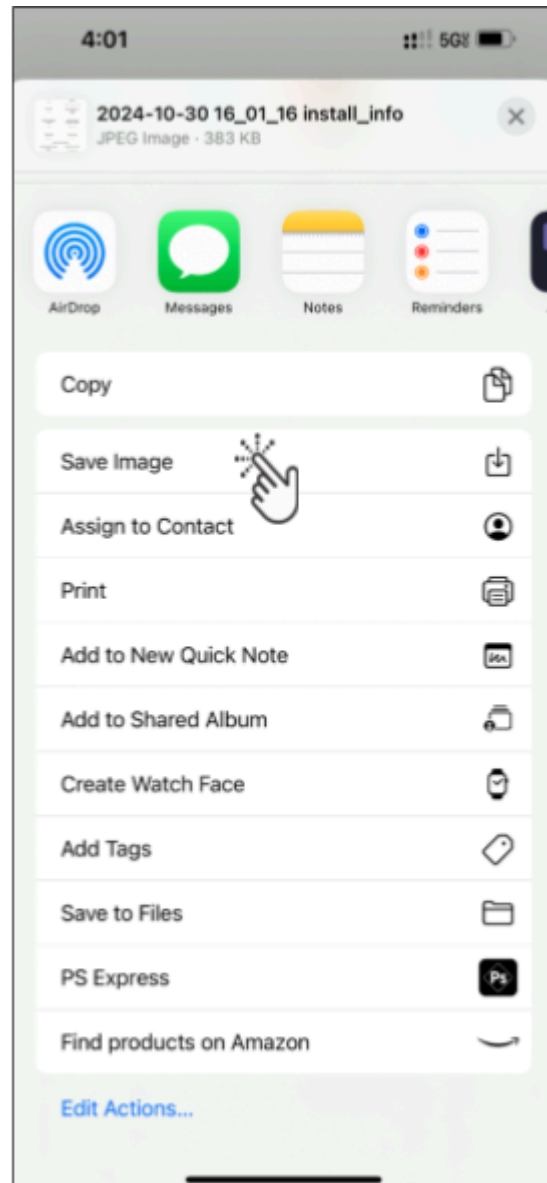


## Step 8: System Operation Verification (Summary)

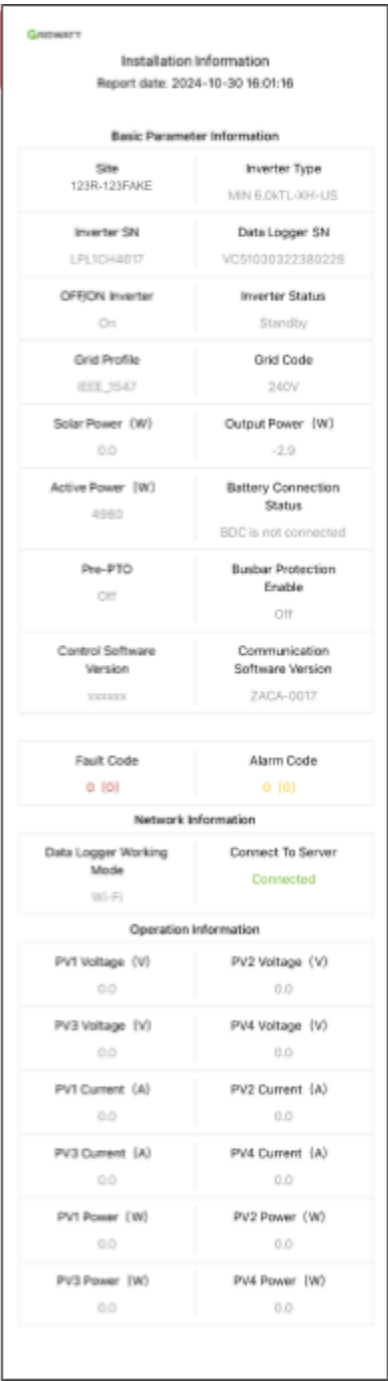
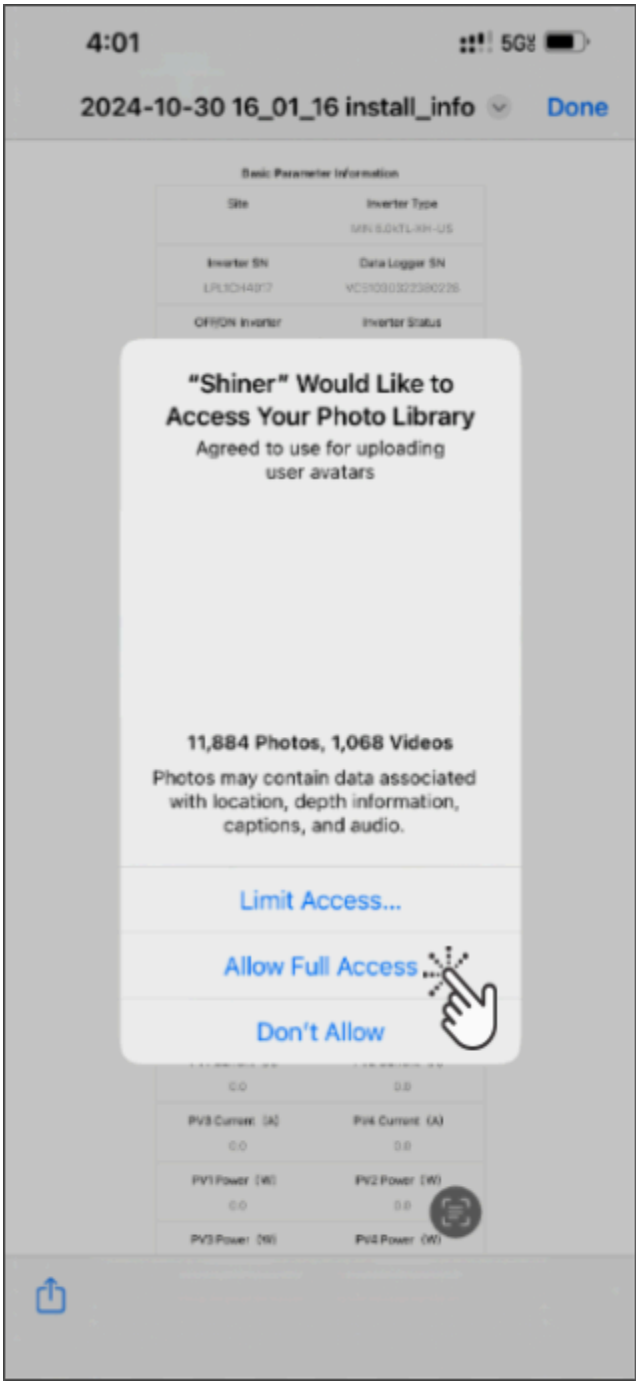
1. From **Quick Config**, Tap **Installation Information**, verify all settings are correct with no errors, and tap **Export > Export JPEG**.



2. Tap the **Share** Icon > **Save Image**.

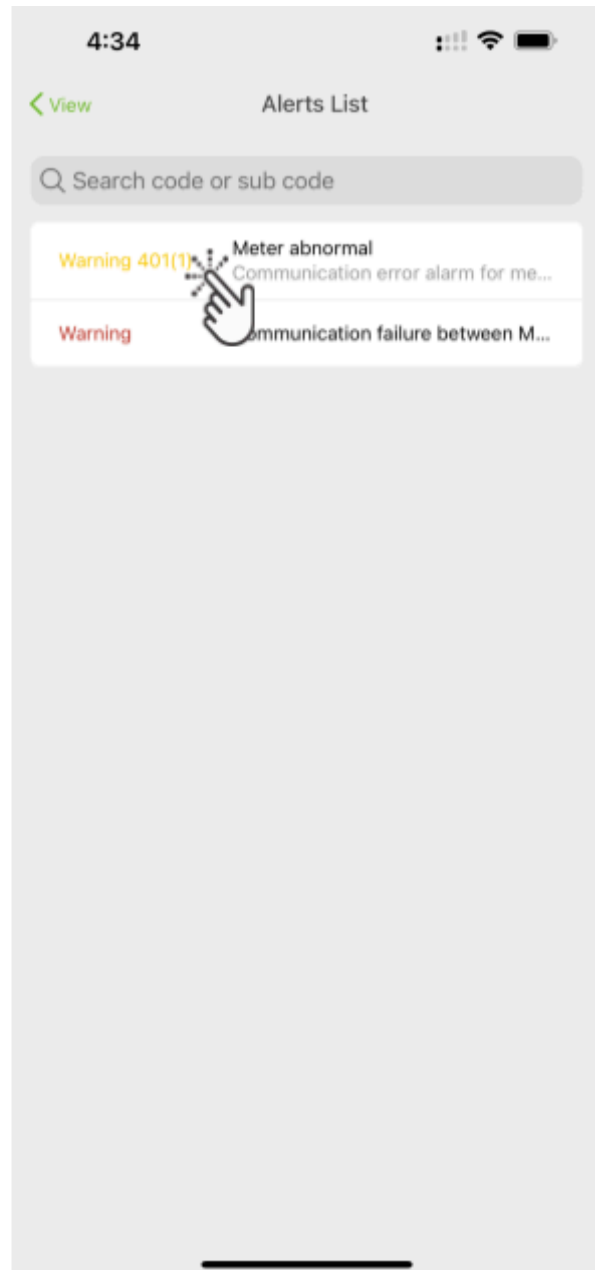
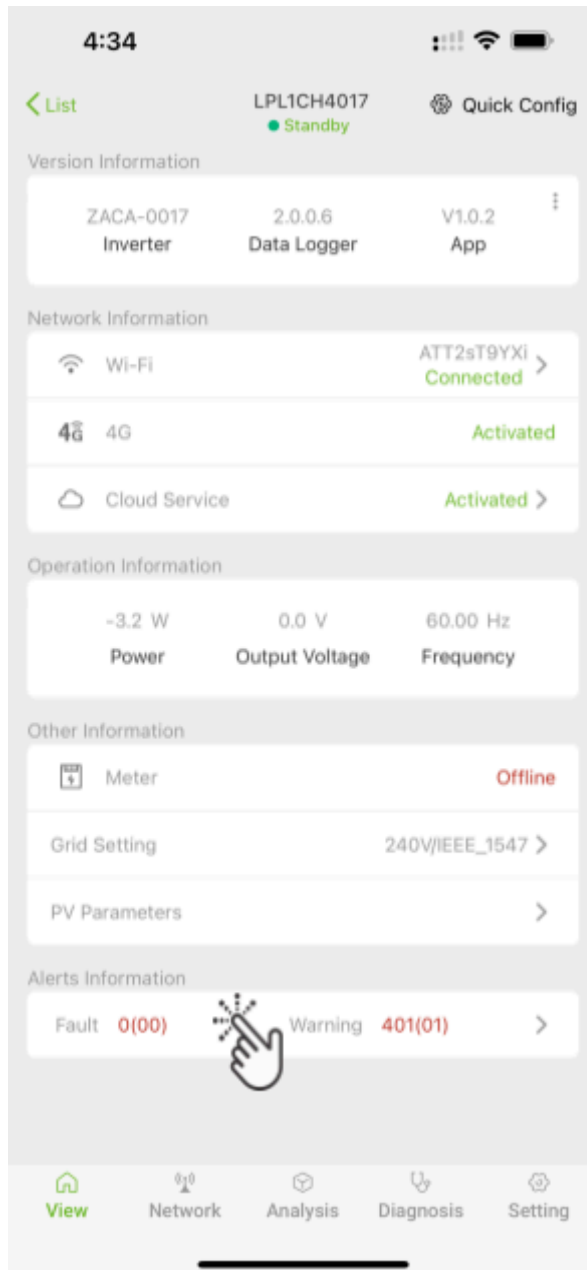


3. Tap **Allow full access** if prompted and upload the summary report.





**NOTE:** If errors are present, return to the **View** screen and tap the **Fault** or **Warning** code, then tap a specific code for more information. Returning to the **View** screen after resolving error, will refresh and clear the warning.



309 Warning Code Suffix	Meaning
(00)	Abnormal CT wiring
(01)	CT1 reversed, CT2 normal
(02)	CT1 normal, CT2 reversed
(03)	CT1 reversed, CT2 reversed
(04)	CT1 disconnected, CT2 normal
(06)	CT1 disconnected, CT2 reversed
(08)	CT1 normal, CT2 disconnected
(09)	CT1 reversed, CT2 disconnected
(12)	CT1 disconnected, CT2 disconnected

#### Acrel Meter LED Indications

LED	LED color	Fuction	Indication	Troubleshooting
Run	Green	Flashing ON/OFF (for 1 second)	Working normally	
	Red	ON for > 3 seconds	Internal error	Contact support
	Yellow	Flashing ON/OFF (for 1 second)	No communication	Check that the communication wires are connected correctly.
L1 / L2	Green	ON for > 3 seconds	No current	
		Flashing ON/OFF (for 1 second)	Positive power	
	Red	Flashing ON/OFF (for 1 second)	Negative power	Check for reversed CTs, swapped CT wires, or CTs not matched with the lines.
		Flashing with green LED	High voltage > 130 V	Check the line voltages and the meter rating.
		Flashing with yellow LED	Low voltage < 70 V	
	Yellow	Flashing ON/OFF (for 1 second)	Break fault < 70 V	
		ON for > 3 seconds	Frequency is below 45 Hz or above 70 Hz	Check for the presence of high noise.

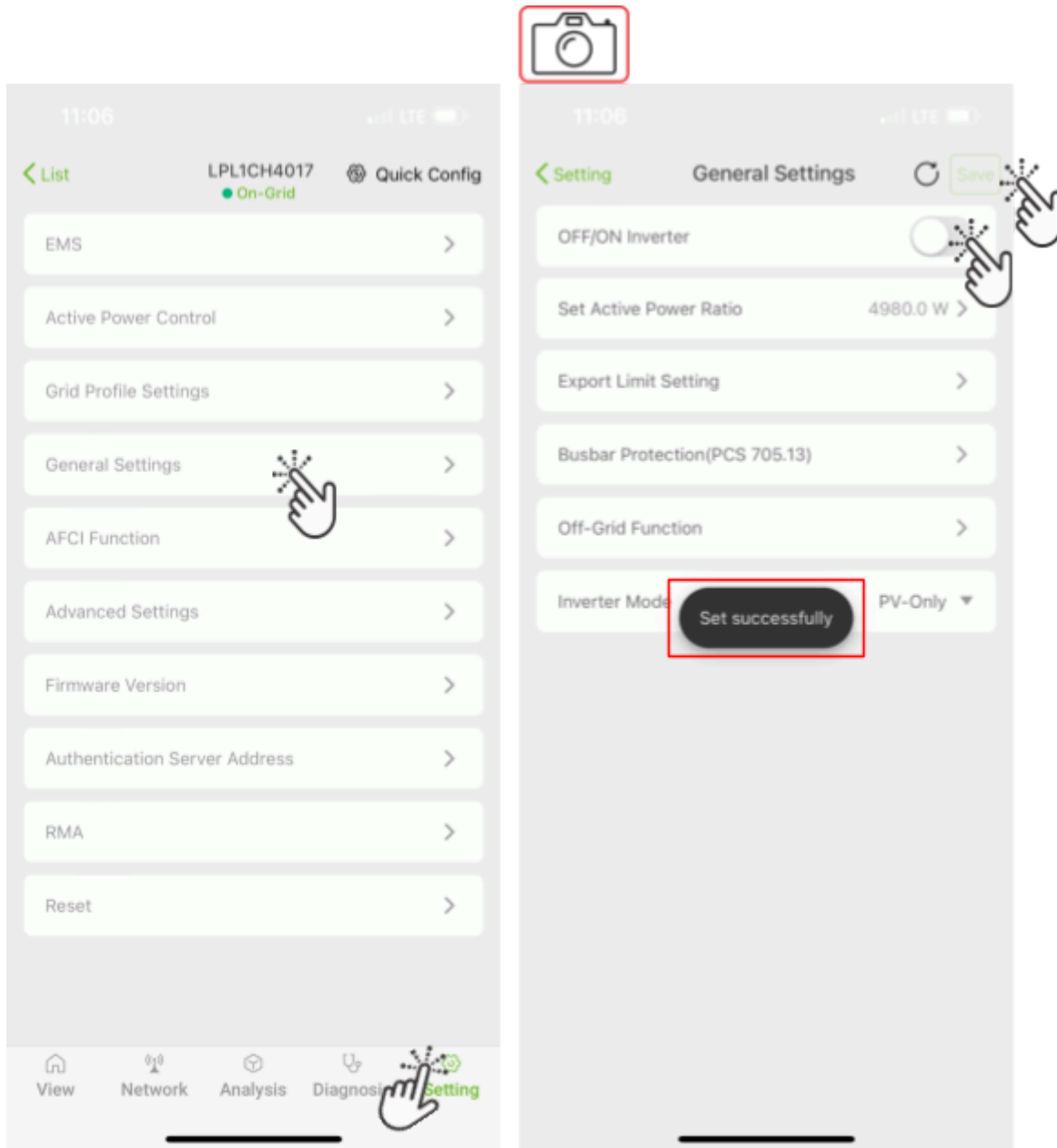


LED indicators  
on Acrel meter

## Step 9: Leave State (Remote Activation)

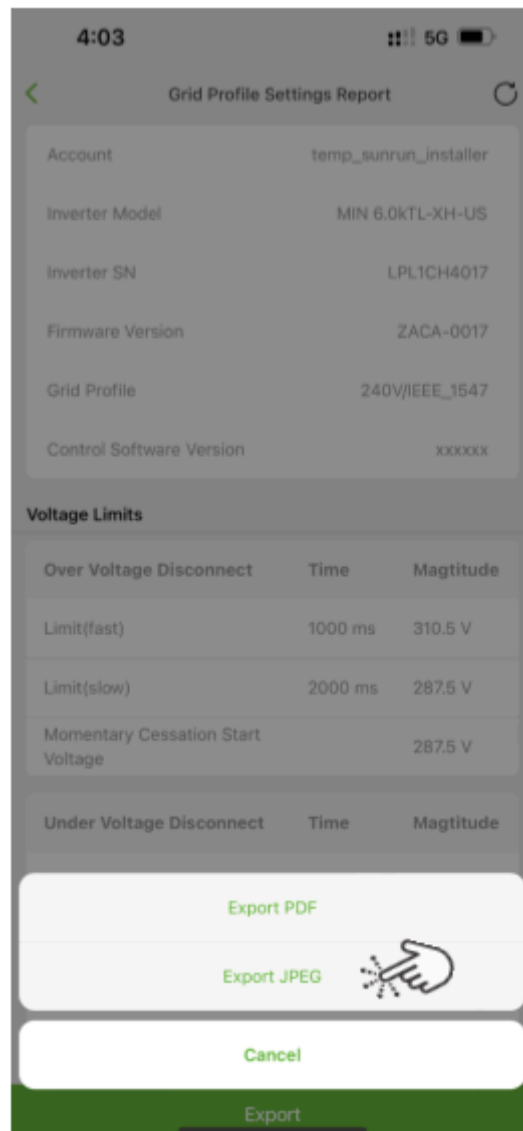
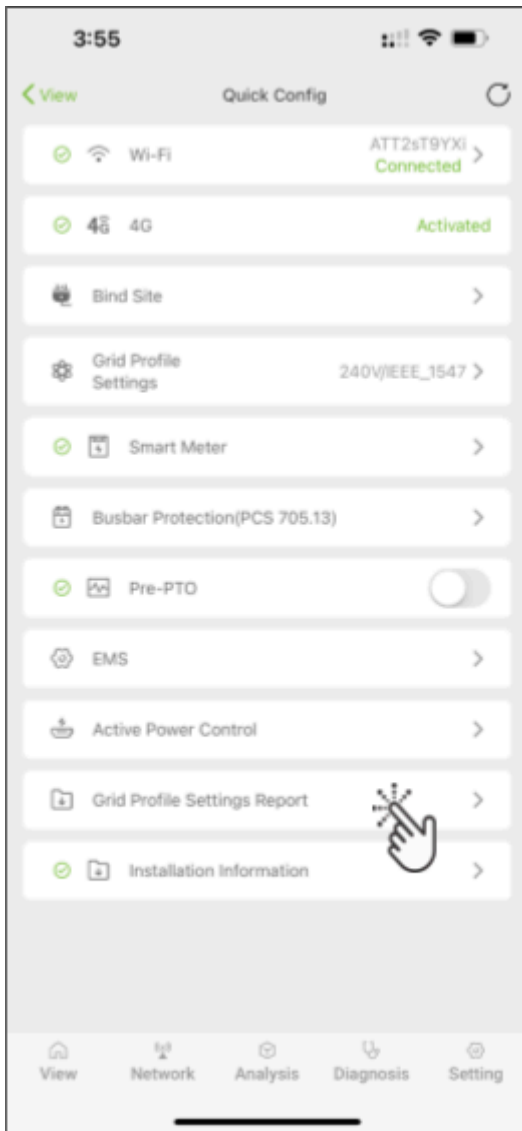
This setting is only to be used if the local jurisdiction allows for remote activation.

1. Tap **Setting** > **General Setting**, and tap the slider for **OFF/ON inverter**.
2. Tap **Save**.
3. **Set successfully** will pop up and the slider will be grayed out, confirming standby mode is enabled.

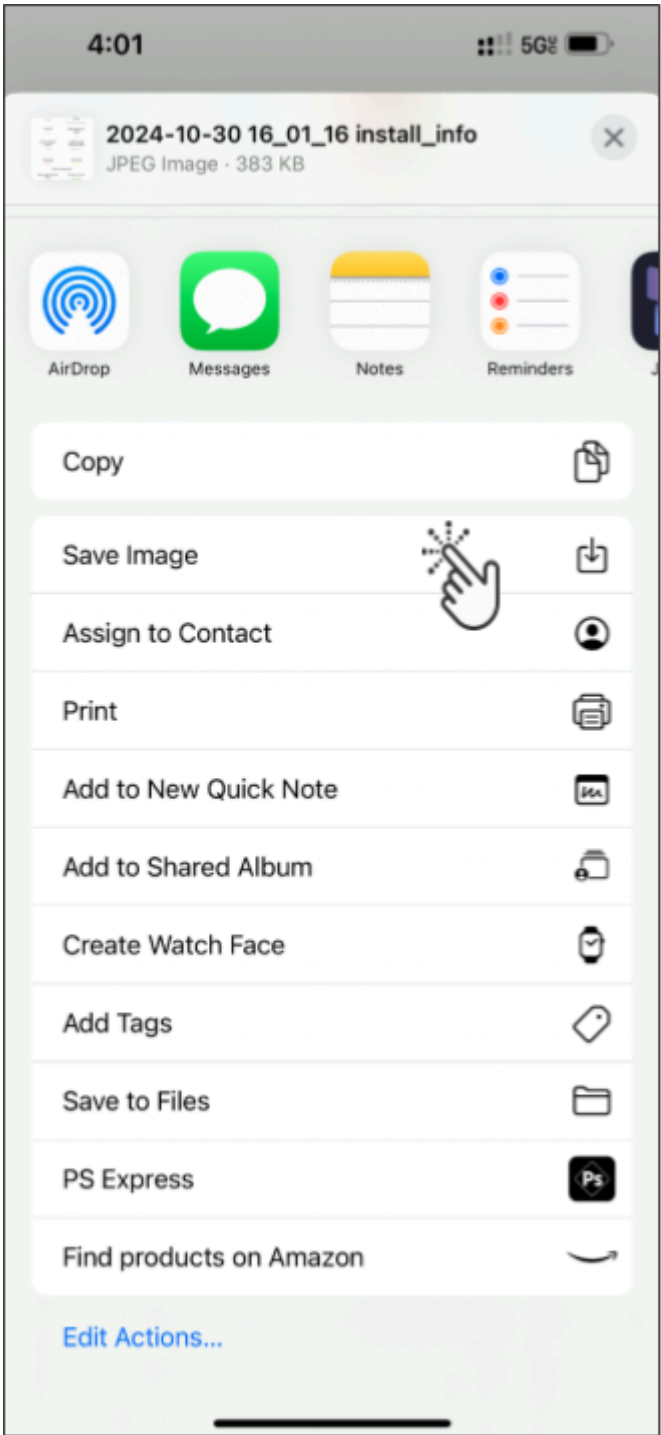


## Step 10: Grid Profile Settings Report (if required by AHJ)

1. From **Quick Config**, Tap **Grid Profile Settings Report**, tap **Export > Export JPEG**.



2. Tap the **Share** Icon > **Save Image**.



Utility Compliance Report		
Report date: 2024-10-30 16:03:02		
Account	WPA_labrador_040001	
Location Name	WPA-LABRADOR-040001	
Location ID	271234567	
Frequency Name	2700-4200	
Coord MGRS	24QUD984_0400	
Coordinate/UTM Zone	48QUD	
Voltage Limits		
Over Voltage Assessment	True	High/Low
Limit (V)	1000-1500	1000-1500
Limit (Hz)	2000-4000	2000-4000
Assessment: Overvoltage Start Voltage	1000V	
Under Voltage Assessment	True	High/Low
Limit (V)	1000-1500	1000-1500
Limit (Hz)	2000-4000	2000-4000
Assessment: Undervoltage Start Voltage	1000V	
Assessment Voltage	High/Low	
High	2000V	
Low	1000V	
Frequency Limits		
Over Frequency Assessment	True	High/Low
Limit (Hz)	1000-1500	1000-1500
Limit (V)	1000-1500	1000-1500
Assessment: Overfrequency Start Voltage	1000V	
Under Frequency Assessment	True	High/Low
Limit (Hz)	1000-1500	1000-1500
Limit (V)	1000-1500	1000-1500
Assessment: Underfrequency Start Voltage	1000V	
Assessment Frequency	High/Low	
High	4000Hz	
Low	2000Hz	
Assessment	High/Low	
Start Time	0%	
Assessment Time	0%	
Stop Time	High/Low	
Assessment Rate	10000 Hz	
Over Voltage Power Limit		
Over Voltage Power Limit	True	
Point	Voltage	1000V
Start	2000V	1000V-1500V
End	2000V	1000V-1500V
Over Frequency Power Limit		
Over Frequency Power Limit	True	
Frequency	High/Low	
Start Frequency	1000Hz	
Stop Overvoltage	1000Hz	
Under Frequency Charge Limit		
Under Frequency Charge Limit	True	
Frequency	High/Low	
Start Frequency	1000Hz	
Stop Undervoltage	1000Hz	
Voltage		
Point	Voltage	1000V
Point 1	2000V	1000V
Point 2	2000V	1000V
Point 3	2000V	1000V
Point 4	2000V	1000V
Open Loop Response Time	0%	

## Verification

- ☐ All string voltages tested as expected
- ☐ Grid profile was set correctly
- ☐ PCS settings (if applicable) match the plan set.
- ☐ Inverter is connected to the Internet either via 4G (or WiFi).
- ☐ Inverter firmware is up to date
- ☐ Inverter produces power with no error codes
- ☐ Inverter was left in the proper leave state for the region
- ☐ All necessary photos/screenshots taken for the FIC

## Product Feedback

Use the links below to provide feedback on SOPs and/or products:

- [SOP/Work Instruction Feedback](#)
- [Product Feedback](#)

## Approvals

Approvals			
Prepared by: J. Costner	1/8/2025	Training: D. Van Kuren	1/9/2025



Reviewed by: J. Ferreira	1/9/2025	Safety:	
Electrical:		Structural:	
Design:		CRT: Z. Thibert	1/9/2025
Product:		Other:	
Quality: A. Chiu	1/13/2025	Other:	

### Revision History

Revision	Date	Description	Approval
1	1/14/2025	Initial Release	J. Costner