APPLICATION GUIDE

FRONIUS GEN24 / GEN24 PLUS
SA DYNAMIC EXPORT COMMISSIONING SETUP

Procedure as of 1st July 2023

1. CHANGE LOG

Date	Version	Comments	Author
02/07/2023	1.0	First release (Single Inverter sites only)	Fronius Australia
24/08/2023	2.0	Revised Solarweb setup and device registration	Fronius Australia

2. SCOPE

This document outlines the necessary commissioning procedure required to set up the *GEN24 series* inverters to operate under a SAPN Dynamic Export agreement as a part of the SA Smart Homes Scheme. The commissioning steps outlined in this document are "additional" steps required on top of the standard inverter commissioning process. Please consult our other documentation for information on how to perform the standard commissioning steps.

IMPORTANT: This version 1.0 release of this document is ONLY valid for "single inverter" and "Inverter inbuilt" communication sites. Multi-Inverter sites are not yet possible with the "inverter inbuilt / native" solution.
For multi-inverter sites an external 3rd party devices MUST be used instead.

The following Fronius Inverter series are relevant to this document:

/ **Fronius Primo GEN24 (Plus) series**
/ **Fronius Symo GEN24 (Plus) series**

For more information on the Dynamic Export Regulations installers are encouraged to visit the following website:

https://www.energymining.sa.gov.au/industry/modern-energy/solar-batteries-and-smarter-homes/regulatory-changes-for-smarter-homes/dynamic-export-limits-requirement

3. GENERAL INFORMATION & REQUIREMENTS

The SA Dynamic Export control function uses the IEEE 2030.5 based CSIP-AUS communication protocol to communicate from a Utility Server (SAPN) to the Fronius Cloud Aggregator. The Utility Server publishes varying "export limits' which the Fronius Aggregator retrieves and forwards to the relevant inverter (Client). For identification of the correct inverter, the protocol requires an LFDI (Long Form Device Identifier) to be created/issued for the inverter to then be supplied to SAPN.
Compatible inverters are listed on the CEC Approved Inverter list and have an entry under the column: "SOFTWARE CLIENT".
https://www.cleanenergycouncil.org.au/industry/products/inverters/approved-inverters
All Fronius Australia CEC listed inverters are compliant to the SAPN Dynamic Export capable requirements.

To complete a compliant install, the system MUST have the following:

/ Fronius Smart Meter MUST be installed in the system
/ Inverter is loaded with a min. firmware version **≥ 1.25.3-1**.
/ *"Remote Control"* activated on the inverter WebUI
/ A PV System in Solarweb is active with the assigned inverter
/ Selected *"Grid Operator"* is *"SA Power Networks"*
/ *"Only tick to register PV system for Dynamic/Flexible Export sites controlled by Fronius"*
  is ticked.

NOTE: Due to the infancy of this emerging technology, there are steps in this guide that could change over time. The user is therefore advised to always use the latest version posted on the Fronius Australia website.

4. SYSTEM INSTALLATION & COMMISSIONING

Carry out the installation & commissioning process as per the standard process, for more information please consult with our online manuals Primo GEN24, Symo GEN24.
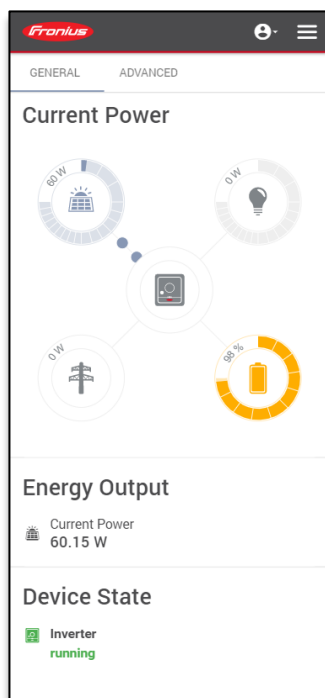YouTube: https://www.youtube.com/watch?v=M_FIsLtCKvo

NOTE: After completion the inverter MUST be running the firmware version **1.25.3-1** or greater.

If the firmware is lower than **1.25.3-1**, please update the inverter via the Solar.Start App or via Solarweb.

5. ONSITE INVERTER SETUP

5.1 Set pre-commissioning Export Limit

/ Connect to inverter Wi-Fi Access Point

/ Select *"User Login"*
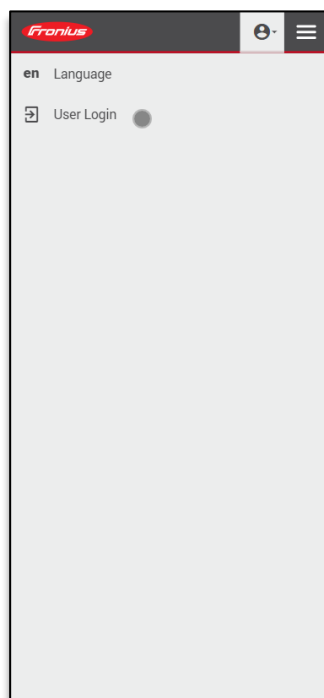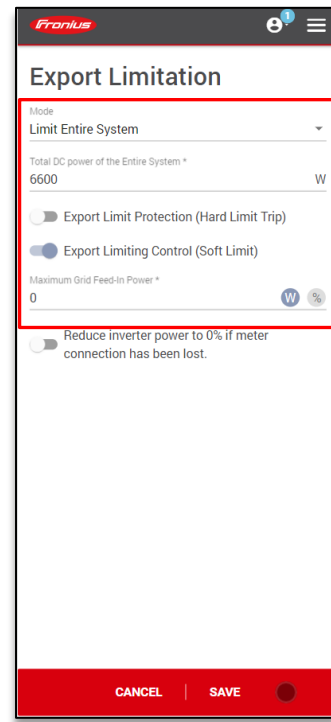
/ Log in as *"Technician"*
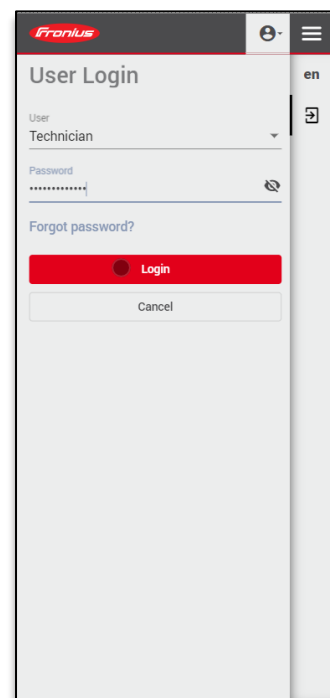
/ Navigate to
"Safety and Grid Regulations"
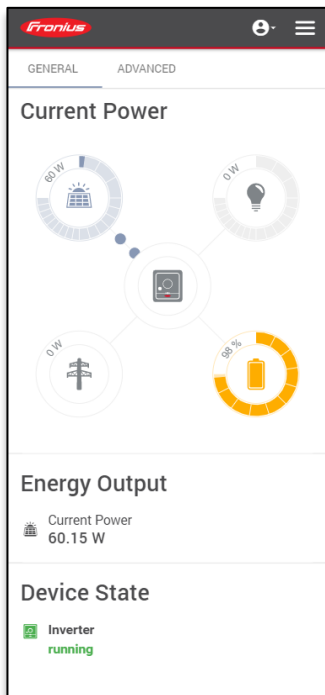(from top right icon)
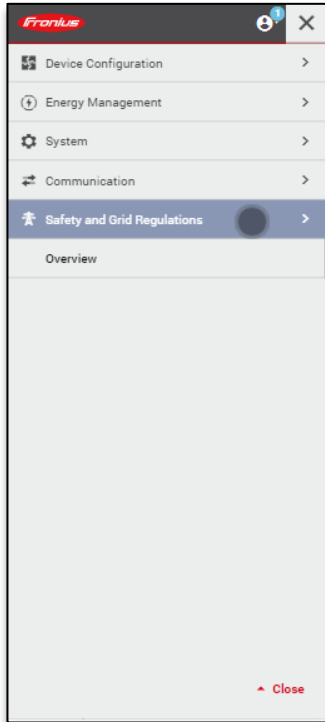
/ Select to
"Export Limitation"

/ Set Mode to
"Limit Entire System"
/ Set **"Soft Limit"** to any value
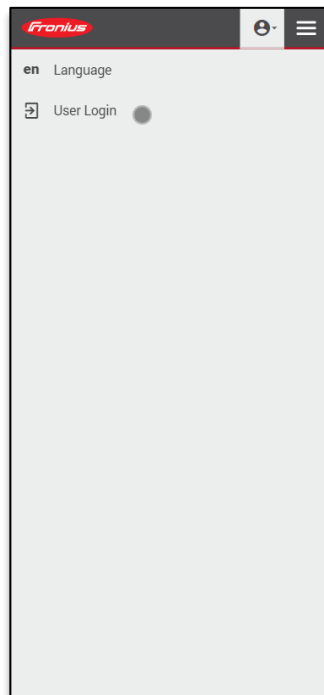between 0 – 1000W, Click **Save"**

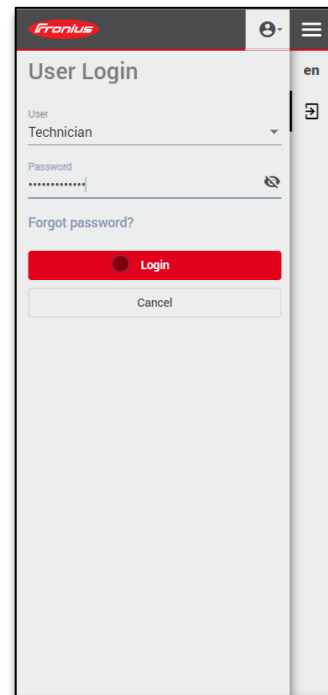## 5.2   Activate *"Allow remote control though Solar.web (Technician)"*
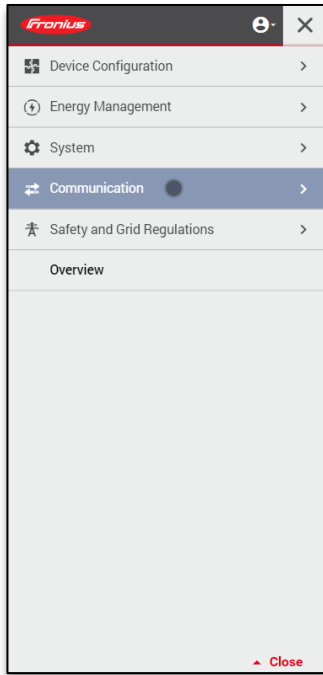
/ Connect to inverter
Wi-Fi Access Point

/ Select **"User Login"**

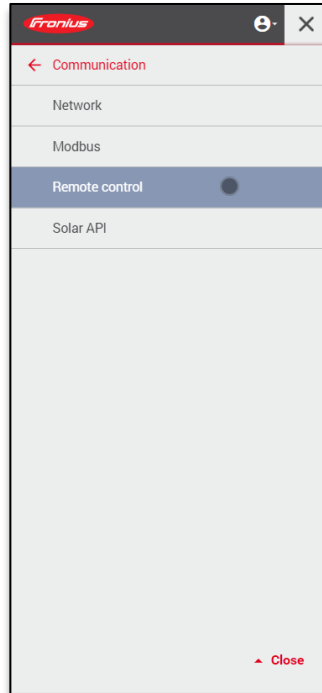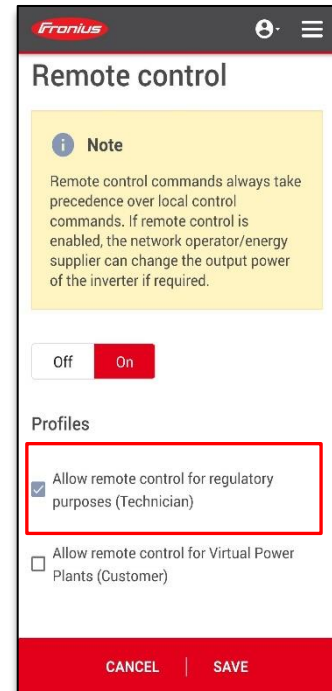/ Log in as **"Technician"**

/ Navigate to *"Communication"*
(from top right icon)

/ Navigate to
"Remote Control"

/ Activate to *"Allow remote control though Solar.web (Technician)"* and "**SAVE**"

NOTE: The Pre-Commissioning Export Limit is an additional fallback limit which the inverter maintains before the Dynamic Export is in place. As soon as the inverter has communication to the SAPN Utility Server the "local" export limit will be overridden.

IMPORTANT: If the *"Allow remote control for regulatory purposes (Technician)"* is NOT activated, the inverter will not be able to receive the export limit commands from SAPN.

6. SOLAR.WEB CLOUD SETUP & DEVICE REGISTRATION

6.1 Create system in Solar.web

Create a new system in Solar.web as per the standard process, see how to here:
https://www.youtube.com/watch?v=umE6-fTwRKA

6.2   Input correct site Address & Installation Date

For tracking of system performance, the correct site address and installation date of the system is entered

6.3 Select & fill in Grid connection details

Under "*Grid operator*" choose "*SA Power Networks*"
Under "*NMI – National Metering Identifier*" enter site's 11 x digit NMI number.
Tick the "*Only tick to register PV system for Dynamic/Flexible Export sites controlled by Fronius*" box

IMPORTANT: Ticking the "*Only tick to register PV system for Dynamic/Flexible Export sites controlled by Fronius.*" box regsitters the inverter system with the SAPN Utility server and creates the LFDI in the backgraound automatically. ONLY tick this box if the system is to be controlled by the Fronius cloud.
i.e. Fronius internal native solution.
DO NOT tick if controlled by Catch Relay, Zeco Marschall or SwitchDin. The registration for these devices MUST be done by them directly.
Also DO NOT tick this box for the SAPN Remote Disconnect functionality.

7. SAPN DEVICE REGISTRATION CHECK

7.1 Check "Device registration" in Smart Install

Access Smart Install and log in
Complete the required details and information up to "*Device registration*"
Check the "*Device registration*" tab for "*Your device has been successfully registered*"

7.2 Run "Export Capability Test"

To run the *"Export Capability Test"* click on the *"TEST EXPORT CAPABILITY"* button.
Progress will be shown of each test being performed.

IMPORTANT: the system MUST be exporting at least 500W for the test to PASS. If the export is below 500W, you will have to perform a test at another time OR turn loads off to enable the export to exceed 500W.

NOTE: this process can take up to *15mins* depending on when the last data upload was executed.

When all **GREEN** ticks are present the test is finished and PASSED

END OF DOCUMENT

Fronius Australia Technical Support
Email: pv-support-australia@fronius.com
Hotline: +61 3 8340 2910

To access Technical articles, Quick guides, Whitepapers and other technical documents, please visit the
Tech Support Area for Installers on our website