

Victoria's solar emergency backstop with Enphase Energy Systems

Applicable regions: Australia

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1. Victoria's solar emergency backstop

Effective November 1, 2024, an [emergency backstop](#) will apply to all new, upgraded, and replacement rooftop solar systems with a capacity of 200 kW or less. For these rooftop solar systems, this means the power generated and exported to the grid can be remotely curtailed or switched off by distribution network service providers (DNSPs) during emergencies, but only as a last resort to protect grid stability. The emergency backstop will be activated only when directed by the Australian Electricity Market Operator (AEMO) and used exclusively in rare emergencies where high solar export levels compromise grid stability.

To enable the emergency backstop when installing or upgrading a rooftop solar system, the following are required:

- **Compatible inverter:** this means the export and generation from the inverter are capable of being remotely managed using the communication protocol Common Smart Inverter Profile Australia (CSIP-AUS).
- **Reliable internet connection:** this will ensure the distribution business can communicate with the inverter (unless an exception applies).

This technical brief describes how to set up and enable emergency backstop for Enphase Energy Systems.

2. CSIP-AUS

CSIP-AUS leverages the IEEE 2030.5 communication standard to provide a common framework for managing distributed energy resources (DER) within the electricity system. Victoria has adopted the CSIP-AUS protocol to implement the emergency backstop, ensuring national consistency and future-proofing solar systems. This approach enables flexible exports to be introduced in the future by Victorian DNSPs, similar to what has already been implemented in South Australia (SAPN) and Queensland (Energy Queensland).

3. Prerequisites

Before visiting the site, familiarise yourself with this document and the following references:

- [Solar Victoria - Emergency backstop training and guidance for installers](#)
- **DNSP-specific solar backstop information:**
 - [AusNet backstop](#)
 - [CitiPower backstop](#)
 - [Powercor backstop](#)
 - [United Energy backstop](#)
 - [Jemena backstop](#)
- **Internet connectivity:** Ensure that the site has a reliable internet connection, which is necessary to ensure that DNSP can communicate with the inverter.
- **Enphase Installer App:** Ensure the latest version of the Enphase Installer App is installed for efficient configuration and monitoring.



iOS



Android

- **Enphase University:** Ensure any necessary Enphase-specific training is completed online via Enphase University.
- **Enphase documentation centre:** Familiarise yourself with the latest documentation such as data sheets, quick install guides, and technical briefs.

4. Process

This section describes the processes and workflow to follow on the Enphase Installer App.

4.1 Standard workflow

This workflow can be used if an electrical inspection will be conducted a few days or more after installation and commissioning.

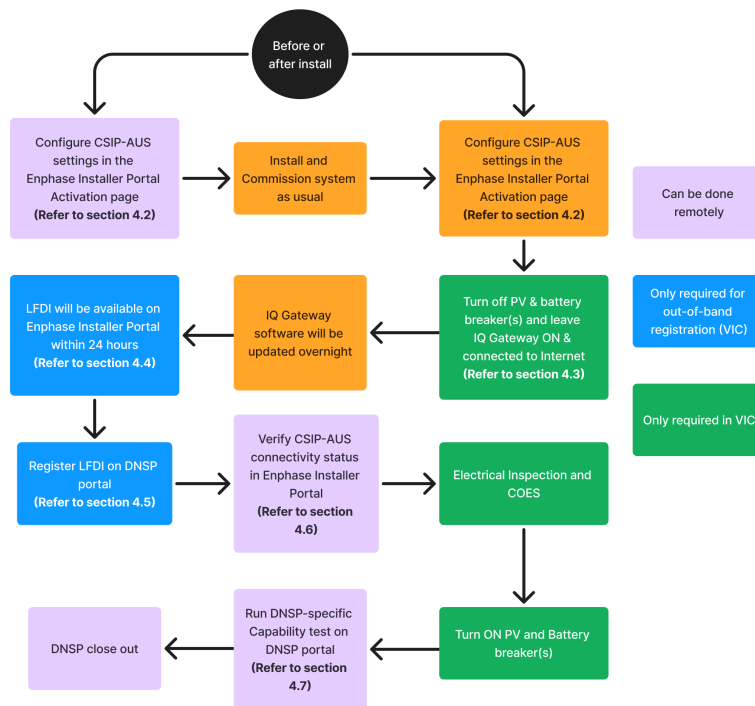


Figure 1: Standard workflow

4.2 Expedited workflow

This workflow can be used if an electrical inspection will be conducted on the same day as installation and commissioning.

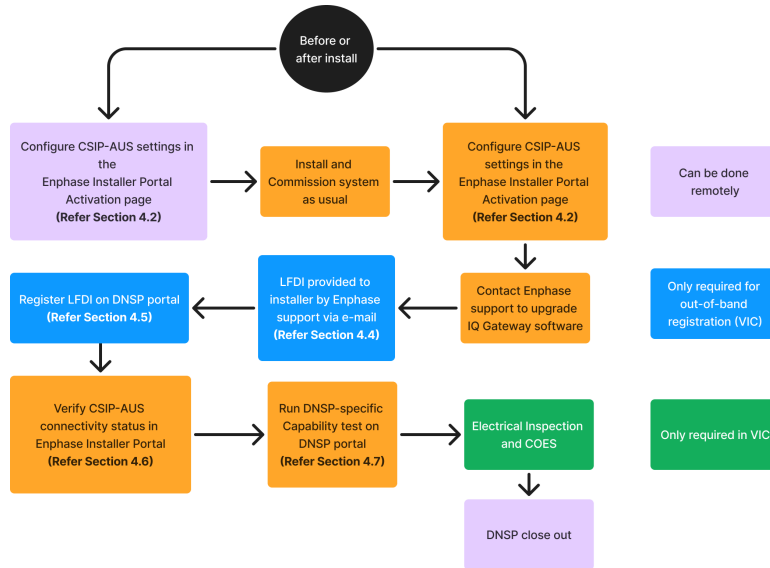


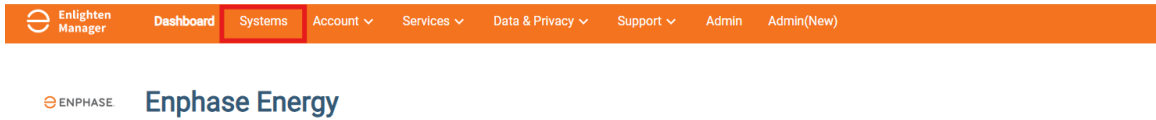
Figure 2: Expedited workflow

4.3 CSIP-AUS settings on Enphase Installer Portal

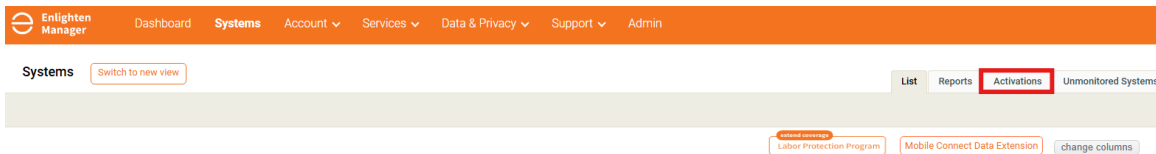
CSIP-AUS settings can be configured from the Enphase Installer Portal activation page either before installation (remotely) or after commissioning (when on-site).

4.3.1 Steps for configuring CSIP-AUS settings before installation

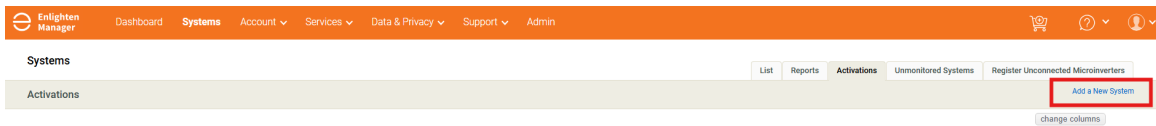
1. Log in to [Enphase Installer Portal](#) using your credentials.
2. Click **Systems**.



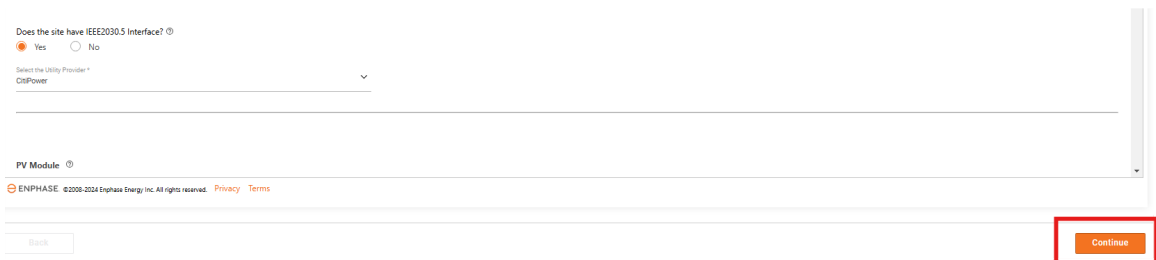
3. Click **Activations**.



4. Click **Add a New System** – fill in the appropriate details.

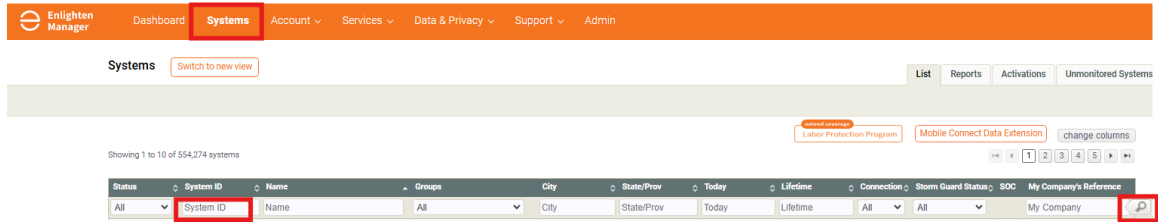


5. Under System Information, configure CSIP-AUS settings by entering the NMI, selecting **Yes** to IEEE2030.5 interface, and selecting the appropriate DNSP (see the following figure). After completing all the required fields, click **Continue**.

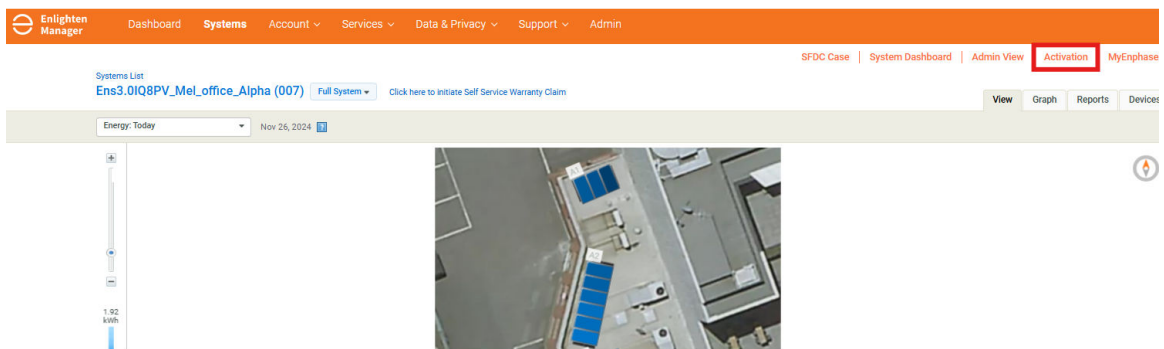


4.3.2 Steps for configuring CSIP-AUS settings before remote installation

1. Go to [Enphase Installer Portal](#).
2. Click **Systems** and search for System ID. Click **System ID** to view site details.



3. Click **Activation**.



4. Under System Information, configure CSIP-AUS settings by entering the NMI, selecting **Yes** to IEEE2030.5 interface, and selecting the appropriate DNSP (see the following figure). After completing all the required fields, click **Continue**.

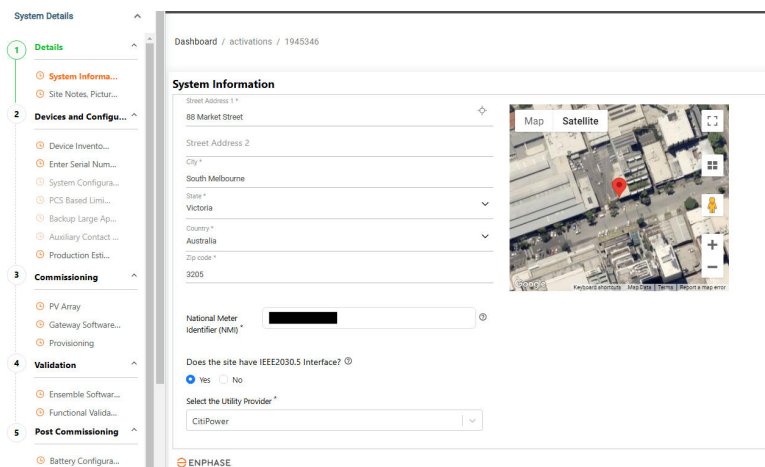
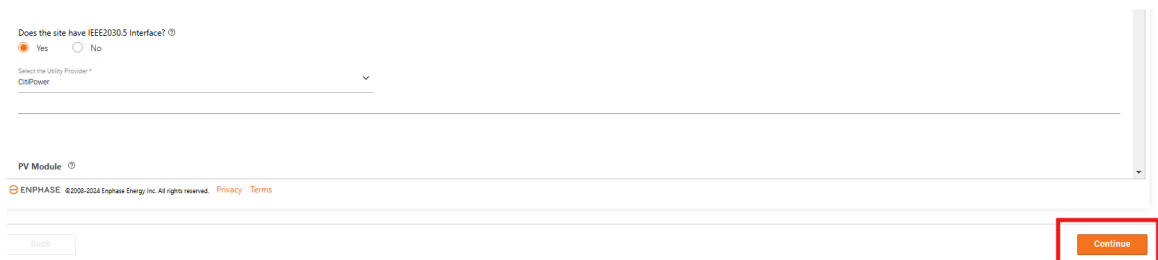


Figure 3: Screenshot of Enphase Installer Portal Activations Page with CSIP-AUS settings



IMPORTANT: Ensure that the correct NMI is entered, as this will assist with troubleshooting with DNSPs in case there are issues with registration and/or the capability test.

4.4 Post-commissioning steps prior to electrical inspection

This step is intended for scenarios where electrical inspection (a requirement in Victoria) does not happen on the same day as the installation and commissioning.

- Before departing the site, ensure the IQ Gateway is connected to the internet (indicated by a solid green cloud light) and remains powered on. This is essential for IQ Gateway emergency backstop-related software updates and triggering the associated CSIP-AUS configuration.
- The rest of the system can be turned OFF as required.

4.5 Obtaining Long Form Device Identifier (LFDI)

The Long Form Device Identifier (LFDI) is required by the DNSP for out-of-band device registration via the DNSP portal. When Victorian DNSPs move to in-band registration, this will be automated, and installers will no longer need to register the device manually via the installer portal.

There are a few ways to obtain the LFDI:

Standard method:

- After leaving the site post-commissioning as per Section [Post-commissioning steps prior to electrical inspection](#), LFDI will be available on Enphase Installer Portal within 24 hours when clicking **Devices > IQ Gateway**.
- If you have any issues with obtaining the LFDI, contact Enphase Support at 1 (800) 006-374 or email support_au@enphaseenergy.com.

Expedited method:

- If electrical inspection will be conducted the same day as installation and commissioning, call Enphase Support at 1 (800) 006-374.
- Enphase Support will help update the site to the emergency backstop-required software and provide the LFDI via email.

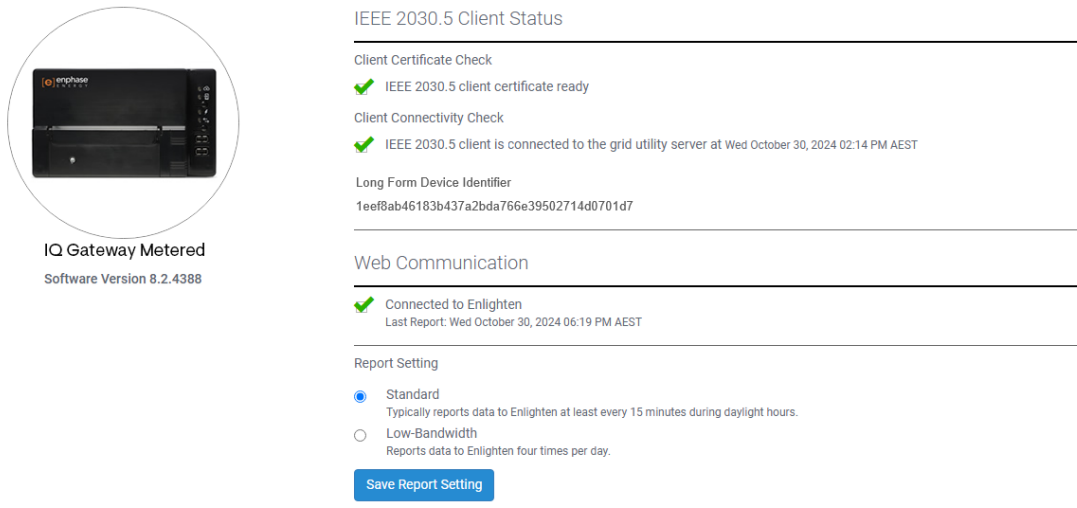


Figure 4: CSIP-AUS IEEE2030.5 status page with LFDI

4.6 Registering LFDI on DNSP Portal

After receiving LFDI, follow DNSP-specific instructions on registering the device via the DNSP portal. Refer to DNSPs-specific links in Section [Prerequisites](#) for more information.

4.7 Verifying CSIP-AUS connectivity status in Enphase Installer Portal

Before proceeding with conducting the DNSP capability test, verify that the device is communicating properly with the DNSP.

CSIP-AUS Connectivity Status can be accessed via the Enphase Installer Portal by clicking on **Devices > IQ Gateway**.

- **Client Certificate Check:** When this is checked, it indicates that the IEEE2030.5 configuration has been successfully configured on the device.
- **Client Connectivity Check:** When this is checked, it indicates that the device is successfully connected to the DNSP.

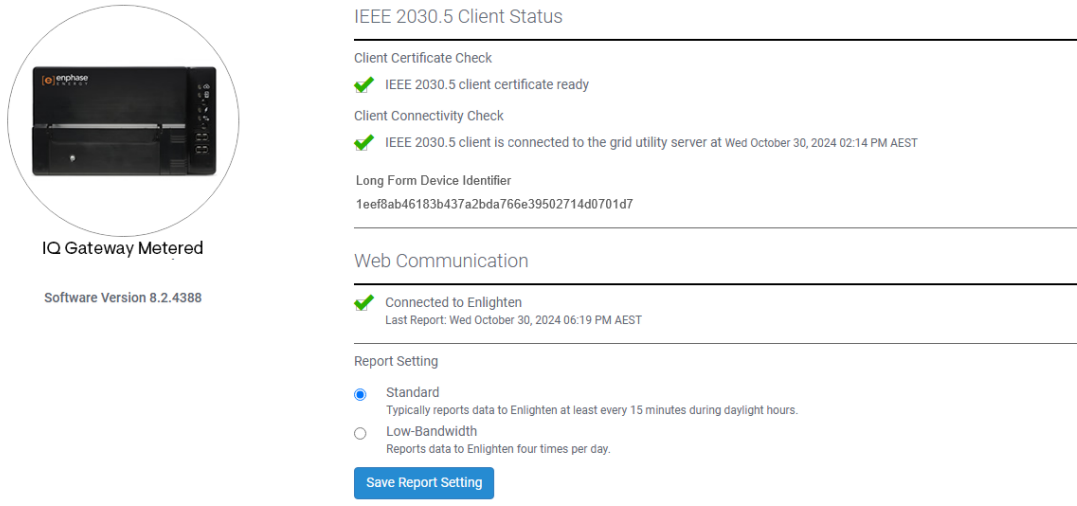


Figure 5: CSIP-AUS IEEE2030.5 connectivity status

4.8 DNSP capability test

This is an automated process required by DNSPs to verify that the emergency backstop is configured correctly and that the device can receive and respond appropriately to remote commands from the DNSP. Each DNSP will have its own requirements for the capability test. The time it takes can vary anywhere from 5-10 minutes up to a week. Refer to DNSPs-specific links in section [Prerequisites](#) for more information.

Prior conducting the capability test:

- Ensure device registration is complete.
- Ensure your equipment firmware is up-to-date.
- Isolate legacy non-emergency backstop enabled PV equipment for duration of capability test.
- Turn off any third-party AC-coupled batteries or set them to Self-Consumption mode, e.g. no export.

If you are having issues passing the capability test, contact Enphase Support at 1 (800) 006-374 or email support_au@enphaseenergy.com.

5. Important notes

- For United Energy, CitiPower or Powercor sites, the following grid profile is required: AS/NZS 4777.2: 2020 Australia A Region - United/Citipower/PowerCor ONLY. For Ausnet and Jemena, use the standard Region A settings, AS4777.2.2020, unless another site-specific grid profile is required.
- Power production limiting by gateway must not be enabled when on-grid.
- As of December 2024, Victorian DNSPs require that when upgrading or expanding existing legacy sites, the entire site must be made emergency backstop compatible. However, this requirement is currently under review by the Department of Energy, Environment and Climate Action (DEECA), which believes that the emergency backstop should not apply to legacy systems. It is advisable to

check with the relevant DNSP for the latest information. Currently, Enphase does not support VIC emergency backstop through multiple IQ Gateways.

6. Reference links

- [Solar Victoria - Emergency backstop training and guidance for installers](#)
- [Department of Energy, Environment and Climate Action \(DEECA\) - Victoria's emergency backstop mechanism for solar](#)

7. Revision history

Revision	Date	Description
TEB-00218-1.0	December 2024	Initial release.