



APPLICATION GUIDE

FRONIUS GEN24, Verto, Tauro, SnapINverter VIC Emergency Backstop Mechanism

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Gender-specific wording refers equally to female and male form.

CHANGE LOG

DATE	VERSION	COMMENTS	AUTHOR
30/09/2024	1.0	First version	Fronius Australia
21/10/2024	2.0	Revised text, additional information	Fronius Australia

SCOPE

This document outlines the process of how to configure a Fronius inverter system to comply with the AEMO directive for the **Victoria Emergency Backstop Mechanism** for Solar. These instructions **ONLY** outline “additional” steps to the standard commissioning process.

The following inverter series are relevant to this document:

- **Fronius Primo & Symo GEN24 and GEN24 Plus**
- **Fronius Verto**
- **Fronius Tauro & Tauro ECO**
- **Fronius SnapINverter Primo, Symo, ECO, Galvo**

GENERAL

From **1. October 2024**, any new, upgraded, altered site applications (less or equal to 200kW) must comply with the VIC Emergency Backstop Mechanism. The following 5 energy distributors (DNSPs) are participating:



This document **ONLY** covers the Fronius processes (Inverter setup & Solarweb). It does **NOT** cover or include any specified processes required by any of the above-mentioned energy distributors. For information on the DNSP processes, please consult the relevant DNSP instructions/procedures.

At the time of the release date of this document, the Fronius “in-house/native” solution is **ONLY** available for the following configurations:

- **Single inverter** sites (Primo & Symo GEN24 and GEN24 Plus, Verto, Tauro, Tauro ECO).
- **Multiple SnapINverter** sites in a “Solar Net communication loop” configuration

The following configuration are currently NOT compatible:

- **Multiple inverter** sites with any GEN24, Verto, Tauro is present
- **Multiple SnapINverter** sites where inverters are NOT in a SolarNet configuration

Until approx. *mid-Nov 2024*, these sites will require an external controller for compliance such as Catch Power Relay, Zeco Marshall or Village Energy controller.

After this date, Fronius should have an “in-house/native” solution.

1 System Components

The following component groups are **required** as part of the system:

Fronius inverter:

- Fronius Primo or Symo GEN24, GEN24 Plus
- Fronius Verto
- Fronius Tauro or Tauro ECO
- Fronius Primo, Symo, Eco SnapINverters

IMPORTANT: A minimum inverter firmware version is required for correct functioning of the system.

GEN24, Verto, Tauro = $\geq 1.33.x-x$

SnapINverter (Datamanager) = $\geq 3.31.1-7$

If the firmware version is below the mentioned versions, the firmware MUST be updated

Supported Fronius Smart Meters:

- Smart Meter 63A-1, 63A-3, 50kA-3
- Smart Meter WR, 480V UL, 240V UL
- Smart Meter IP

IMPORTANT: A Fronius Smart Meter is now required in ALL systems that to be enrolled in the VIC Emergency Backstop

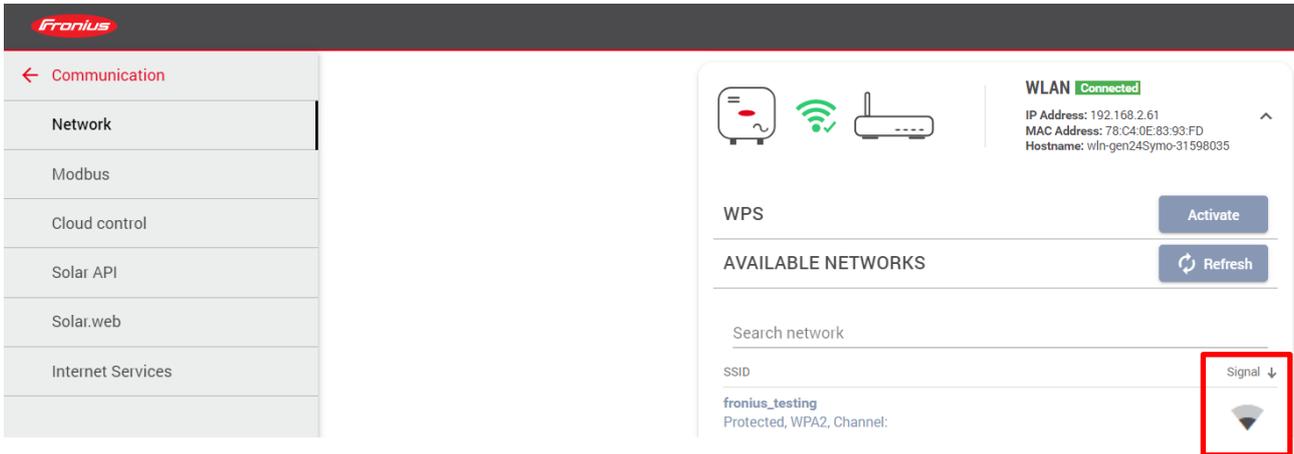
Router:

An ethernet router with internet connection is required so that all inverters can be controlled via the internet (IEEE 2030.5 – CSIP-AUS).

A hard wired ethernet connection to the inverters is recommended to ensure stable and reliable operation. Where a Wi-Fi connection is the only possible connection, the signal strength must be equal or better than 

This can be checked in the “**Network**” tab

- Click on “**Communication**” then “**Network**” to check the signal strength.



NOTE: If the connection to the router or internet is lost the inverter will go into “**Default Control**” until the connection is restored. The “**Default Control**” value varies depending on the DNSP (e.g. 0kW, 0.5kW, 1kW.) Once the internet is restored, the latest active DER Control Export value is enabled (e.g. 5kW)

2 General Configuration

- Familiarise yourself with the DNSP application & commissioning process
- A Solarweb account is required
- A stable internet connection needs to be established

Current DNSP Default Control values to be applied in Section 3.2 or 4.2

DSNP / Utility	Default Control value / Low Static Limit
United Energy, Powercor, Citipower	0 W
AusNet Services	1000 W
Jemena	500 W

3 Inverter Configuration Setup (GEN24/Verto/Tauro)

There are 3 x functions that must be set on the inverter:

- **Firmware Update**
- **Set Local Export Limit / Default Control**
- **Enable Cloud Control**

3.1 Inverter Setup:

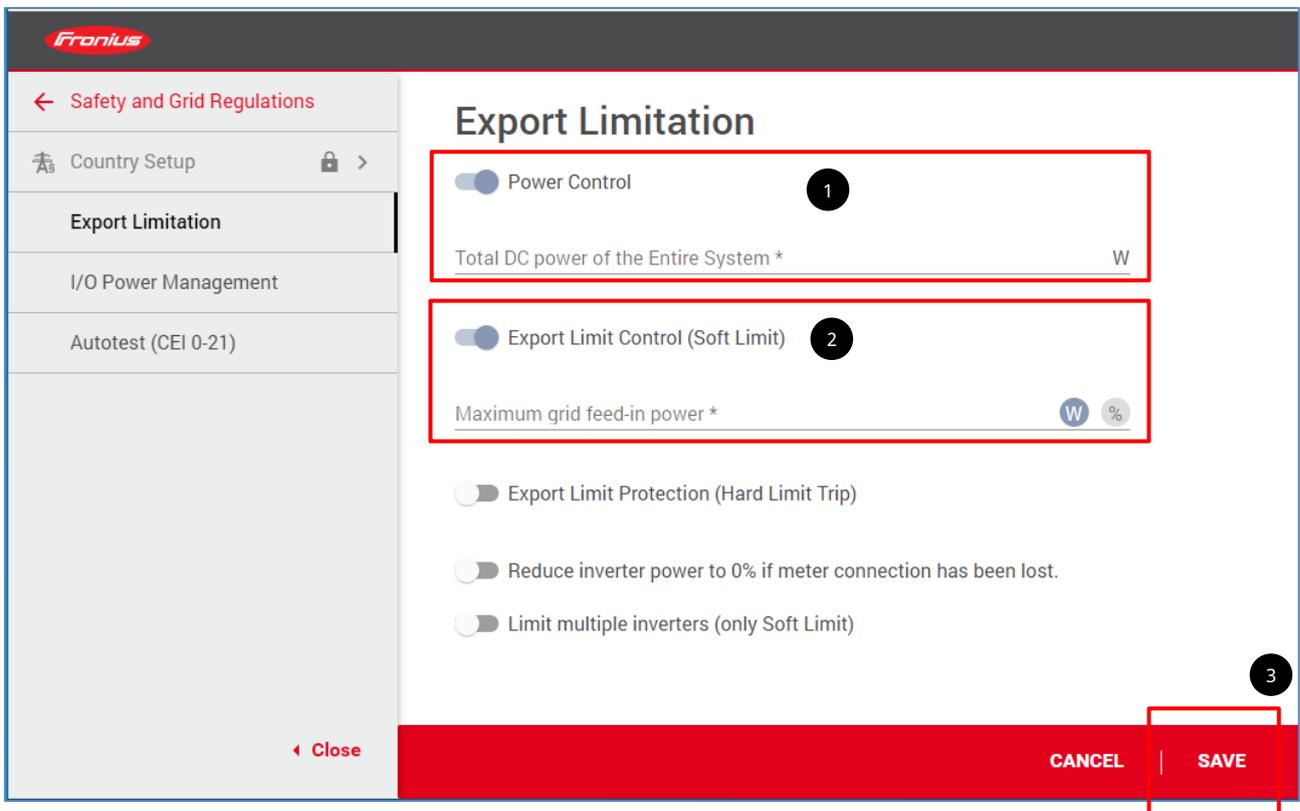
- Update inverter firmware to at least **1.33.x-x**

3.2 Set Local Export Limit / Default Control

Connect to the user web interface and login using the **“Technician”** password.

If required, see our YouTube video: *How-To video: Connecting to the user interface of the GEN24/Tauro*

- Click on **“Safety and Grid Requirements”** in the menu on the left and then select **“Export Limitation”**.



1. Activate **“Power Control”** and enter the **“Total DC power of the Entire System”** in Watts.
2. Activate **“Export Limit Control (Soft limit)”** and enter the **“Maximum grid feed-in power”** in **Watts***, (see Table in Section 2)
3. Click on **“Save”**

* The **“Local Export limit / Default Control”** value is the Low Static Limit defined by each DNSP. (see Table in Section 2). The system will fall back to the **“Default Control ”** value when the internet connection is lost. Once the internet is restored, the latest Active DER control is enabled.

3.3 Enable Cloud Control

- Click on **“Communication”** in the menu on the left and then select **“Cloud Control”**.

The screenshot displays the 'Cloud control' configuration page. On the left, a navigation menu is visible with 'Communication' selected and 'Cloud control' highlighted. The main content area features a yellow 'Note' box stating that cloud control is mandated by the grid operator and that its commands take precedence over local ones. Below the note is a toggle switch labeled '1' which is currently set to 'On'. Under the 'Profiles' section, there are two checkboxes: '2' is next to the checked checkbox 'Allow cloud control for regulatory purposes (Technician)', and '3' is next to the unchecked checkbox 'Allow cloud control for Virtual Power Plants (Customer)'. At the bottom, a red bar contains 'CANCEL' and 'SAVE' buttons, with 'SAVE' being the target of the instruction.

1. Set **“Cloud Control”** to ON
2. Tick **“Allow cloud control for regulatory purposes (Technician)”**
3. Click on **“Save”**

4 Inverter Configuration Setup (SnapINverter)

There are 3 x functions that must be set on the inverter:

- **Firmware Update**
- **Set Local Export Limit / Default Control**
- **Enable Cloud Control**

4.1 Inverter Setup

- Update inverter firmware to at least **3.31.1-7**

4.2 Set Local Export Limit / Default Control

- Navigate to “**DNO editor**” and perform the 2 required settings

Settings

GENERAL
PASSWORDS
NETWORK
FRONIUS SOLAR.WEB
IO MAPPING
LOAD MANAGEMENT
PUSH SERVICE
MODBUS
INVERTERS
FRONIUS SENSOR CARDS
METER
DNO EDITOR

DNO editor Pv system, on 7/31/2024, 1:54:52 PM

IO control

unlocked	Input pattern	Active power	Power factor cosφ	DNO output	excluded inverter(s)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> 100 %	<input type="checkbox"/> 1 <input type="radio"/> ind <input checked="" type="radio"/> cap	<input checked="" type="checkbox"/>	<input type="text"/>
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- Set **“Limit entire system”** in the **“Dynamic power reduction”**
- Enter **“Total DC system power of the system”**
- Activate **“Export Limiting Control (Soft Limit)”** and set **“Maximum grid feed-in power”** to **“X Watts”***. (see Table in Section 2)
- Click on the **“Tick”** to save the settings.

Dynamic power reduction

Export Limitation No Limit **Limit Entire System** Limit per Phase (not for single-phase devices)

total DC power of the system

Export Limit Protection (Hard Limit Trip)

Export Limiting Control (Soft Limit)
 Maximum Grid Feed-In Power **x Watts***

Reduce inverter power to 0% if meter connection has been lost.

* The **“Local Export limit / Default Control”** value is the Low Static Limit defined by each DNSP. (see Table in Section 2). The system will fall back to the **“Default Control”** value when the internet connection is lost. Once the internet is restored, the latest Active DER control is enabled.

4.3 Enable Cloud Control

- Set **“Allow cloud control for grid/Utility purposes”** in the **“Cloud Control”**
- Click on the **“Tick”** to save the settings.

Cloud Control

Allow cloud control for grid/utility compliance purposes

Note: If cloud control is enabled, authorized operators (e.g. network operator/energy supplier) can change the output power of the inverter if required. Cloud control commands always take precedence over local control commands. Connection to internet is required.

5 Solarweb Portal Setup & LFDI Creation

- Navigate to the system on Solarweb and click on **“Settings”**.
- Under **“Profile”** then **“Grid Operator”** select the designated DNSP
- Add the **“NMI”** of the site.
- Tick the **“INSTALLER USE ONLY...”** registration box and click on **“SAVE”**

The screenshot shows the 'Profile of PV system' page in the Solarweb portal. The 'GRID CONNECTION' section is highlighted with a red box. It contains the following fields and options:

- Grid operator:** A dropdown menu with 'Powercor' selected.
- NMI - National Metering Identifier:** A text input field containing '6001999977'.
- INSTALLER USE ONLY:** A checked checkbox with the text: 'Tick to register this system for remote DNSP Flexible Export/Dynamic Export or Emergency Backstop programs where ONLY Fronius is the controller via CSIP-AUS / IEEE 2030.5. Note: DO NOT tick this option if are unfamiliar with these programs or if you are using 3rd party controller, as this may lead to incorrect operation of the system.'
- LFDI:** A text input field containing the alphanumeric string 'C14 71AC 0868 B5A9 634E 7C18 2FA7 7C9D 0035 2956' and a copy icon.

After clicking **“SAVE”** an **LFDI** (Long Form Device Identifier) field will appear with the LFDI number.

Device Registration with LFDI:

“In-band registration” – DNSPs with this capability will self-register with the utility server. No additional action is needed once this step is completed. Please check the DNSP portal for next steps.

“Out-of-band registration”- DNSPs that only support this method, you will need manually copy the LFDI and paste this into the relevant section of the DNSP portal.

Use the COPY button to help with this.

Troubleshooting tips

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.

DNSP Information Links

For information on the DNSP processes and information for installers please follow the below links:

- **United Energy:** www.unitedenergy.com.au/solar-installers
- **Powercor:** www.powercor.com.au/solar-installers
- **CitiPower:** www.citipower.com.au/solar-installers
- **AusNet:** <https://www.ausnetservices.com.au/renewable-solutions/industry-solar/solar-emergency-backstop>
- **Jemena:** <https://www.jemena.com.au/electricity/solar-and-other-technologies/emergency-backstop-mechanism/>

NOTE: The above links were valid at the time of publication. These may change over time, therefore Fronius is not responsible for the ongoing validity of these links.

END OF DOCUMENT

Fronius Australia Technical Support

Email: PV-Support-Australia@fronius.com

Phone: 03 8340 2910

For more detailed information see the operation manual available on the product specific page on [here](#).