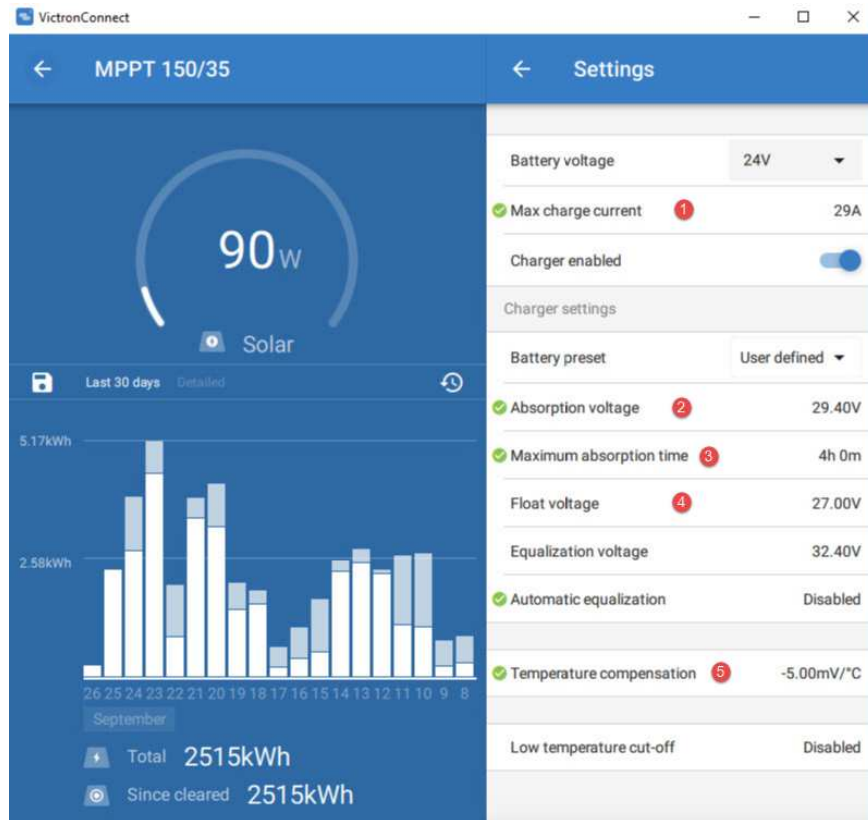


VICTRON ESS QUICK SETUP

First the MPPT, as same settings must be on inverter, under Charging, and in ESS:

Note: These settings are for Trojan T105RE batteries.



Upgrade the inverter firmware to the latest version available:

1.1 Register on professional.victronenergy.com for access to all the latest firmware.

It is here: [Victron Firmware versions](#)

1.2 Consult the VE.Bus firmware versions text document on the site to figure out what version of the firmware you need

OR

Open the front panel and look at the sticker on the main processor inside the inverter, you need the first 4 digits.

You are looking for this: [Victron Firmware explained](#)

1.3 Just do exactly what VEFash tells you

It is here: [Updating Victron Inverter Firmware](#)

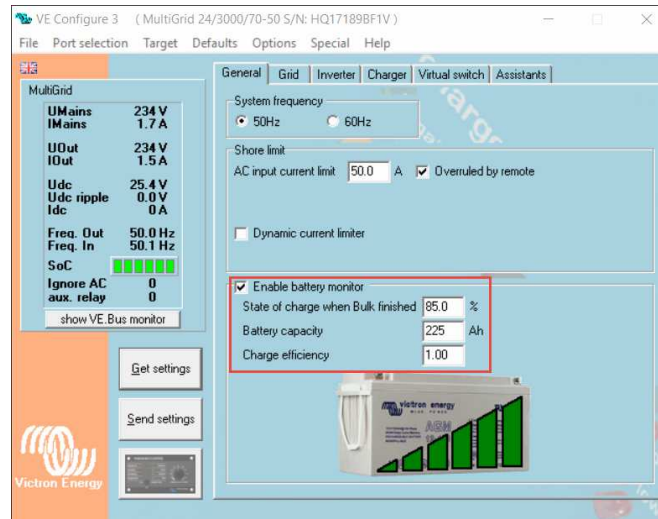
Notes:

- 1) If the inverter goes "dead", that is good, keep going.
- 2) Don't diddle, click quick Continue button, or the upgrade window passes.
 - If you have missed the window, just start again. No problem.
 - Each time you upgrade the firmware, the settings are gone, so keep a record.

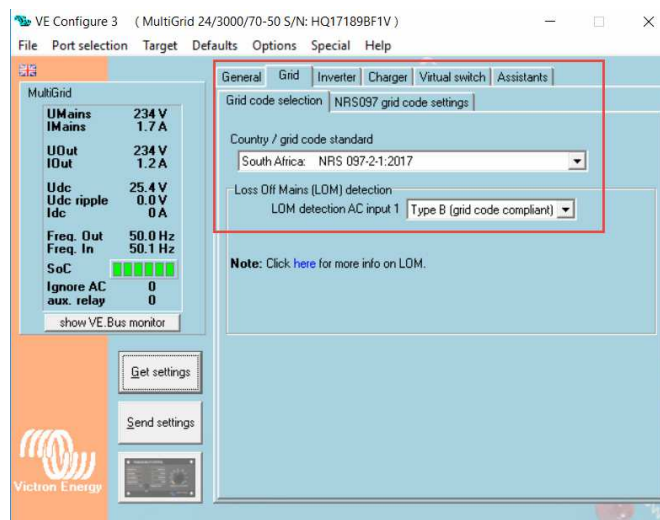
Program the inverter:

Using VE Configure [Software is here](#) configure the basic inverter values, such as the charge voltages for the batteries. The defaults are almost always good enough for a first try till you know more.

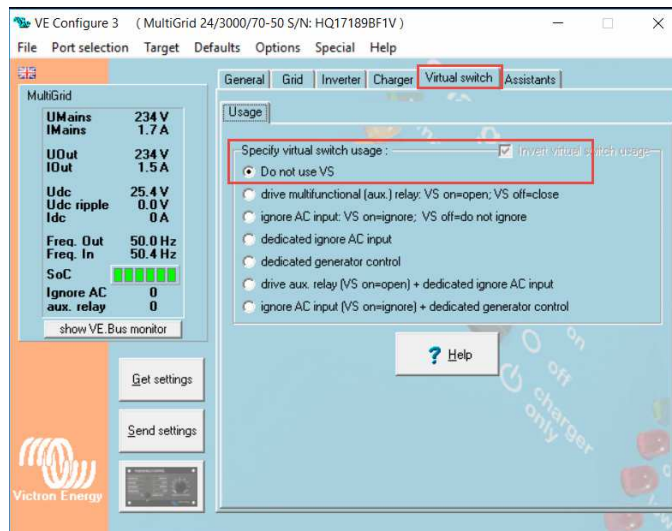
1. Enable the battery monitor and set the battery capacity.



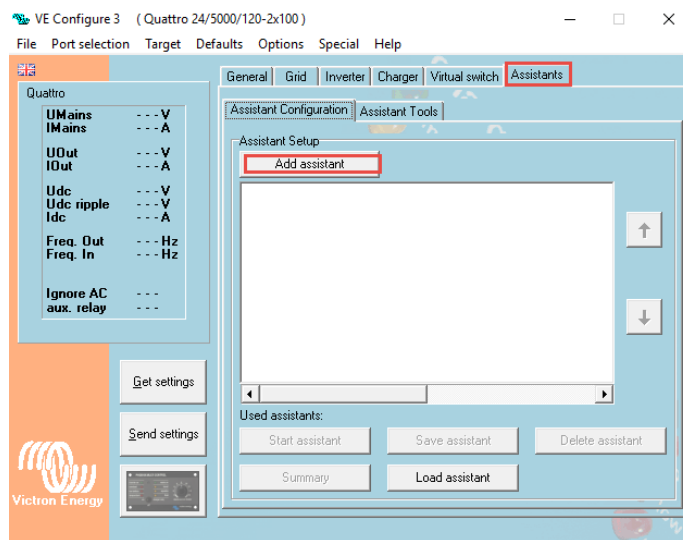
2. Set the grid code to NRS097-2-1 if you are in South Africa. When you do this the first time it won't ask for a password.



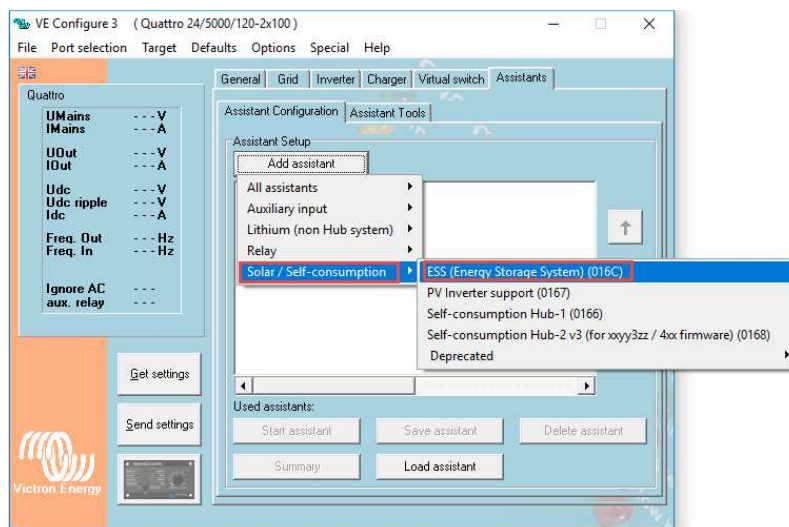
3. Go to the Virtual Switch tab and tell it not to use Virtual Switch. This enables the assistants.



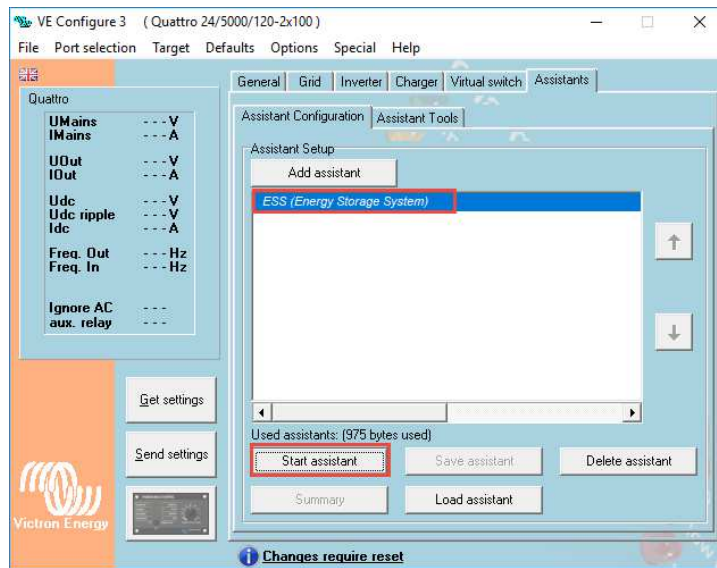
4. Go to the Assistants tab, and click **Add Assistant**.



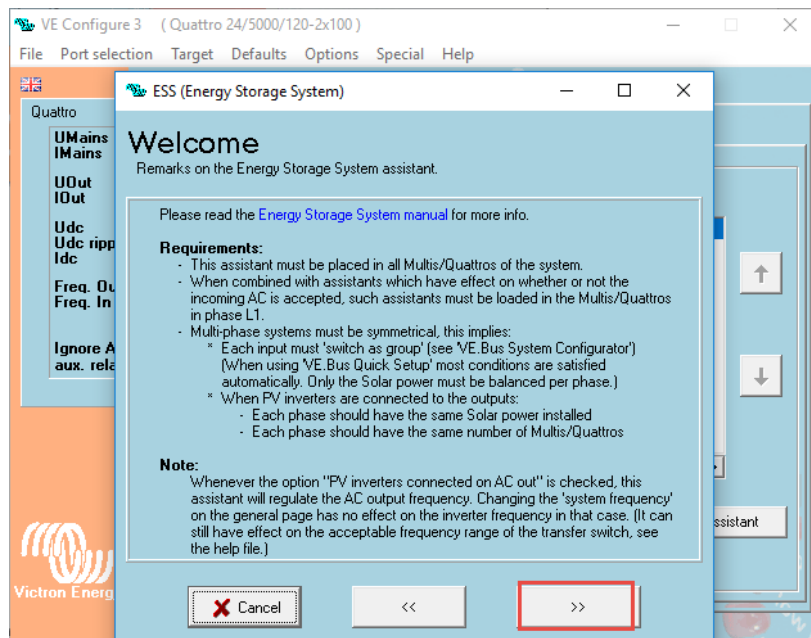
5. Select the **ESS Assistant**.



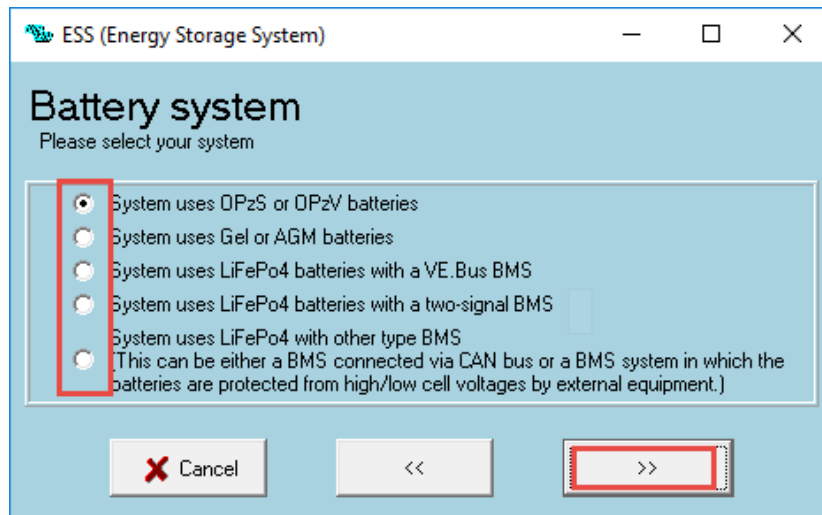
6. **Start** the ESS Assistant



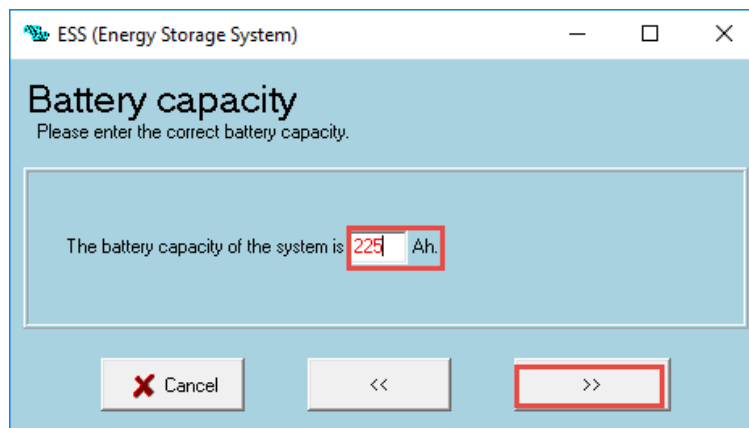
7. Click the >> button after reading what it said ...



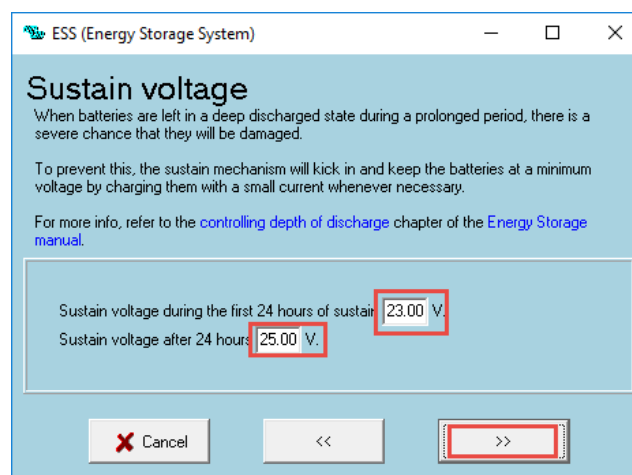
8. Select the type of battery system



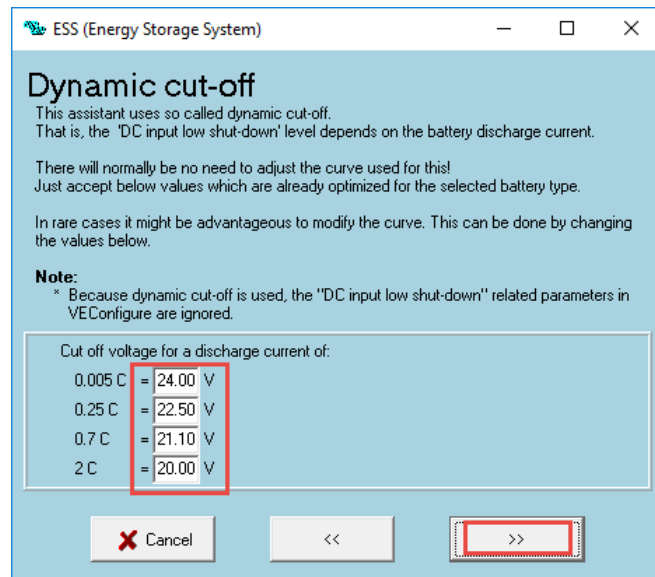
9. Select the **battery capacity**.



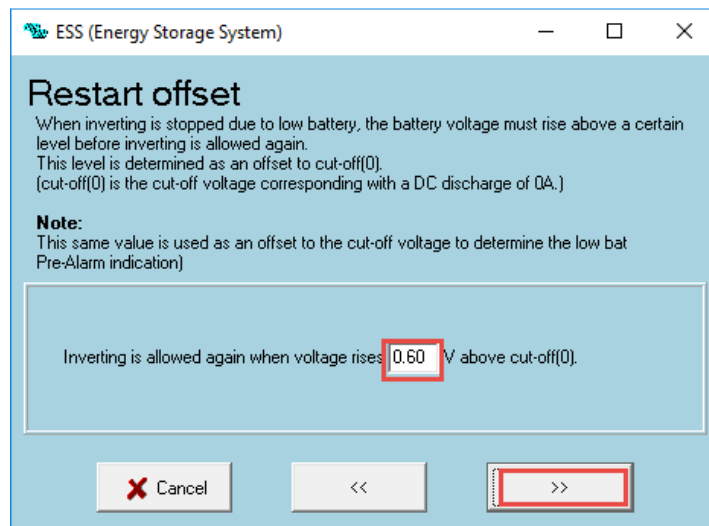
10. Adjust the **Sustained voltages** as you need.



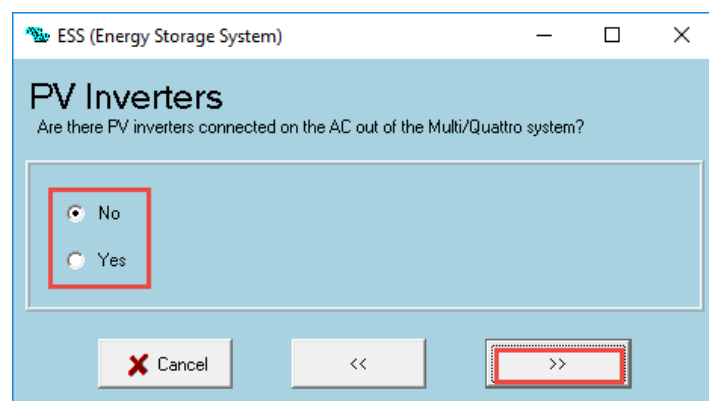
11. Note the Dynamic cut-off volts, tweaking them to your battery needs. **The defaults are a bit high in some cases.**



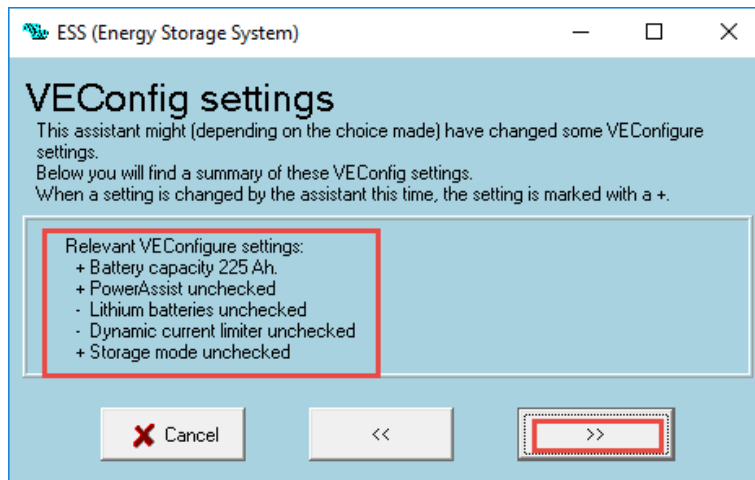
12. Set the Restart offset



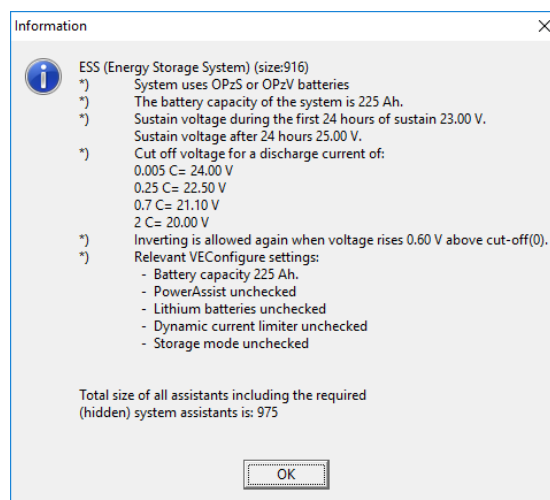
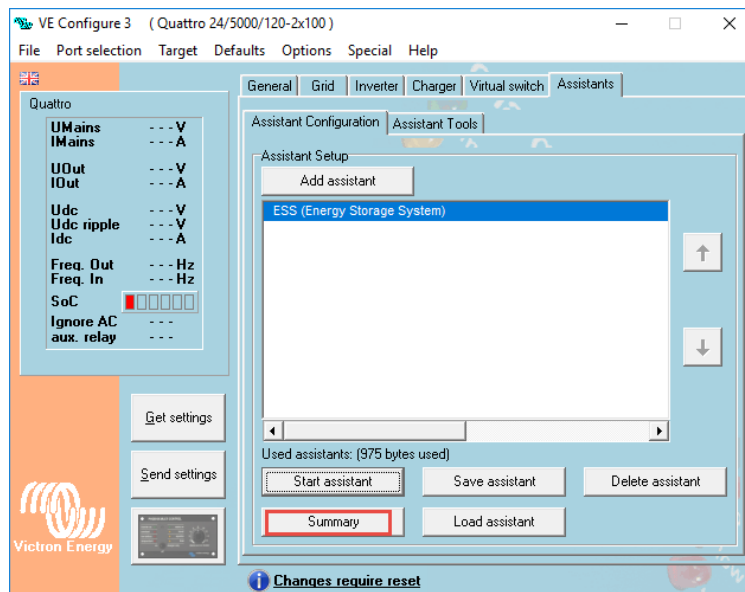
13. Do you have a Fronius / PV Inverter, then set it here, otherwise No.



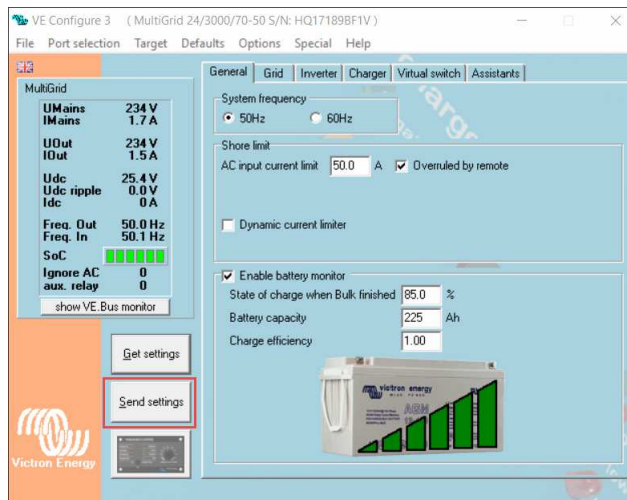
14. Check the VEConfig settings



15. Click on **Summary**.



16. Write the settings back the Multi, by clicking **Send Settings**, to the inverter:



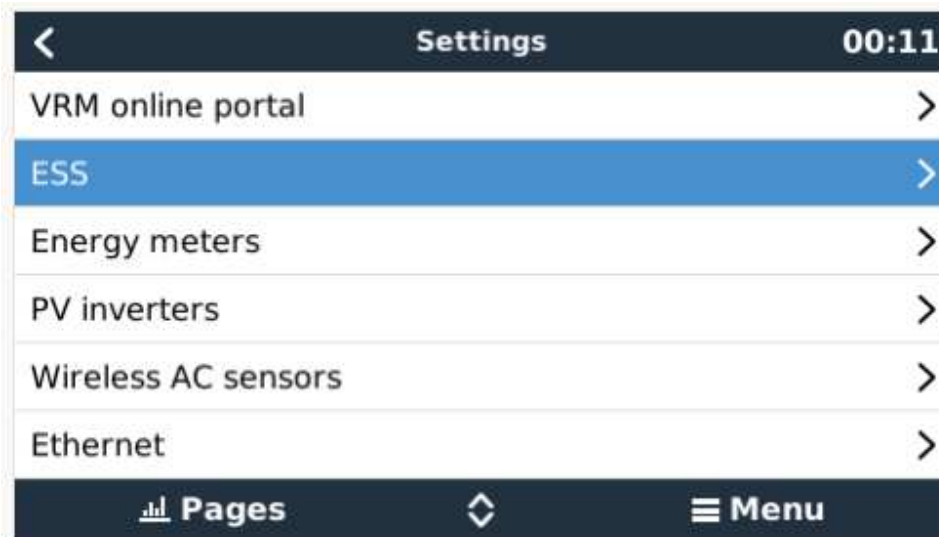
Done!!!

Next, tweak the values of ESS on the **VenusGX (VGX) / CCGX / RPi Software configuration**:

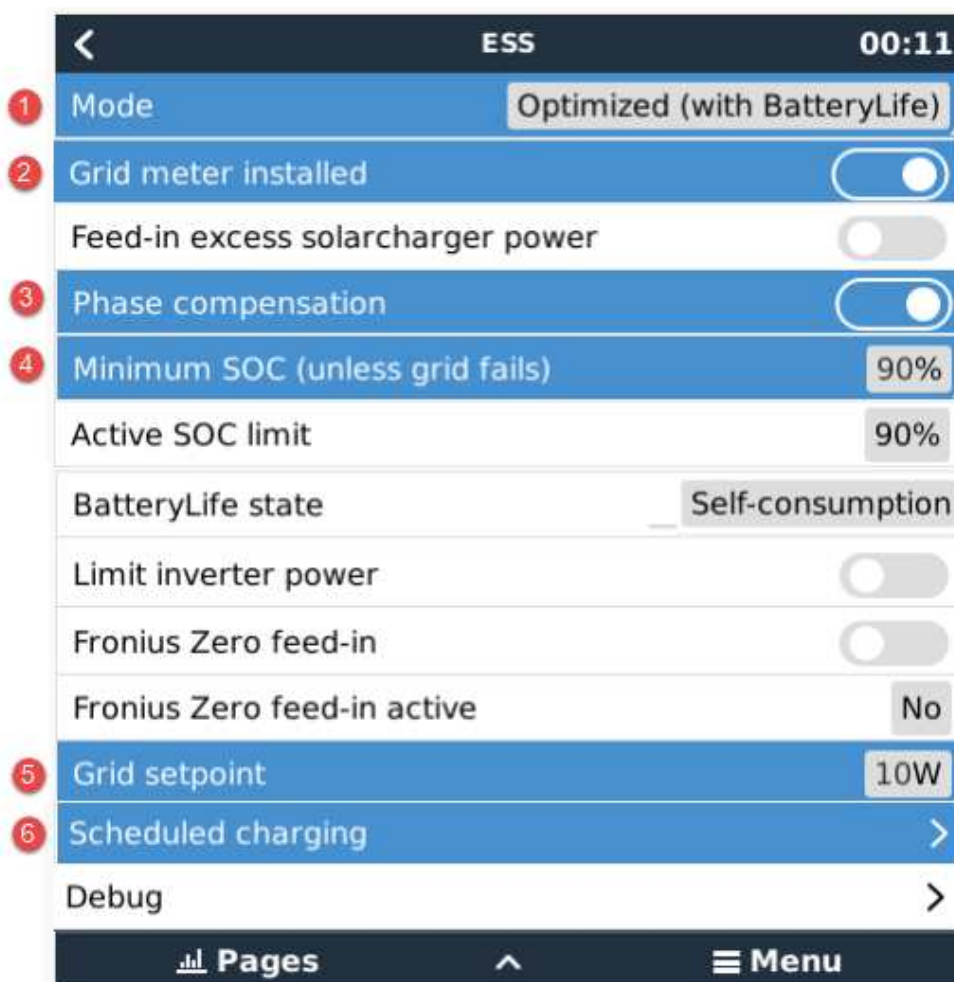
- The Main Menu / Device list:

Device List		13:36
BMV-700	91% 27.05V 21.6A	>
MPPT 150/35 - 930w	455W	>
Carlo Gavazzi ET112	711W	>
MPPT 75/15 - 400w	156W	>
MultiGrid 24/3000/70-50	Bulk	>
Notifications		>

ESS Settings, found under **Settings** on the main menu, then scroll down:

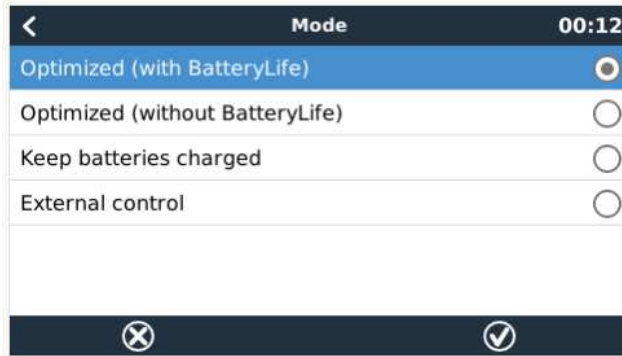


ESS options:



1) Mode of operation

- Best most efficient way to utilise all panel power, is Optimized with Battery Life.



2) **Grid Meter Installed** – like a Carlo Gavazzi ET112

- Best place to have it installed in the main DB board, is directly after the main breaker, that the entire boards power is measured going through it.
- You can use UTP cable to extend the **RS485 to USB interface** cable 5m.

3) **Phase Compensation**

- Enabled or disabled, for single phase systems this setting has no effect - can be ignored.
- For 3 phase systems, refer to the manual. **NB!**

4) **Minimum SOC (Unless grid fails)**

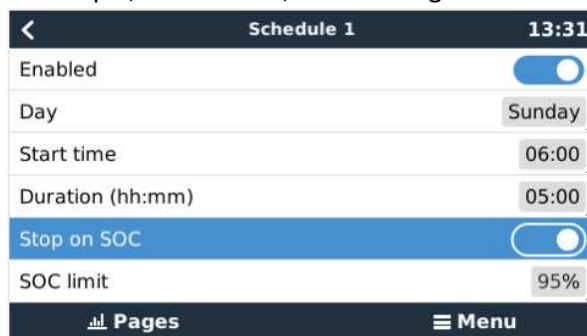
- This is the core setting, to not over discharge the batteries during normal operation.
- 80% is the best setting, you decided.

5) **Grid Setpoint**

- 40watts is good, drop the value to see which one works best for you.
- If you pre-paid is tripping, increase the value.

6) **Scheduled Charging**

- Ideal for ensuring that once a week the batteries are fully charged. Use the day the least AC power is used.
- SOC limit as an example, or disable it, that it charges to 100%.



ESS is configured!!!

General:

Keep a record of your data: Data can be sent here: <https://vrm.victronenergy.com/login>

FIY, out of interest, here is a list of all the **assistants:** [All Victron Inverter Assistants](#)

ESS Codes on the screen, bottom center of screen, if any:

#1 and #2 - means the SOC is low,

#3 and #4 - has to do with BMS signals,

#5 - slow charge,

#6 - user set the max charge power to zero

#7 - user set the max discharge power to zero.