

## Solar Energy South Africa

# Ess 1 soc is low The Gambia



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### [Discharging below minimum SOC](#)

Hi, I presume this is the normal operation of Foxx-ESS battery storage? When I set minimum SOC to say 30%, the batteries stop discharging power once the SOC is reached, but then slowly, over several hours, the battery reduces to 25% & then charges at approx 0.5kWh until 30%. The cycle then repeats until PV charges the batteries above 30%.

### [1. ESS introduction & features](#)

1. ESS introduction & features. 1.1. Let's look at the following example installations: 1.2. Components 4.3.7. Minimum SoC (unless grid fails) 4.3.8. Peak shaving; 4.3.9. Active SoC limit; 4.3.10. BatteryLife state; 4.3.11. Limit inverter power The AC Load value shown will be too low (and will show zero where there is a surplus of



### **ESS ontwerp**

Als de SoC van de accu langer dan 24 uur onder de SoC-laaggrens valt, wordt deze langzaam opgeladen (vanaf een AC-stroombron) totdat de ondergrens weer is bereikt dynamische lage limiet is een indicatie van hoeveel overschot aan PV-stroom we overdag verwachten; een lage laadlimiet geeft aan dat we veel PV-stroom verwachten om de accu op te laden en dat het ...

**max SOC limit setting in ESS is very necessary**

Those are two very simple features, that are very important for the VALUE of Victron ESS: 1. MAX SOC setting, 2. MIN Battery usage regulation. I tried to set the grid setpoint to a high minus value, but this is not a usable solution. but if the coloub counter works and a high voltage and low voltage calibration is done, and the approx. cell



## Answer

and min / max 2-6 modules to the H1 ( 1~ Hybrid ). 36. What is the best way to set the SoC ( State of Charge ) for the batteries ? Answer: We recommend setting the minimum SoC to 10 % and the minimum SoC (grid- connected) to 15 %. You can set the maximum SoC to 100 %. 37. When does the warranty period start ?

## Dynamic ESS inconsistent target SOC and start charging in sell ...

It sets a target soc of 49% but changes it's mind 8min later, and sets it to 52%. Then 7:00 comes around, and target soc gets set at 23%, this lasts 8min again, then a new target soc gets set, at 53% and again 15 mins later, to 54%. The 23% target soc results in dumping power on the grid, discharging the battery to 49%.



## Recharge Requirements for Batteries with a Low SOC

When the SOC of the ESS is low due to self-discharge loss or extended periods of storage without being charged, the system forcibly charges the ESS to prevent damage from overdischarge. Additionally, in situations where



the PV power is insufficient, the system will draw power from the power grid regardless of the Charge from AC threshold.

## 6. Steuerung der Entladungstiefe

Wenn das SoC der Batterie für mehr als 24 Stunden unter den SoC-Tiefstwert fällt, wird sie langsam (von einer AC-Quelle) aufgeladen, bis der untere Grenzwert wieder erreicht ist. Die dynamische Untergrenze ist ein Hinweis darauf, wie viel überschüssige PV-Leistung wir während des Tages erwarten; eine Untergrenze bedeutet, dass wir erwarten, dass viel PV-Leistung ...



51.2V 300AH

## ESS self-consumption mode

They cope with low SOC better than PB, but mostly they like "storage" voltage -> e.g. 50% SOC if they are not used for some time. Mine are lithium type too. ESS (min SOC -20%) in 'Non-battery life mode', with 5Kva LifePro4 battery, 15 330w panels. The two overnight discharge examples (good and bad) are as below, I would appreciate any help.

## Grid settings in ESS mode

If the SOC rises 5% over the low SOC limit it will start using the battery again. To charge the battery only surplus energy is used. As long as enough PV power or battery capacity is available it will automatically have priority over the grid. Please read the link above it will answer most of your questions.



## ESS drains battery after 100% SOC and 1Hr absorption is reached

ESS drains battery after 100% SOC and 1Hr absorption is reached. When charging the battery to 100% with multiplus and mppt it finally reaches absorption point. After 1Hr of absorption it stops charging and starts to discharge the battery into the grid. After these changes it has worked perfectly, not discharging so low now. Reset my ESS

## Verhalten Victron ESS bei SOCmin Limit (Sustain Ladung)

Mein Multiplus II 48/5000 entlädt den Akku über eine große Spanne relativ problemlos, aber im unteren SOC Bereich habe ich Schwierigkeiten mit der Optimierung. Ich habe 10% SOC Mindestwert eingestellt. Die 4 Cut-Off Werte im ESS Assistant liegen bei 48V. Problem 2: Ich habe 51,2V Sustain-Spannung eingestellt (16s System). Ich sehe



## 11. DVCC

Lead-acid. VE.Bus BMS V1 Lithium. VE.Bus BMS V2 1) Lithium. Supported 3rd party managed batteries 2). 1) DVCC must be enabled for the GX



device to control the solar chargers, Inverter RS or Multi RS in a system with a VE.Bus BMS V2. 2) Use the Battery Compatibility manual to see which parameters need to be set and which are set automatically. 3) In an ESS system ...

## What is the difference between ESS mode

To make the choice easier between "Optimized (with BatteryLife)" and "Optimized (without BatteryLife)": if you have a lead-acid battery (including gel, AGM, etc.), then use "Optimized (with BatteryLife)" and set the Minimum SOC to 50% (or higher); if you have a LiFePO4 battery, then use "Optimized (without BatteryLife)" and set the Minimum SOC to 10% ...



## ESS

Low SOC limit is increased 5% once a day when the battery reaches it for the first time. Inverting STOPS and power for ac loads is taken from grid. ess-and-solar-solutions answered · Nov 15, 2020 at 09:30 PM. @pete60 If recall correctly from experience it is 5%. It is also important to note that it is typically activated if the battery has

## Multiplus II Ess behaviour, self consumption

If you have your min SOC increased from the ESS menu, while you have already reached the previous min SOC value (and already have ESS Low Soc set), the system will either go into ESS Recharge mode (if the SOC was lower than 5%

below the min SOC for more than 24h), or the system will start charging the battery with priority until reaching the



**LPR Series 19  
Rack Mounted**



## How to prevent Battery Discharge during Low Tarrif

Our installation: 3 phase Multiplus 48/5000 Installation with 30 kWh Battery. DC Coupled PV with SmartSolar MPPT RS 450/100 and a Cerbo of course. Now well underway in oktober PV yield start to drop below our 24h usage and the battery starts to run to a low SOC %. As we have a low Tariff for grid power between 22.00 - 06:00. I would like to prevent the ESS ...

## What is your SOC limit?

ESS SOC. Comment. 0 Likes 0 Show . The reason why there isn't much capacity at the high/low ends of the voltage is illustrated on the graph below. This is for EVE 304h LFP cells and may vary a bit between LFT batteries but gives an idea. eve-304ah-discharge-curve.jpeg (194.7 KiB)



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## ESS Active SoC Limit fluctuations

Thanks, Nick I have tried With & Without battery life doesn't seem to differ. I also did BSL firmware updates on both batteries . I have also noticed on another site (running 3 x 5kVA Multis and 20K of Freedom Won) batteries the ESS Active SoC Limit is set to 40% but the voltage was around 50% for a number of weeks, then dropped to the set ESS Active SoC Limit.



## ESS battery state

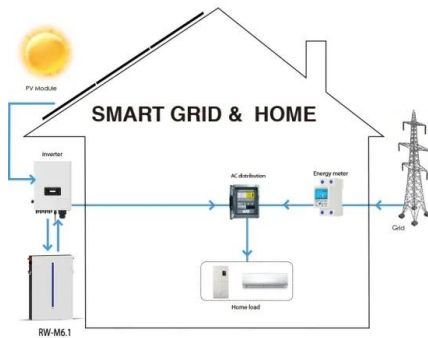
where do I find a description of the different battery states of ESS shown at the VRM "ESS battery life state"? #1: SOC is low #2: BatteryLife is active #3: BMS disabled charging #4: BMS disabled discharge #5: Slow Charge in progress (part of ...

## **Low battery warning continuasly appeare on Quattro while SOC ...**

Using Quattro 5000 / 120 V with an updated firmware and ESS assistant for a 48V system. We are facing the problem of while having a high AC load and there are no available solar Energy inputs so we are running purely on batteries "having ALWAYS a low battery warning LED



flashing - and of course on the CCGX- even that the SOC of the battery from the BMV is higher than ...



## Solved: False low battery voltage alerts

In low battery SOC (~15%) I see tons of 'Low battery voltage' alerts at rather high voltages (51.25V). DVCC is enabled (with SVS). In the Seplos BMS I don't see any warnings. In the ESS assistant configuration I have configured the 'Cut off voltage' at 44.8V for all discharge currents. Restart offset is at 1.20V.

## Multiplus Low Batterie mit ESS

Ja, wenn ich den SOC im ESS erhöhe, dann fängt er über das Netz die Batterie zu laden an. Das möchte ich ja auch nicht. MfG. MultiPlus 2 immer Low Batterie im ESS mit 2x LiFePO4 von Victron. 3 Phasensystem mit Multiplus II 48/5000/70 + 4\* Pylontech US3000C -> Low Battery Voltage.



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