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Goodwe Statement – VIC Emergency Back-Stop full version

Back ground:

Effective October 1, 2024, all inverters installed in Victoria (VIC) are required to comply with the VIC Emergency Backstop regulations. For more details on this mandate, please visit the VIC Energy website: Victoria's Emergency Backstop Mechanism for Solar.

Under the new regulations, all inverters must be equipped with remote control capabilities and export limit devices. These devices must be able to respond to export limiting commands from Distribution Network Service Provider (DNSP) servers.

Regulations covering all VIC DNSPs:

- Powercor/Citipower/UnitedEnergy
- Ausnet
- Jemena

Goodwe Solution: inverter with inbuilt cloud-based aggregator

Goodwe has developed an advanced cloud-based control method for its inverters. Most compliant models are listed on the CEC Soft Communication Product List under 'Inverter Inbuilt.'

With Goodwe's export limiting devices integrated into our inverters, no additional equipment is required for customers to meet the emergency backstop requirements.

Retailers requirement from 1st of October 2024:

- Ensure using compliant inverter models listed on each DNSP website.

  Goodwe inverter listed on CEC and each DNSP as 'inverter inbuilt' which means no 3rd party meter requested.

  Sample like below:

GoodWe Technologies Co Ltd	DNS G3	GW3000-DNS-30 (AS4777-2 2020)	Inverter Inbuilt OR Catch Power Catch Solar Relay OR Greensync Dex C
GoodWe Technologies Co Ltd	DNS G3	GW3600-DNS-30 (AS4777-2 2020)	Inverter Inbuilt OR Catch Power Catch Solar Relay OR Greensync Dex C
GoodWe Technologies Co Ltd	DNS G3	GW4200-DNS-30 (AS4777-2 2020)	Inverter Inbuilt OR Catch Power Catch Solar Relay OR Greensync Dex C
GoodWe Technologies Co Ltd	DNS G3	GW5000-DNS-30 (AS4777-2 2020)	Inverter Inbuilt OR Catch Power Catch Solar Relay OR Greensync Dex C
GoodWe Technologies Co Ltd	DNS G3	GW6000-DNS-30 (AS4777-2 2020)	Inverter Inbuilt OR Catch Power Catch Solar Relay OR Greensync Dex C
GoodWe Technologies Co Ltd	SBP G2	GW3600-SBP-20 (AS4777-2 2020)	Inverter Inbuilt OR Greensync Dex
GoodWe Technologies Co Ltd	SBP G2	GW5000-SBP-20 (AS4777-2 2020)	Inverter Inbuilt OR Greensync Dex
GoodWe Technologies Co Ltd	SBP G2	GW6000-SBP-20 (AS4777-2 2020)	Inverter Inbuilt OR Greensync Dex
GoodWe Technologies Co Ltd	EH Plus	GW3600N-EH (AS4777-2 2020)	Inverter Inbuilt OR Greensync Dex OR Combined Energy EMU HEMS
GoodWe Technologies Co Ltd	EH Plus	GW5000N-EH (AS4777-2 2020)	Inverter Inbuilt OR Greensync Dex OR Combined Energy EMU HEMS
GoodWe Technologies Co Ltd	EH Plus	GW6000N-EH (AS4777-2 2020)	Inverter Inbuilt OR Greensync Dex OR Combined Energy EMU HEMS
GoodWe Technologies Co Ltd	ES G2	GW3600-ES-20 (AS4777-2 2020)	Inverter Inbuilt OR Combined Energy EMU HEMS
GoodWe Technologies Co Ltd	ES G2	GW3600M-ES-20 (AS4777-2 2020)	Inverter Inbuilt OR Combined Energy EMU HEMS
GoodWe Technologies Co Ltd	ES G2	GW5000M-ES-20 (AS4777-2 2020)	Inverter Inbuilt OR Combined Energy EMU HEMS
GoodWe Technologies Co Ltd	ES G2	GW6000M-ES-20 (AS4777-2 2020)	Inverter Inbuilt OR Combined Energy EMU HEMS

  inverters-with-scc-240903.pdf (cleanenergycouncil.org.au)

  Approved devices for solar installers | CitiPower & Powercor

  ausnet-interoperable-csip-scc-inverter-combinations-100924.pdf (ausnetservices.com.au)

  Jemena Approved List of Inverters | Jemena

  Also a few 3rd party meter suppliers such as Combine meter & Catch Power Relay can be used for complying referring to CEC and DNSP solution list.

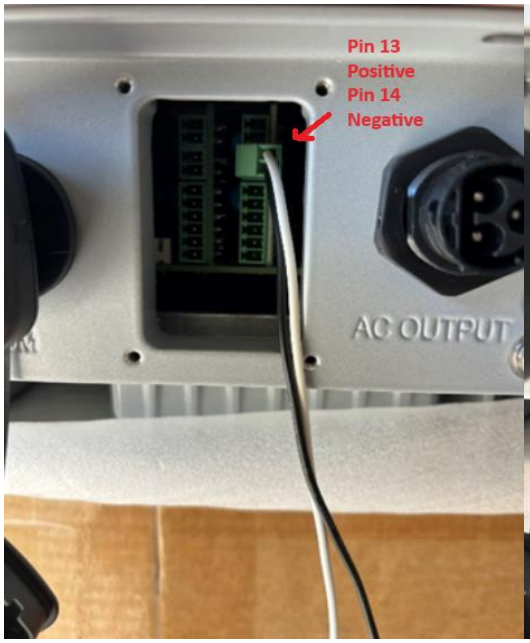
- Ensure selecting correct export limit accessory for complying emergency back stop referring to *Appendix A: Accessory selection for Emergency backstop*
- Correctly install the export limit devices referring to *Appendix B: accessory installation and commissioning*
- Connect the inverter to the customer's Wi-Fi (refer to the Goodwe Wi-Fi communication setup manual or contact the Goodwe support center)
- Register inverters on the SEMS monitoring platform referring to *Appendix C: SEMS registration for getting Emergency backstop ready*
- Upgrade firmware on inverter if requested referring to *Appendix D: SolarGo onsite upgrading*
- Using each DNSP-released app or website to run the Emergency Backstop test referring to *Appendix E: DNSP self-capability test*
- Sign off job if the test successfully passed.

Appendix A: Accessory selection for Emergency backstop

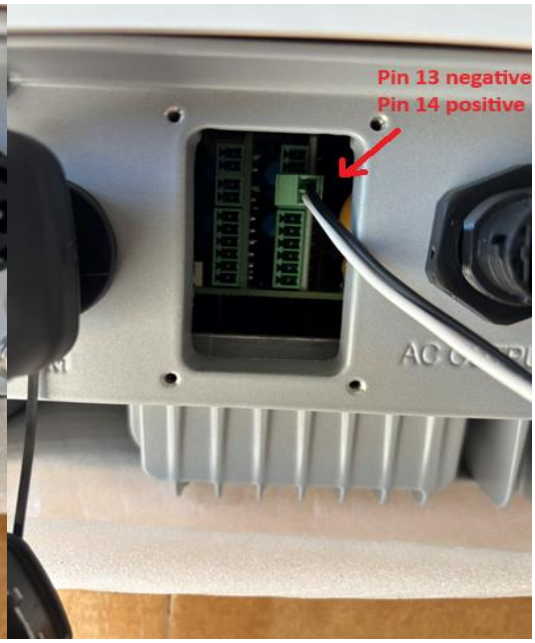
Compatible Model	Emergency BackStop only	Emergency backstop & consumption monitoring
DNS-30 MS-30	CT90 	GM1000 
SDT G2 SMT	GM3000 	Homekit 3000
ES-20, EH	GM1000 (coming with inverter)	GM1000 (coming with inverter)
ET5-10kW ET15-30kW	GM3000 (coming with inverter)	GM3000 (coming with inverter)

Appendix B: Accessory installation and commissioning

CT90 wiring on DNS-30 and MS-30

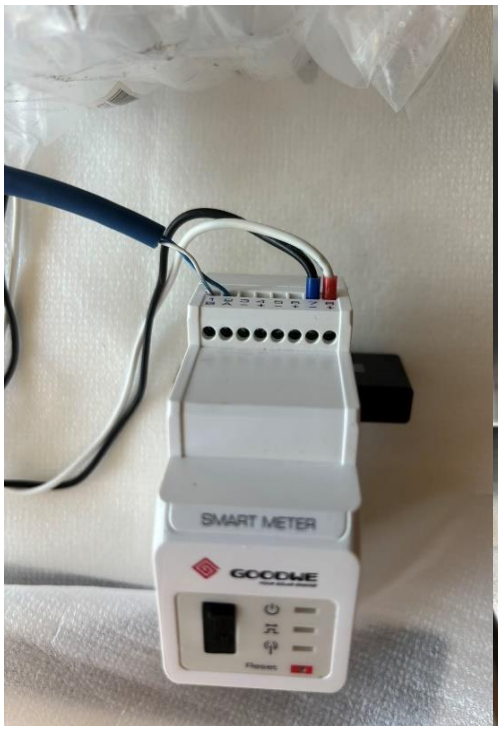


DNS-30

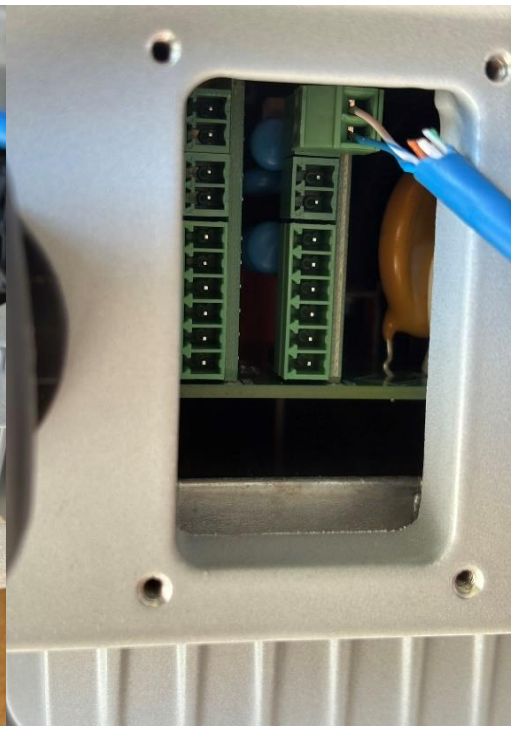


MS-30

Meter wiring on DNS-30 and MS-30



DNS-30

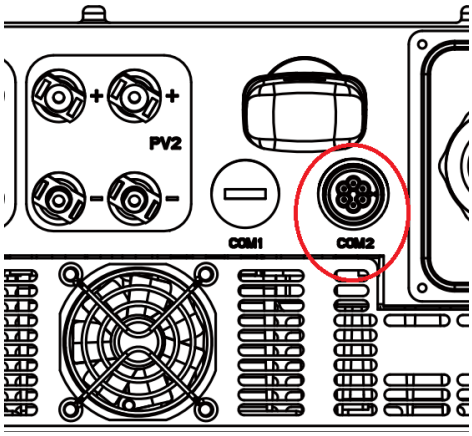


MS-30

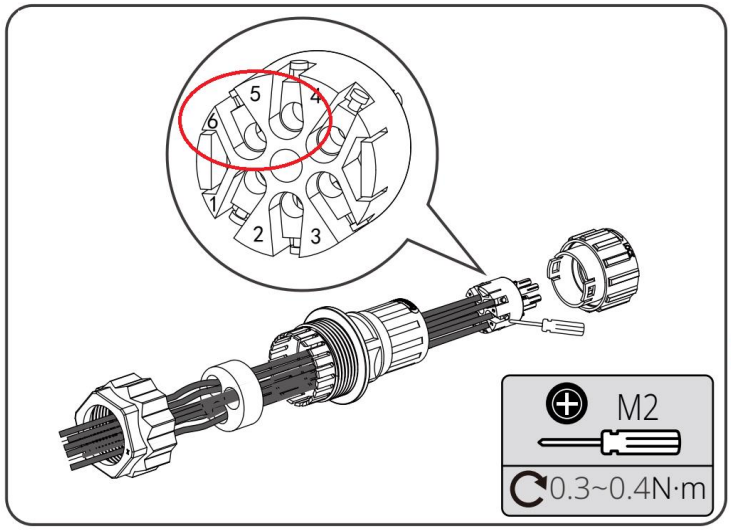
DNS-30/MS-30 will report CT loss warning when CT90/Meter not communicating with inverter properly.

GM3000 on SDT G2 5-20kW

Always use the COM2 on inverter for meter communication.



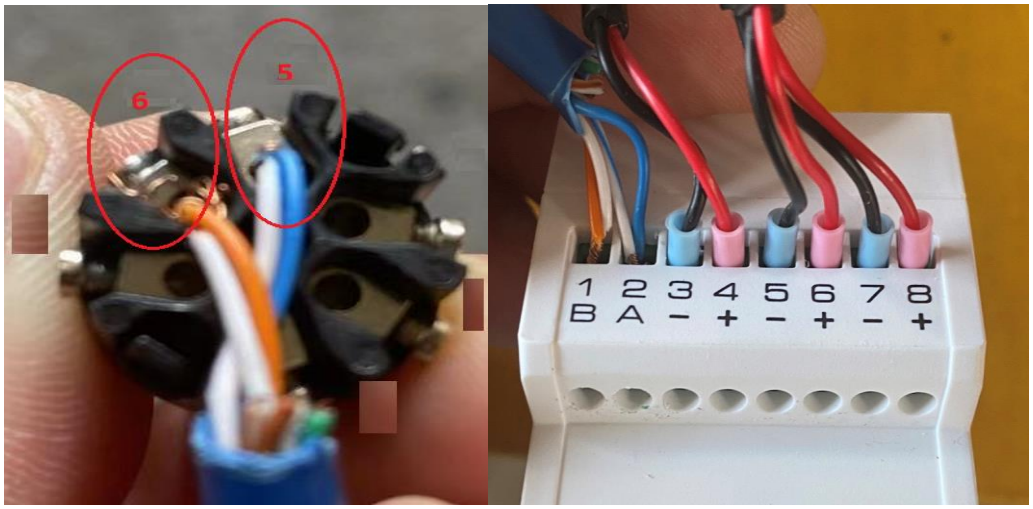
Connection at inverter side:



NO.	Function
1	RS485 B
2	RS485 B
3	RS485 A
4	RS485 A
5	Meter +
6	Meter −

HomeKit 3000/GM3000 RS485+ terminal A on top of meter connect with Terminal 5 on 6-Pin plug, RS485- terminal B on top of meter connect with Terminal 6 on 6-Pin plug.

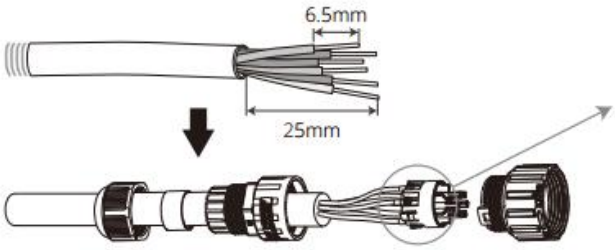
Wiring sample is below:

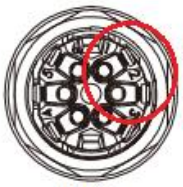


GM3000 on SMT 20kW-36kW inverters:

Connection of RS485

Please connect the cables in order as shown in the right table.

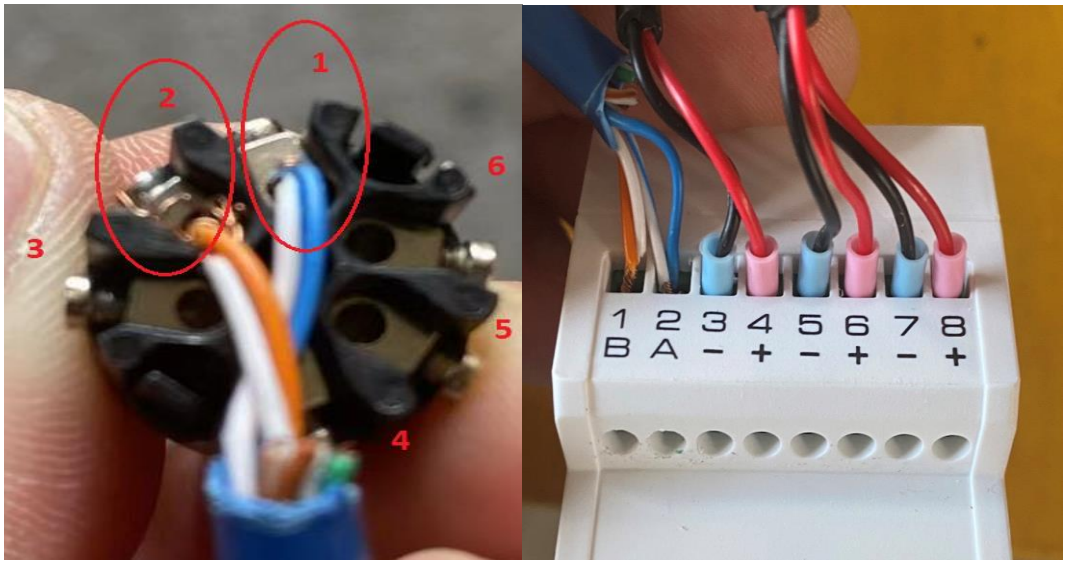




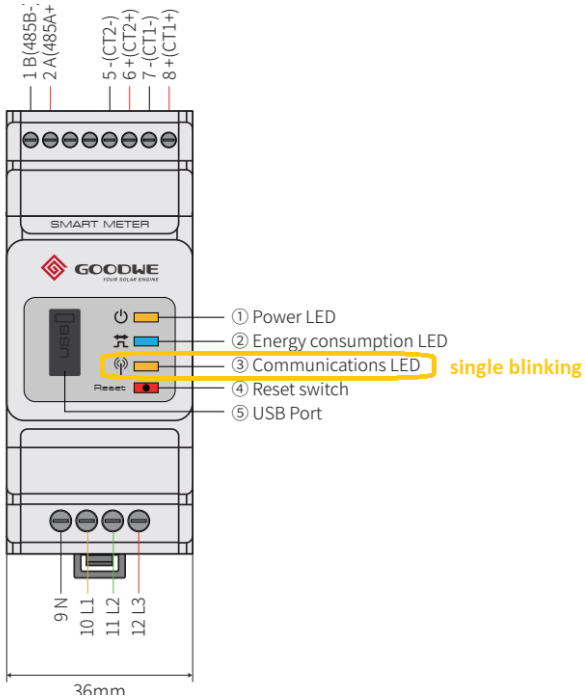
6-Pin	
No.	Function
1	485-A1
2	485-B1
3	485-A1
4	485-B1
5	485-A2(Reserved)
6	485-B2(Reserved)

HomeKit 3000/GM3000 RS485+ on terminal B on top of meter connect to 485-A port 1 on 6-Pins plug, GM3000 RS485- on terminal A on top of meter connect to 485-B port 2 on 6-Pins plug.

Wiring sample is below:



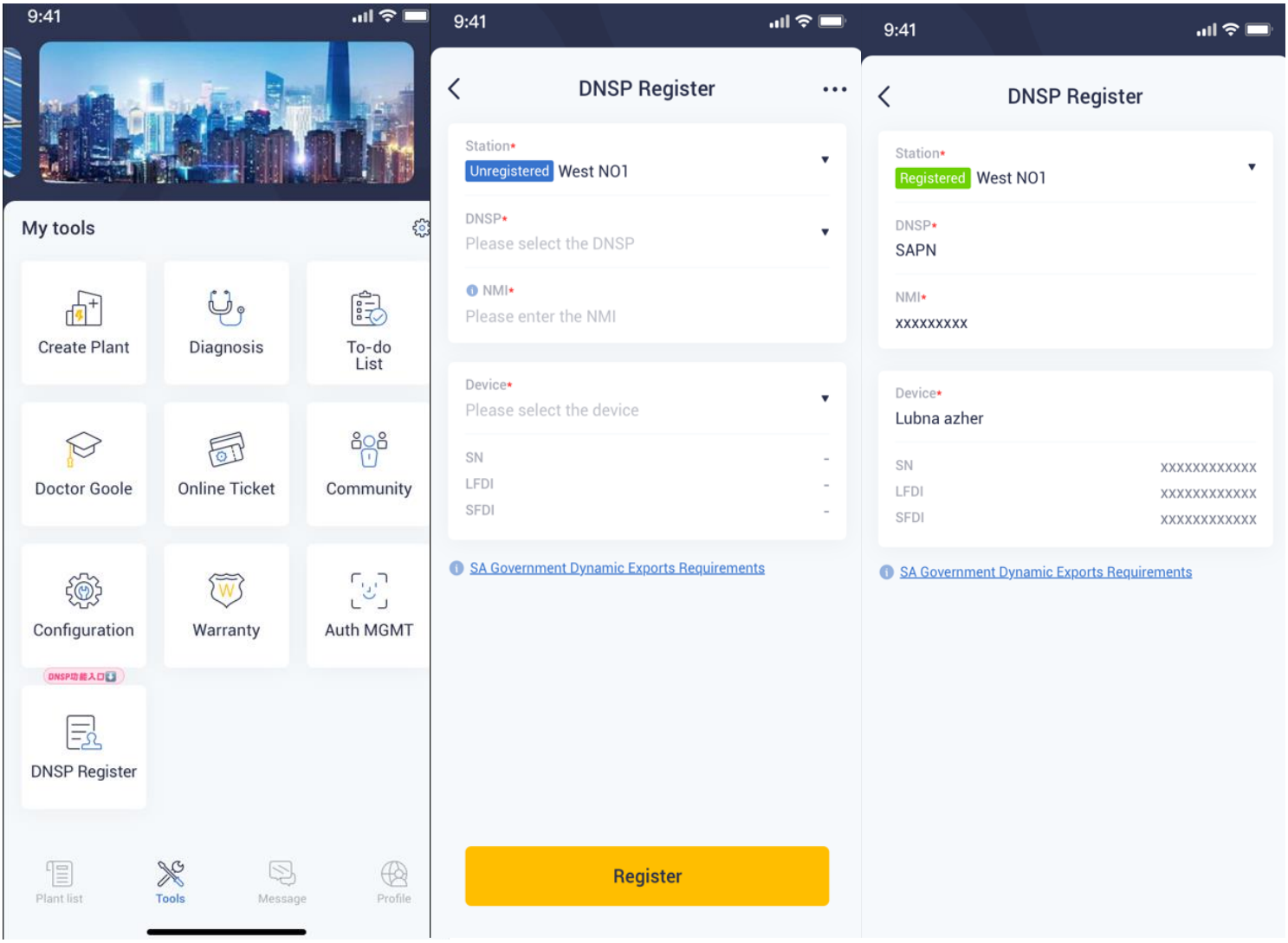
GM1000/GM3000 meter reading



GM1000/GM3000 comes with three LED lights. *The bottom orange light should be single blinking* to indicate the communication with inverter is successful. If blue LED light is off, export limit does not work.

Appendix C: SEMS registration for getting Emergency backstop ready

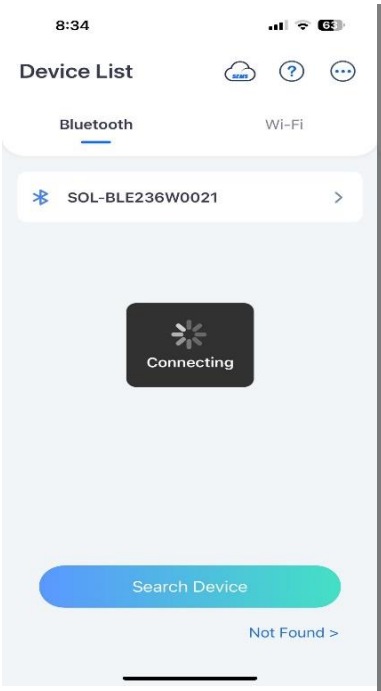
- ✓ Follow standard procedure for wifi connection.
- ✓ Registered SEMS account and create plant on SEMS app. This is mandatory for emergency backstop.
- ✓ Following guide below to add emergency backstop agency.
  Select DNSP register > manually select station name > Select DNSP (*SAPN, Powercor/Citipower/UnitedEnergy, Ausnet and Jemena*). > manually type in the NMI.
- ✓ Finish the registration by clicking register.
- ✓ May need to keep LFDI and SFDI for DNSP capability test referring to Appendix D.

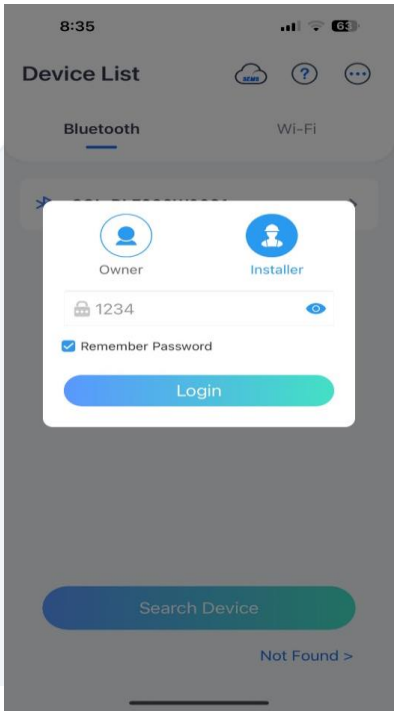


Appendix D: Upgrade firmware via SolarGo application

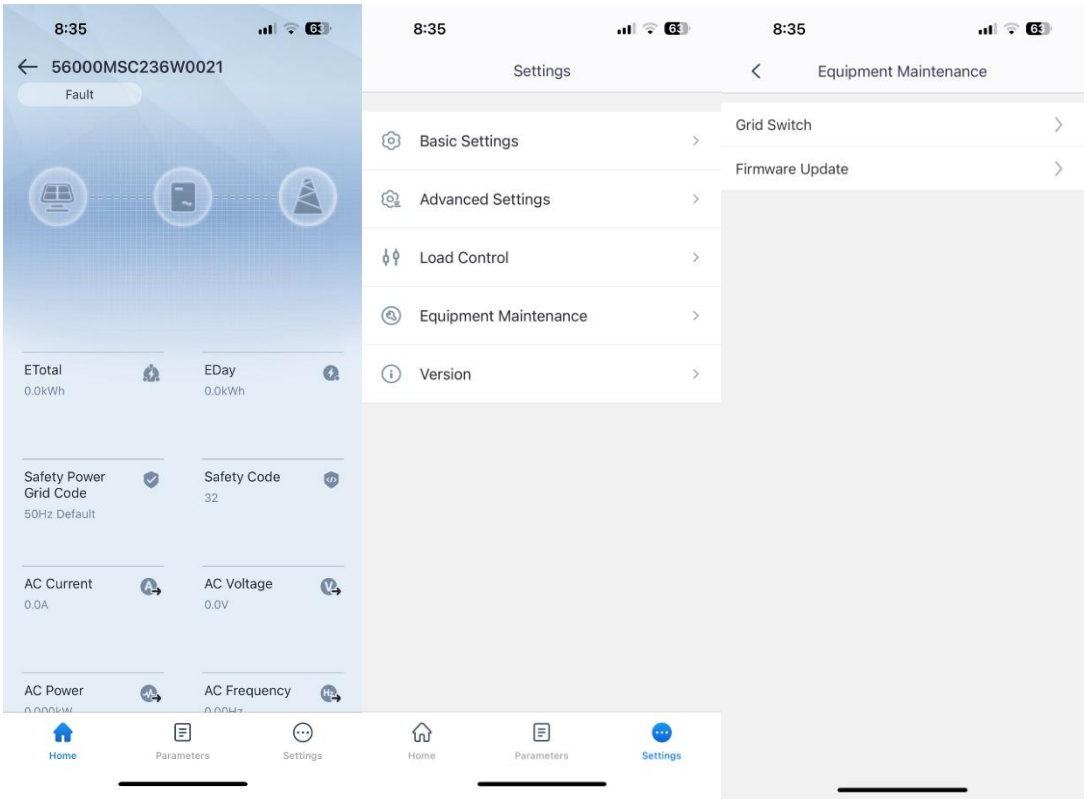
DNS-30, MS-30, ES-20 and ET 15-30kW inverters with Goodwe wifi-lan-20 dongle (pic below)

- ✓ Installers need to upgrade firmware locally.
- ✓ Insert the Goodwe wifi-lan-20 dongle to inverter.
- ✓ Open the SolarGo app and select Bluetooth connection and installer with password 1234

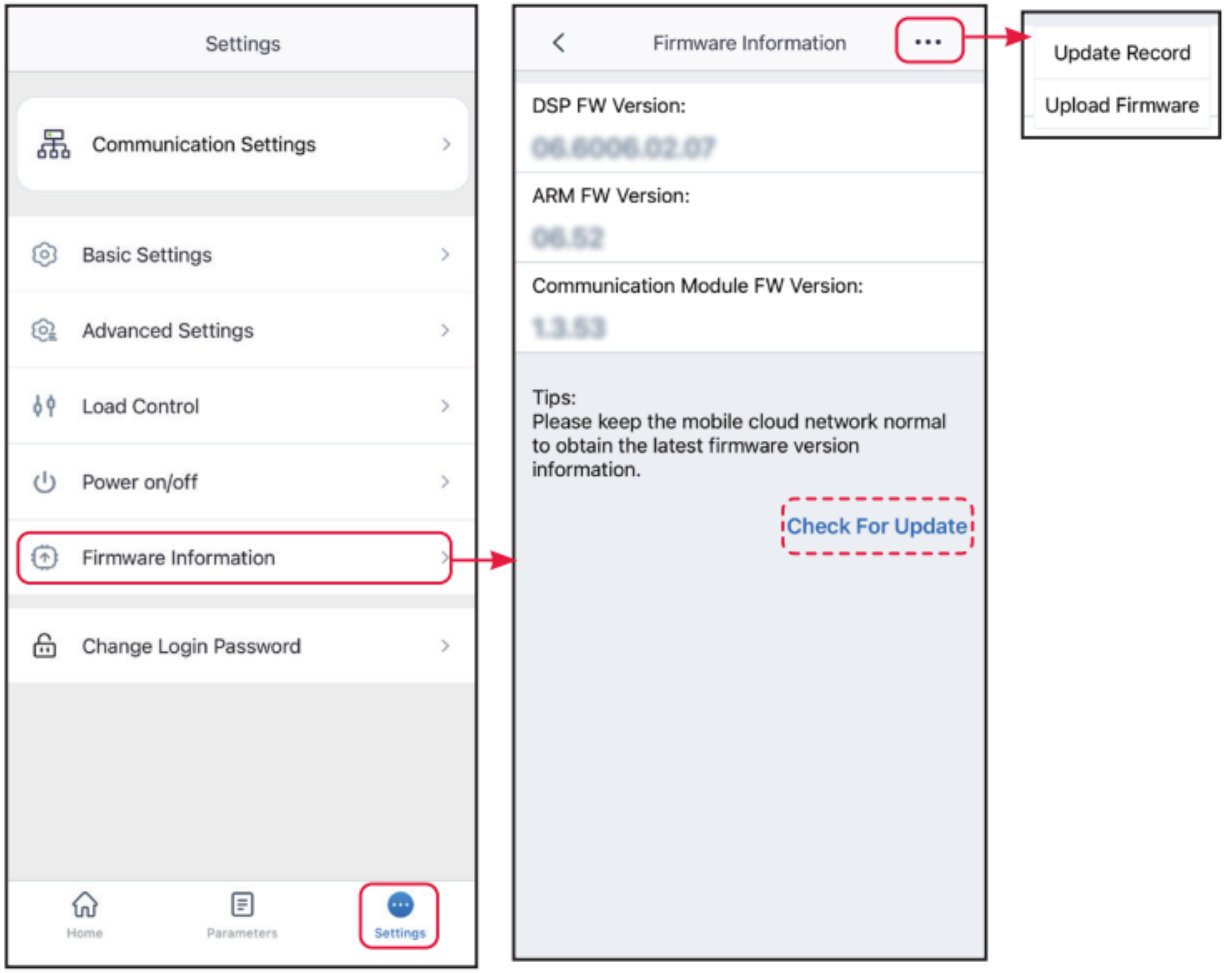




- ✓ Select the settings > Equipment Maintenance > firmware upgrade



✓ Click firmware update under the FW version > click UPDATE > firmware will update successfully > please check the ARM version once firmware update is completed.



Compatible firmware version table:

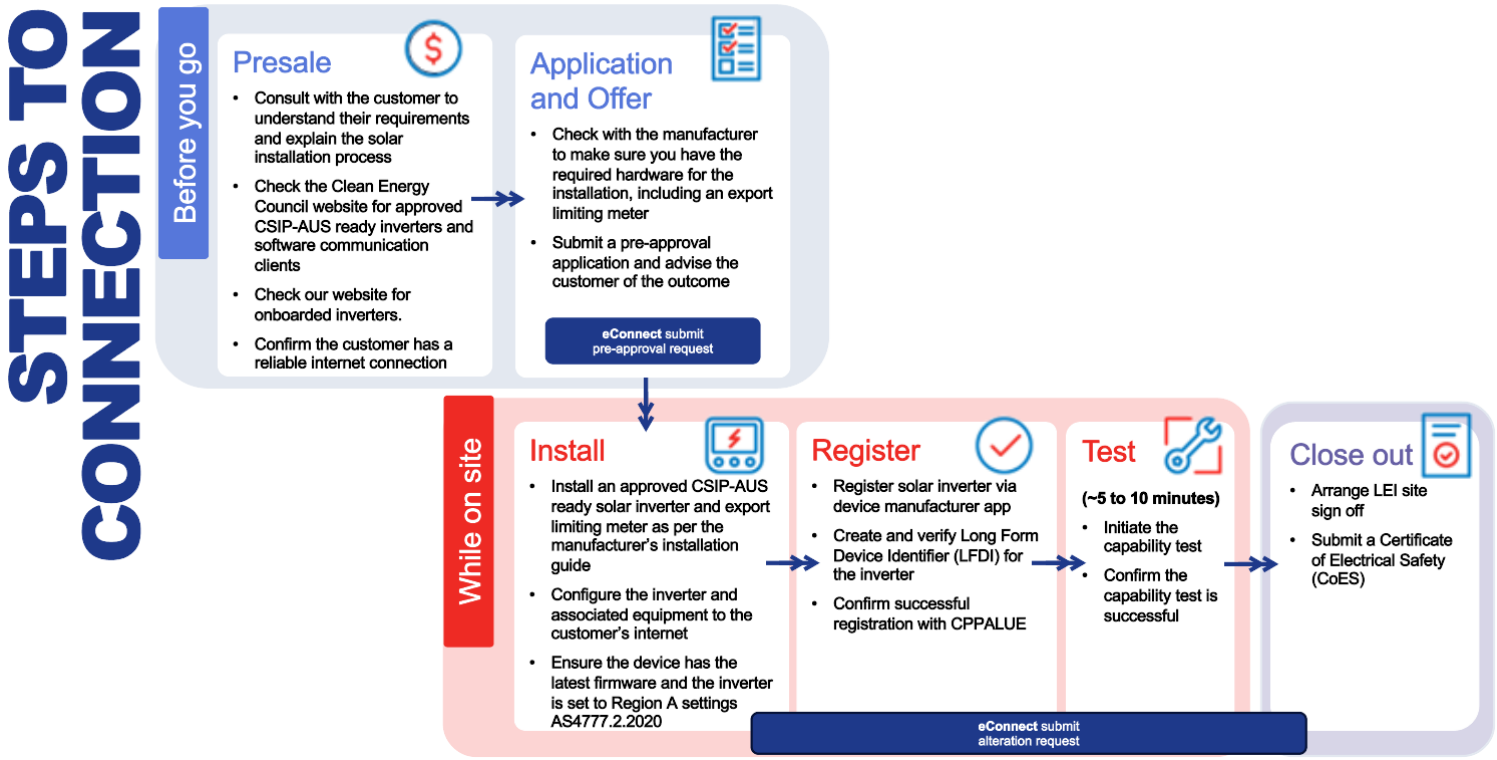
Model	ARM version (mini request)	DSP version (mini request)
DNS-30	07(53)	08-Release(8004)
MS-30	07(53)	08-Release(8003)
ES-20	09(403)	07-Release(7202)
ET 15-30kW	10(407)	08-V8045

DNS-30, MS-30, SDT G2, SMT with old wifi dongle

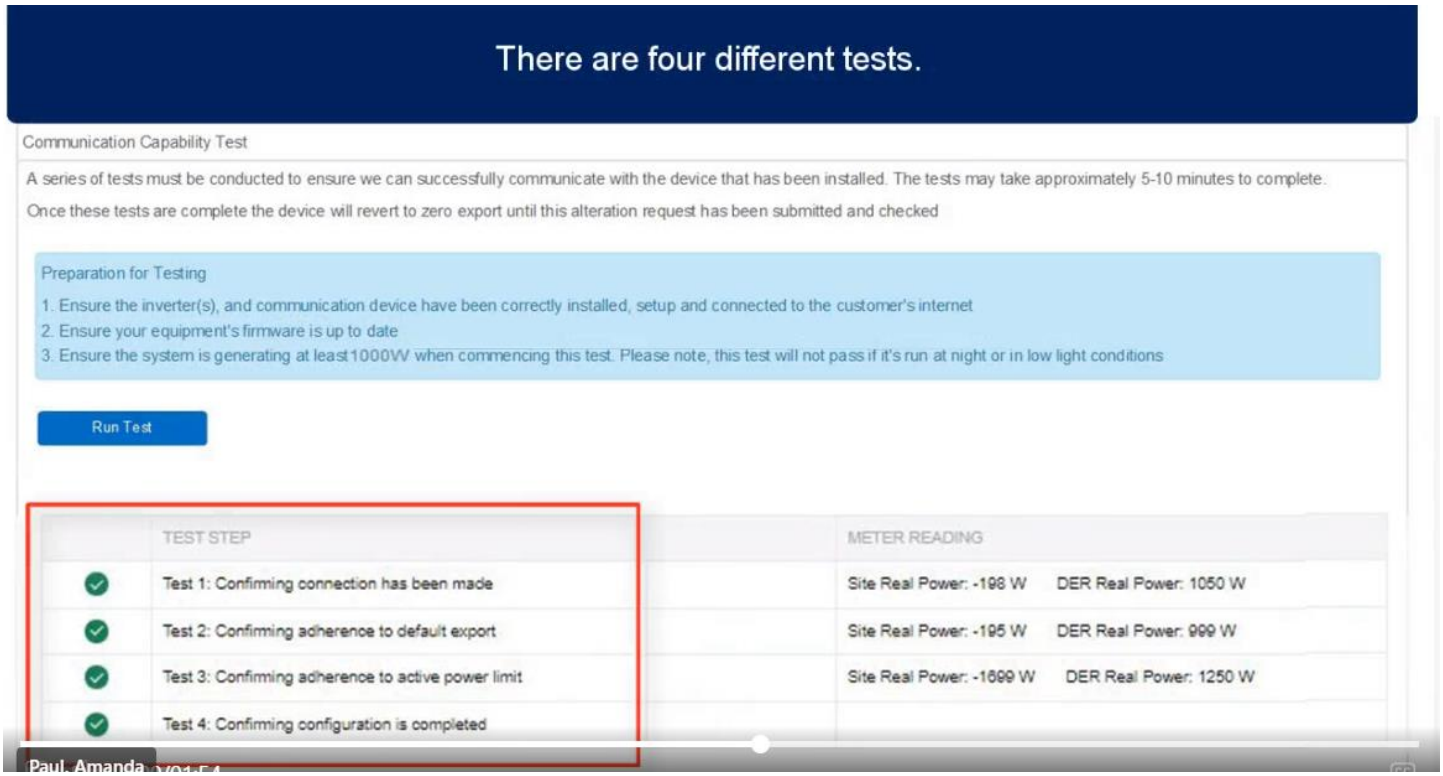
Please contact with Goodwe support line for firmware upgrading remotely.

Appendix E: DNSP self capability test

below process is sample from *Powercor/Citipower/UnitedEnergy* which is very similar as *Ausnet & Jemena.*



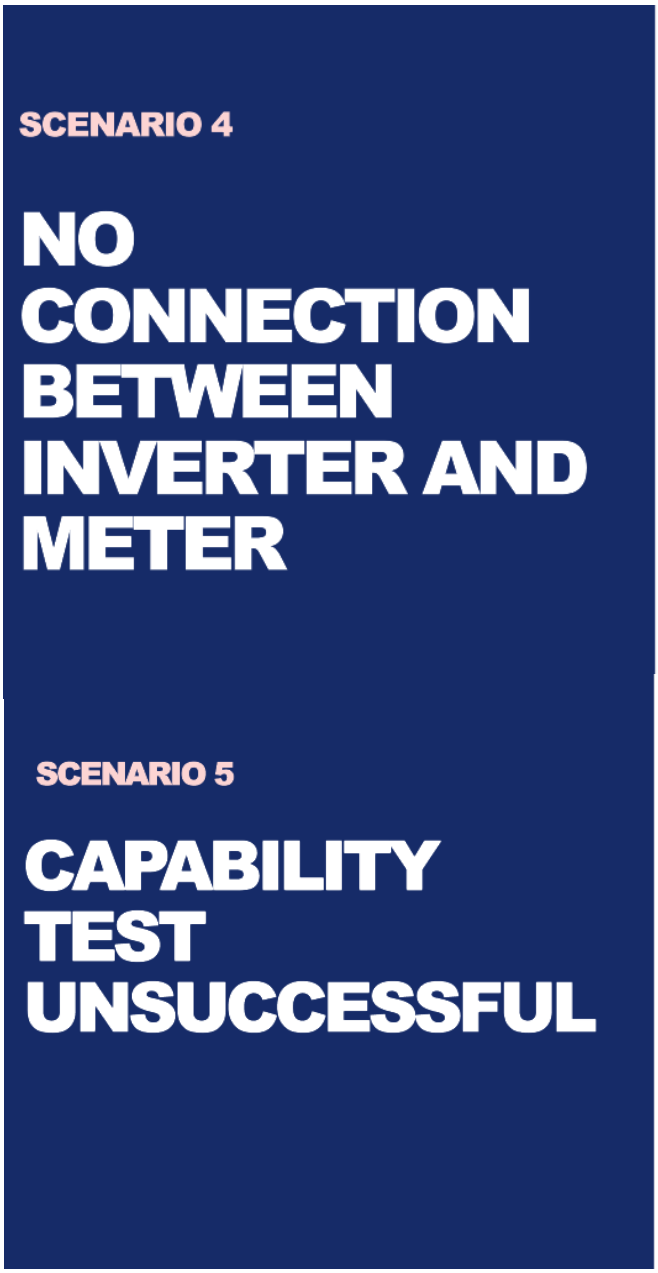
Capability test:



Appendix F: FAQ

Q: Without wifi connection or wifi lost connection, what happened?

A: The device request process 0kW export limit under Powercor/Citipower/UnitedEnergy, 0.5kW under Ausnet.



SITUATION/PROBLEM

- Solar system and inverter is installed away from the main residence (i.e. a shed) and there is no connection to the (export) meter

REQUIREMENT

- We must be able to limit export during a minimum demand event for both single and multi-inverter installations

ACTIONS

- There must be a connection between the inverter(s) and meter so that export can be limited when required

SITUATION/PROBLEM

- Device has been successfully registered however the capability test is unable to be completed

POSSIBLE CAUSES

- Insufficient generation on site (needs to be at least 1,000W)
- Technical issues (equipment or system problem)

ACTIONS

- Attempt capability test at another time. If multiple attempts do not result in a successful outcome, please contact your OEM, or our New Energy Services team
- A successful capability test is a must for a site to be compliant. If it cannot be completed at the time of installation, it can be completed remotely

Q: consumers will be informed if curtailment happened?

A: depending on OEM whether have function to inform consumers. Goodwe is developing the function to inform customers via SEMS plus if emergency backstop happening.