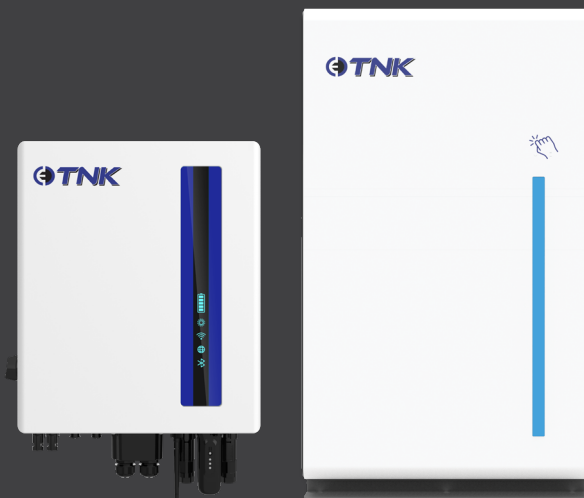




- TNK PV5/6
- TNK LV10



VIC EMERGENCY BACKSTOP - APPLICATION GUIDE

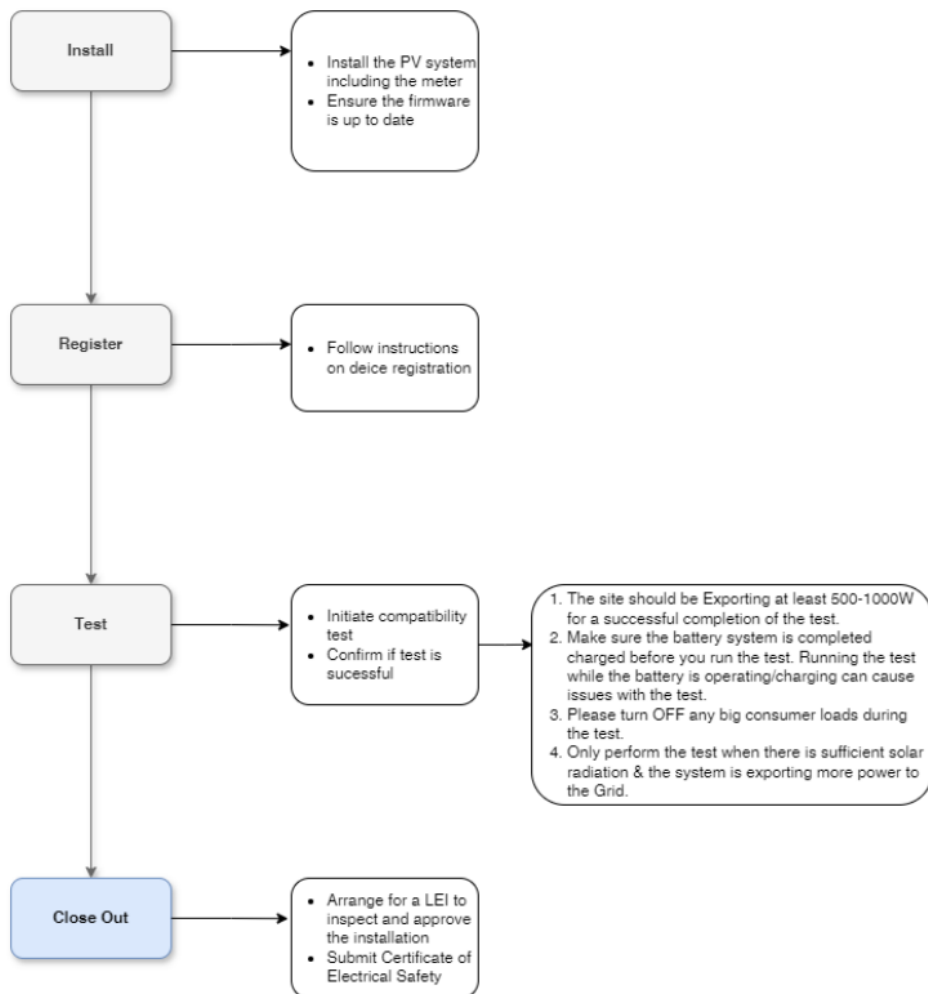
VIC EMERGENCY BACKSTOP – APPLICATION GUIDE

- As of 1st October 2024, all new & upgrading solar systems needs to be setup for Victoria Emergency Backstop. Emergency Backstop is a mechanism which controls the solar exports to be remotely reduced/Solar Generation to be curtailed if there is an excess of energy in the network.
- The changes only apply to new, upgrading or replacing solar customers with a capacity of 200kVA or less. Existing solar customers were not affected by this new regulation.
- The capability to reduce the solar exports will only be under the discretion of the Australian Energy Market Operator (AEMO) when there is an imbalance in the Grid Network.
- To comply with these requirements, the installer must follow these steps:
 1. A compatible (CSIP-AUS) approved inverter must be installed.
 2. The site should have a reliable internet connection.
 3. The Device should be commissioned in accordance with the VIC Emergency Backstop requirements.



VICTORIA'S DISTRIBUTED NETWORK SERVICE PROVIDER (DNSP) MAP

System Registration Process – Flow Chart



Grid Approval Process:

- PV Systems that need to be installed in the Victorian DNSP network must require a Solar Pre-Approval from the relevant authority.
- Solar Pre-approval is a mandatory requirement without which the installer couldn't be able to lodge/sign off the application.

- **Note:** The Solar Pre-approvals received after the 1st of October 2024 is only eligible for the Victorian Emergency Backstop Mechanism.

Inverter Commissioning:

- The Inverter should be commissioned as per the Manufacturer guidelines & needs to be connected to the Internet for Online Monitoring.
- For the Inverter Commissioning, please follow the steps outlined in this document.



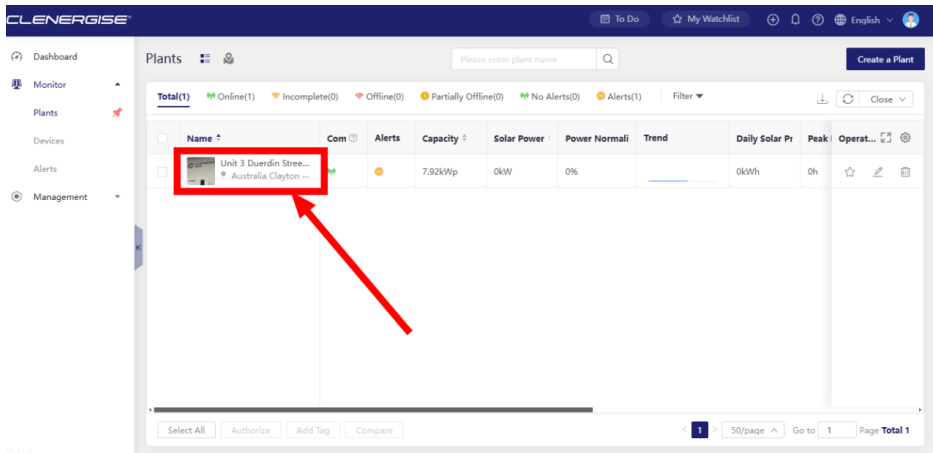
<https://www.clenergy.com.au/downloads/clenergy-ess-tnk-commissioning-quick-guide/>

- The Inverter should be commissioned as per the Manufacturer guidelines & needs to be connected to the Internet for Online Monitoring.

- **Note:** Please make sure the Inverter is set up for the Export Limit approved by the Network Service Provider.

Device Registration:

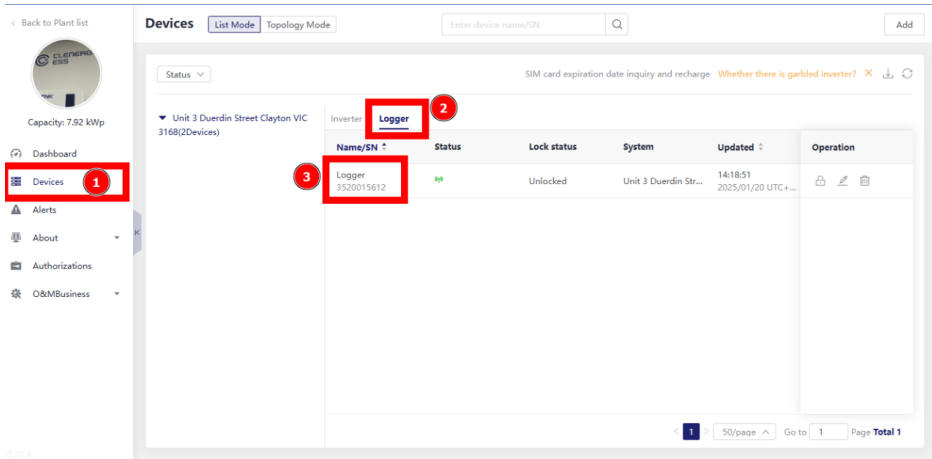
- 1. Jump to the Clenergy Web Page (<https://monitoring.clenergyess.com/business/maintain/plant>) and log in with the same installer account.
Go into the site you just created.



The screenshot shows the Clenergy monitoring dashboard. The 'Plants' tab is selected, displaying a table of installed plants. A red box highlights the first plant entry, 'Unit 3 Duerdin Street', and a red arrow points to it. The table columns include Name, Com, Alerts, Capacity, Solar Power, Power Normal, Trend, Daily Solar Pr, Peak, and Operat... (Operating Status). The plant status is 'Online(1)', 'Incomplete(0)', 'Offline(0)', 'Partially Offline(0)', 'No Alerts(0)', and 'Alerts(1)'. The capacity is 7.92kWp, solar power is 0kW, and power normal is 0%.

Name	Com	Alerts	Capacity	Solar Power	Power Normal	Trend	Daily Solar Pr	Peak	Operat...
Unit 3 Duerdin Street			7.92kWp	0kW	0%		0kWh	0h	

2. Go to the 'Logger' tab in 'Devices' page.



Back to Plant list

Devices List Mode Topology Mode

Enter device name/SN

Add

Capacity: 7.92 kWp

Dashboard

Devices 1

Alerts

About

Authorizations

O&MBusiness

Unit 3 Duerdin Street Clayton VIC 3168(2Devices)

Inverter

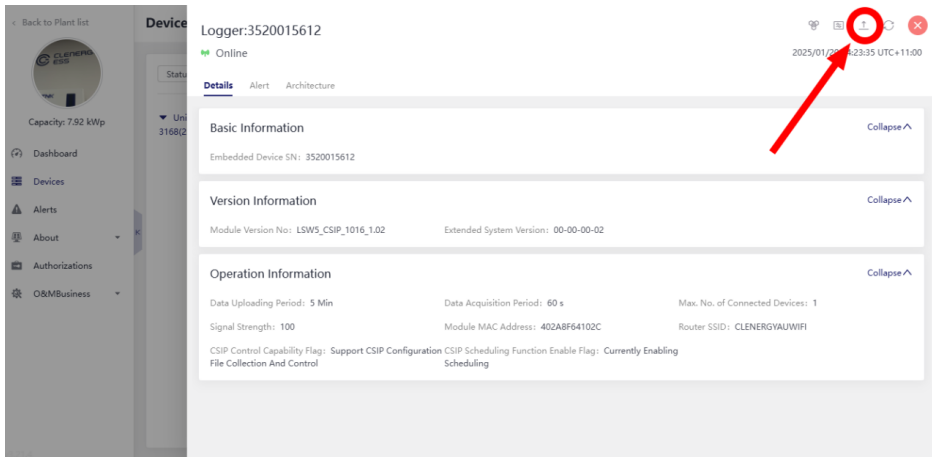
Logger 2

Name/SN	Status	Lock status	System	Updated	Operation
Logger: 3520015612 3	Online	Unlocked	Unit 3 Duerdin Str...	14:18:51 2025/01/20 UTC+...	

50/page

Go to 1 Page Total 1

3. Click the 'Firmware Upgrade' button.



Back to Plant list

Devices

Capacity: 7.92 kWp

Dashboard

Devices

Alerts

About

Authorizations

O&MBusiness

Unit 3 Duerdin Street Clayton VIC 3168(2)

Logger: 3520015612

Online

2025/01/20 14:23:35 UTC+11:00

Details Alert Architecture

Basic Information

Embedded Device SN: 3520015612

Version Information

Module Version No: LSW5_CSIP_1016_1.02 Extended System Version: 00-00-00-02

Operation Information

Data Uploading Period: 5 Min Data Acquisition Period: 60 s Max. No. of Connected Devices: 1

Signal Strength: 100 Module MAC Address: 402ABF64102C Router SSID: CLENERGYAUWIFI

CSIP Control Capability Flag: Support CSIP Configuration CSIP Scheduling Function Enable Flag: Currently Enabling Scheduling

File Collection And Control

Logger:3520015612

Online

2025/01/20 14:24 UTC+11:00

Firmware Upgrade

Upgrade Log

Current Version Info

Module Version No: LSW5_CSIP_1016_1.02

Extended System Version: 00-00-00-02

Last Upgrade Record

Target Version:
LSW5_CSIP_1016_1.02

Related Version:
Module Version No

Upgrade phase:
Succeeded

Upgraded Time:
2024/12/16 13:57:27 UTC+11:00

Feedback Time:
2024/12/16 14:00:27 UTC+11:00

Upgrade operation

Select Firmware Packages

Click Select Firmware Package

Timeout: 40 Minute

Start upgrading

Logger:3520015612
Online
Firmware Upgrade
Upgrade Log

2025/01/20 14:24 UTC+11:00

Current Version Info
Module Version No: LSW5_CSIP_1016_102

Last Upgrade Record
Target Version: LSW5_CSIP_1016_102
Upgrade phase: Succeeded

Upgrade operation
Select Firmware Package:
Click Select Firmware Package
Timeout: 40 Minute

Select Firmware Package

Please enter Firmware Name/Version Number

Total number of options: 3
Latest firmware first | Older firmware first

Firmware Name	版本号	Version description	Updated Time
☒ 1	TEST_LSW5_CSIP_1016_102	LSW5_CSIP_1016_102	2024/11/22 21:13:33 UTC+11:00

1 50/page Go to 1 Page Total 3

Cancel Confirm

3

Start upgrading

Logger:3520015612

 Online

2025/01/20 14:24 UTC+11:00

[Firmware Upgrade](#) [Upgrade Log](#)

Upgrade Log

Current Version Info

Module Version No: LSW5_CSIP_1016_1.02

Extended System Version: 00-00-00-02

Last Upgrade Record

Target Version:
LSW5_CSIP_1016_1.02

Related Version:
Module Version No

Upgraded Time:
2024/12/16 13:57:27 UTC+11:00

Upgrade phase:

 Succeeded

Feedback Time:
2024/12/16 14:00:27 UTC+11:00

Upgrade operation

Select Firmware Package:

Click Select Firmware Package

Timeout: ?

40 Minute

[Start upgrading](#)

5. Go to the 'Inverter' tab in 'Devices page.

Back to Plant List

Capacity: 7.92 kWp

Dashboard

Devices

Alerts

About

Authorizations

O&M/Business

Devices

List Mode Topology Mode

Enter device name/SN

Whether there is garbled inverter?

Unit 3 Duerdin Street Clayton VIC 3168(2Devices)

Inverter

Unit 3 Duerdin Street Clayton VIC 3168(2Devices)

Name/SN	Status	System	DC Dis	Operation
Inverter 1031140239260001		Unit 3 Duerdin Street Clayton VIC 31...	--	

Select All Select System

1/50 page Go to 1 Page Total 1

6. Click the 'Firmware Upgrade' button.

Inverter:1031140239260001

Alerts

2025/01/20 14:32:49 UTC+11:00

Details Alert Architecture Historical Data

Basic Information

SN: 1031140239260001 Product Type: 3114 Production Compliance Country: AU (AS/NZS 4777-A)

Power Curve Version: 0 Battery Protocol: 99 System Time: 2025/01/20 14:32:00

Version Information

Protocol Version: 0001 HMI Version: 1305 DSP Version: 0C01

Electricity Generation

DC	Voltage	Current	Power	AC	Voltage	Current	Frequency
PV1	0.20V	0.00A	--	R	231.10V	0.00A	50.00 Hz
PV2	0.00V	0.00A	--	S	0.00V	0.00A	--
PV3	0.00V	0.00A	--	T	0.00V	0.00A	--
PV4	0.00V	0.00A	--				

Total DC Input Power: 0 W Inverter output power: 0 VA Paralleling Inverter AC Current: 0.00 A

Paralleling Inverter AC Voltage: 0.00 V Paralleling Inverter Power: 0.00 W Paralleling Inverter CT Test Switch: OFF

Inverter:1031140239260001

Alerts

2025/01/20 14:32 UTC+11:00

Firmware Upgrade Upgrade Log

Current Version Info

Protocol Version: 0001 HMI Version: 1305 DSP Version: 0C01

Last Upgrade Record

Target Version: DSP-5K-M3114_V0CB01_API Related Version: DSP Version Upgraded Time: 2024/12/16 14:48:23 UTC+11:00

Upgrade phase: Terminated Retry Feedback Time: 2024/12/16 15:18:25 UTC+11:00

Upgrade operation

Click Select Firmware Package

Timeout: 40 Minute

Start upgrading

7. Select the DSP package and upgrade.

5kw Inverter:

Inverter:1031140239260001

Alerts

2025/01/20 14:32 UTC+11:00

Firmware Upgrade Upgrade Log

Current Version Info

Protocol Version: 0001

Last Upgrade Record

Target Version: DSP-5K-M3114_VOCB01_API

Upgrade phase: X Terminated Retry

Upgrade operation

Select Firmware Package: Click Select Firmware Package

Timeout: 40 Minute

Select Firmware Package

Please enter Firmware Name/Version Number

Total number of options: 7 Latest firmware first | Older firmware first

Firmware Name	版本号	Version description	Updated Time
☐ CSIP_DSP-5K-M3114_VOCB01_API	VOCB01		2025/01/09 16:04:20 UTC+11:00
☐ CSIP_HMI-3-6K_M3114_Vec13-05	M3114_Vec13-05		2024/10/31 10:49:22 UTC+11:00
☒ DSP_DSP-5K-M3114_VOCB01_API	DSP-5K-M3114_VOCB01_API		2024/10/31 10:49:00 UTC+11:00
☐ HMI-3-6K_M3114_Vec11-17	M3114_Vec11-17		2024/09/20 14:41:36 UTC+11:00
☐ DSP-5K-M3114_V0AB01_API	M3114_V0AB01		2024/09/20 14:40:42 UTC+11:00

1 > 50/page Go to 1 Page Total 7

Cancel **Confirm** **Start upgrading**

6kw Inverter:

Inverter:1031140239260001

Alerts

2025/01/20 14:32 UTC+11:00

Firmware Upgrade Upgrade Log

Current Version Info

Protocol Version: 0001

Last Upgrade Record

Target Version: DSP-5K-M3114_VOCB01_API

Upgrade phase: X Terminated Retry

Upgrade operation

Select Firmware Package: Click Select Firmware Package

Timeout: 40 Minute

Select Firmware Package

Please enter Firmware Name/Version Number

Total number of options: 7 Latest firmware first | Older firmware first

Firmware Name	版本号	Version description	Updated Time
☒ DSP_DSP-5K-M3114_VOCB01_API	VOCB01		2025/01/09 16:04:20 UTC+11:00
☐ CSIP_HMI-3-6K_M3114_Vec13-05	M3114_Vec13-05		2024/10/31 10:49:22 UTC+11:00
☐ DSP_DSP-5K-M3114_VOCB01_API	DSP-5K-M3114_VOCB01_API		2024/10/31 10:49:00 UTC+11:00
☐ HMI-3-6K_M3114_Vec11-17	M3114_Vec11-17		2024/09/20 14:41:36 UTC+11:00
☐ DSP-5K-M3114_V0AB01_API	M3114_V0AB01		2024/09/20 14:40:42 UTC+11:00

1 > 50/page Go to 1 Page Total 7

Cancel **Confirm** **Start upgrading**

This might take 10-20 mins.

Inverter:3031140238020192
Online

2025/01/20 14:40 UTC+11:00

Firmware Upgrade

Upgrade Log

Current Version Info

Protocol Version: 0001

HMI Version: 1305

DSP Version: 0C01

Last Upgrade Record

Target Version:
M3114_Ver13-05

Related Version:
HMI Version

Upgraded Time:
2025/01/08 20:50:24 UTC+11:00

Upgrade phase:

Succeeded

Feedback Time:
2025/01/08 20:56:55 UTC+11:00

Upgrade operation

Select Firmware Package:

Click Select Firmware Package

Timeout: 40 Minute

Start upgrading

8. Select the HMI package and upgrade.

Inverter:3031140238020192
Online

2025/01/20 14:40 UTC+11:00

Firmware Upgrade

Upgrade Log

Current Version Info

Protocol Version: 0001

Last Upgrade Record

Target Version:
M3114_Ver13-05

Related Version:
HMI Version

Upgraded Time:
2025/01/08 20:50:24 UTC+11:00

Upgrade phase:

Succeeded

Upgrade operation

Select Firmware Package:

Click Select Firmware Package

Timeout: 40 Minute

Select Firmware Package

Please enter Firmware Name/Version Number

Total number of options: 7

Latest firmware first

Older firmware first

Firmware Name	版本号	Version description	Updated Time
☐ CSIP_DSP-6K-M3114_VOCB01_API	VOCB01		2025/01/09 16:04:20 UTC+11:00
☒ CSIP_HMI-3-6K_M3114_Ver13-05	M3114_Ver13-05		2024/10/31 10:49:22 UTC+11:00
☐ CSIP_DSP-5K-M3114_VOCB01_API	DSP-5K-M3114_VOCB01_API		2024/10/31 10:49:00 UTC+11:00
☐ HMI-3-6K_M3114_Ver11-17	M3114_Ver11-17		2024/09/20 14:41:36 UTC+11:00
☐ DSP-5K_M3114_VOCB01_API	M3114_VOCB01		2024/09/20 14:40:42 UTC+11:00

1

50/page

Go to 1

Page Total 7

Cancel

Confirm

Start upgrading

10

Inverter:303114023B020192
🟢 Online
2025/01/20 14:40 UTC+11:00

Firmware Upgrade Upgrade Log

Current Version Info

Protocol Version: 0001
HMI Version: 1305
DSP Version: 0C01

Last Upgrade Record

Target Version:
M3114_Ver13-05

Related Version:
HMI Version

Upgraded Time:
2025/01/08 20:50:24 UTC+11:00

Upgrade phase:
🟢 Succeeded

Feedback Time:
2025/01/08 20:56:55 UTC+11:00

Upgrade operation

Select Firmware Package:

Timeout: ⓘ
 Minute

9. Make sure both packages have been updated to the right version.

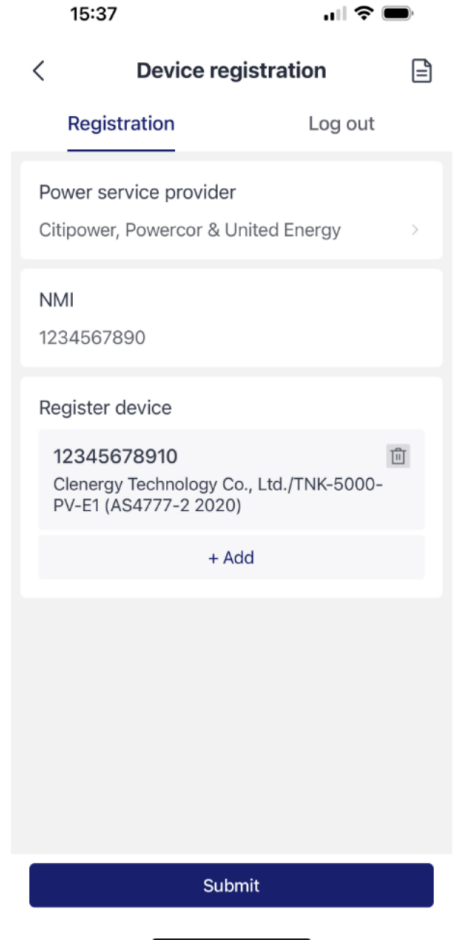
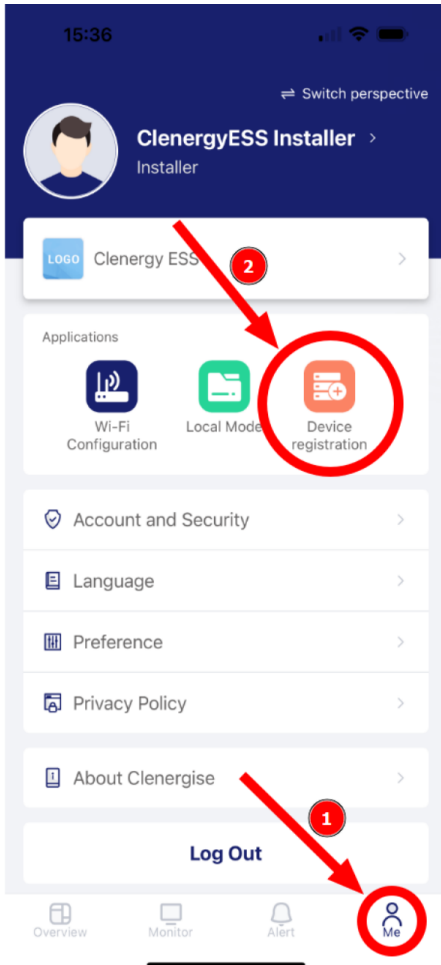
10. Static Export Limit:

- The Static Export Limit should be set according to the DNSP requirements. This will act as a Fail safe when the Device loses connection with the Internet provider.

DNSP	Static Export Limit
United Energy/CitiPower & Powercor	0W
Jemena	500W
Ausnet Services	1000W

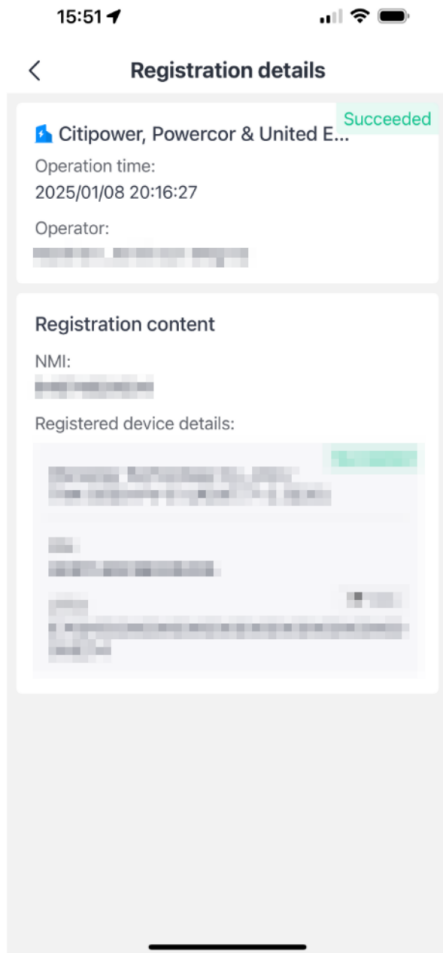
11. Once the firmware is updated, go back to the app. From the main page, go to 'Me' tab and click 'Device Registration' button.

12. Select the DNSP, enter the NMI, and select the Clenergy ESS device model for the site.

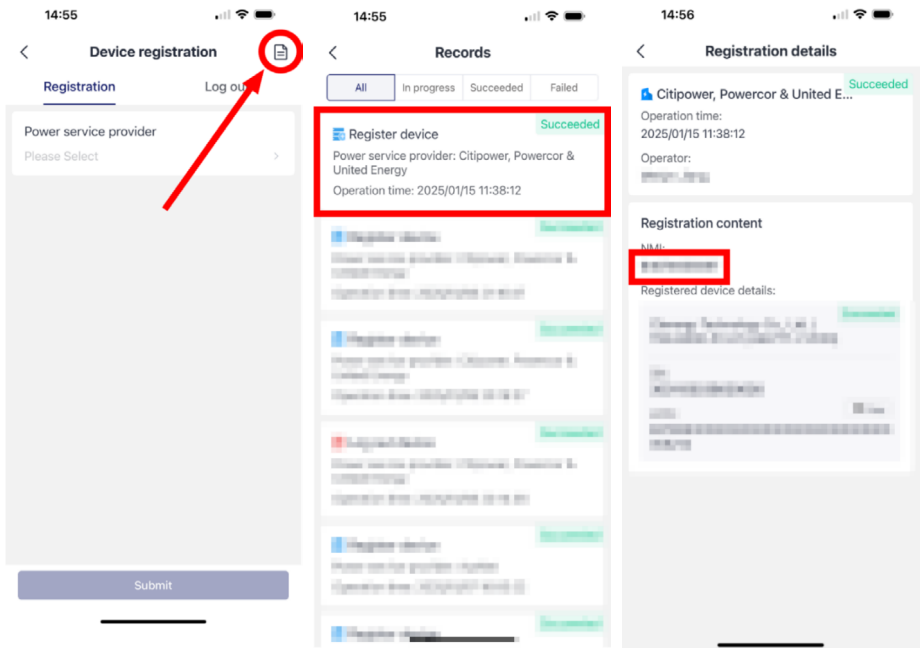


13. By clicking 'Submit', the device will be registered on the DNSP server and is ready for the DNSP to perform the Export capability test.

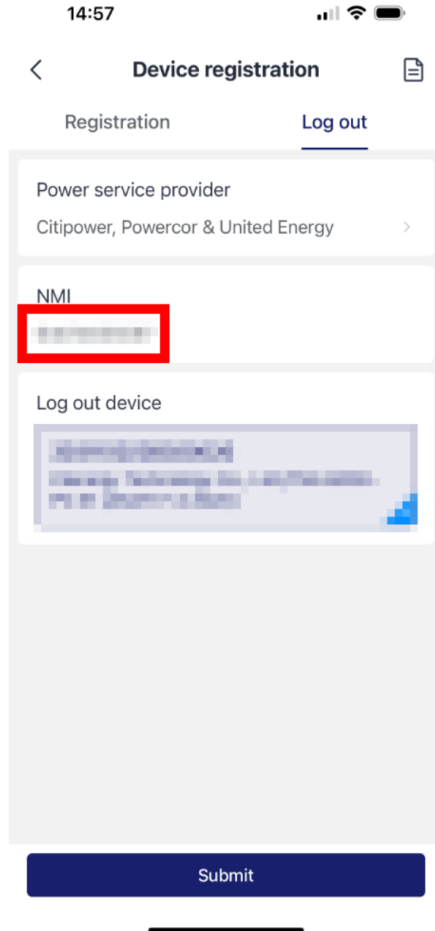
14. Once the LFDI is generated, submit it on the DNSP portal & proceed with the DER Test.



- 15. If a wrong NMI is entered & hence a wrong LFDI will be generated. The device can be logged out to cancel the LFDI. Please follow the instructions to correct the NMI on the App.
- Go to "Device Registration" and tap "Records" button on the top right-hand corner.
- From the Records view, select the device that needs to be corrected with the NMI number. Make a note of the NMI number for the use of the following steps:



- Go to “Log out” Tab, select the DNSP, enter the wrong NMI to locate the registered device.



14:57

< **Device registration** >

Registration Log out

Power service provider
Citipower, Powercor & United Energy >

NMI

Log out device

Submit

Tap on “Submit” button to log out the Device.

After successfully logged out, the device can be registered again with the correct NMI.

■ Export Capability Test:

Please follow these steps for a successful completion of the Export Capability Test.

1. The site should be Exporting at least 500-1000W for a successful completion of the test. Please check with your local DNSP requirements before you trigger the Capability test.
2. Make sure the battery system is completed charged before you run the test. Running the test while the battery is operating/charging can cause issues with the test procedure.
3. Please turn OFF any big consumer loads during the test.
4. Only perform the test when there is sufficient solar radiation & the system is exporting power to the Grid.

■ Troubleshooting and FAQs

The 2 main causes of failed “Capability Tests” within the DNSP portal is due to firmware not updated & cloud control not being activated on the inverter.

1. Issue: No or Low Export Despite High Solar Generation

Symptoms: The solar system is generating high amounts of power, but the amount being exported to the grid is very low or zero.

■ Possible Causes & Solutions:

- **Export Limitations:** Check if the area is subject to the backstop export limits. If export restrictions are in place, the inverter may be automatically throttling the power sent to the grid.
Solution: Verify the export limit set by the local network operator and ensure the inverter settings comply with these limits.
- **Inverter Settings:** Ensure that the inverter is correctly configured to handle the export limits. Some inverters may require manual adjustments or firmware updates.
Solution: Update the inverter firmware and check its configuration to ensure it's correctly limiting exports according to the backstop requirements.
- **Grid Connection Issues:** There could be issues with the grid connection itself, such as voltage issues that are preventing export.
- **Solution:** Check the grid voltage and ensure it is within acceptable ranges for the inverter. If the voltage is too high or low, the inverter may limit export to prevent damage.

2. Issue: Inverter Doesn't Comply with Export Limit Settings

Symptoms: The inverter is not adhering to the set export limit or continues to try exporting above the allowed limit.

■ Possible Causes & Solutions:

- **Inverter Configuration:** The inverter may not be configured to follow export limits, or its software may need to be updated.
Solution: Check the inverter's settings, particularly the export control function. Ensure it is set to limit exports in line with the local network's requirements. You may need to consult the inverter's manual or the manufacturer's support for guidance on adjusting these settings.
- **Firmware Update Needed:** Outdated firmware might be preventing the inverter from properly implementing the export control limits.
- **Solution:** Update the inverter firmware to the latest version. Manufacturers often release updates to improve compliance with grid export limitations and to fix bugs.

3. Issue: Lack of Clarity on Export Control Settings

Symptoms: Customers may not be clear about how export controls are implemented or whether the backstop is affecting their system.

■ Possible Causes & Solutions:

- **Lack of Communication with Network Provider:** Customers may not always have clear information on export limits set by the local network operator.
Solution: Ensure you communicate with the local DNSP or network provider to get accurate information on export control settings for specific areas. Check with the grid operator if there are any recent updates or changes to export restrictions.
- **Misunderstanding of the Backstop Mechanism:** Some customers may not fully understand how the backstop mechanism works or how it impacts system design.
- **Solution:** Stay updated on the latest regulations from Solar Victoria and local network operators regarding export limits. Provide clear guidance to customers about how the backstop affects their system and energy usage.

■ Useful links

United Energy

<http://www.unitedenergy.com.au/solar-installers>

Faults & emergencies 13 20 99

Customer enquiries 1300 131 689

Powercor

<http://www.powercor.com.au/solar-installers>

Faults & emergencies 13 24 12

Customer enquiries 13 22 06

CitiPower

<http://www.citipower.com.au/solar-installers>

Faults & emergencies 13 12 80

Customer enquiries 1300 301 101

AusNet

<https://www.ausnetservices.com.au/renewable-solutions/industry-solar/solar-emergency-backstop>

Faults & emergencies 13 17 199

Customer enquiries 1300 360 795

Jemena

<https://www.jemena.com.au/electricity/solar-and-other-technologies/emergency-backstop-mechanism/>

Faults & emergencies 13 16 26

Customer enquiries 1300 131 677



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