



## EPISODE 61

# Understanding the Battery Reserve Function and its Importance

**Bankable. Reliable. Local.**

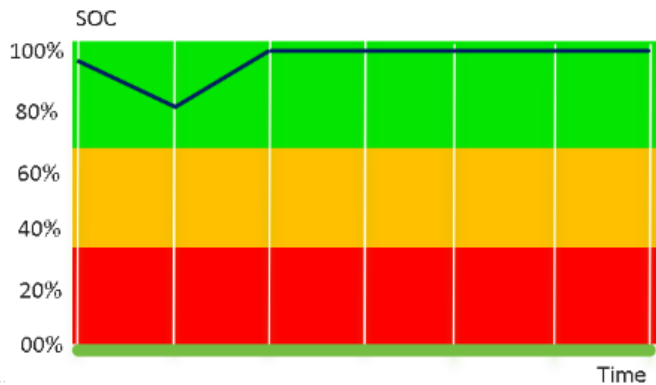
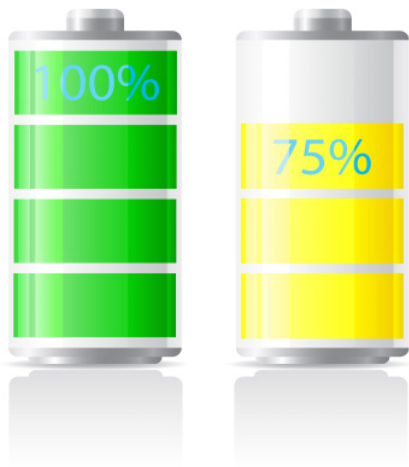
# Understanding the Battery Reserve Function and its Importance

## >> Background

Power storage solutions have become essential for households worldwide, ensuring uninterrupted electricity during power failures and network disruptions. For instance, in natural disasters, home energy storage systems can provide continuous power – critical in such conditions. By storing renewable energy like solar power, these systems reduce grid dependency and overall energy consumption, optimizing electricity usage patterns and minimizing wastage through intelligent control. However, many energy storage setups fail to ensure sufficient backup capacity during emergencies, leading to inconvenient and potentially critical situations.

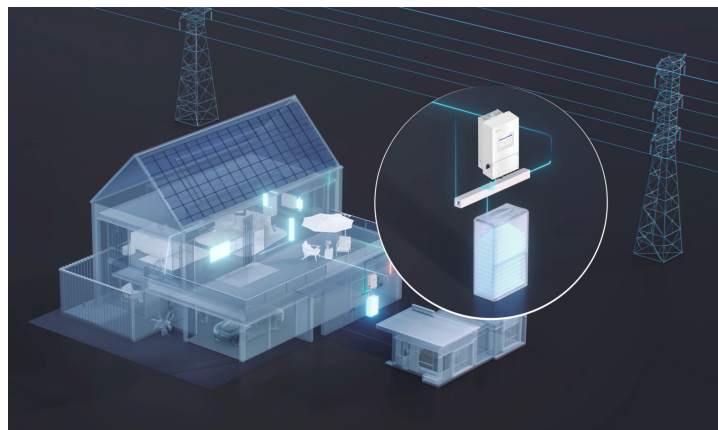
## >> What is the “Battery Reserve Function”?

To understand the battery reserve function, it's essential to first understand “battery reserve capacity.” This term refers to the duration a battery can sustain a load when the primary power source fails, typically measured in minutes based on the battery's discharge rate. The battery reserve function, integrated into energy storage inverters, manages the battery's state of charge (SOC) to ensure it remains within the desired range.



## >> Main Use and Benefits

Maintaining a sufficient SOC is crucial as it directly impacts how long a user can rely on the battery during outages. Low spare capacity can quickly deplete, resulting in power loss. Conversely, a battery with high reserve capacity lasts longer, providing a reliable power source for emergency use or during prolonged outages.



In addition to ensuring sustained power, spare capacity influences battery lifespan. Batteries with higher spare capacity generally have longer lifespans. Proper maintenance, such as storing batteries in cool, dry places and regular charging, helps preserve SOC and extend battery life. The battery reserve function optimizes spare capacity, preventing overcharging and subsequent battery damage.

## >> Setting up the Battery Reserve Function on Solis Energy Storage Inverters

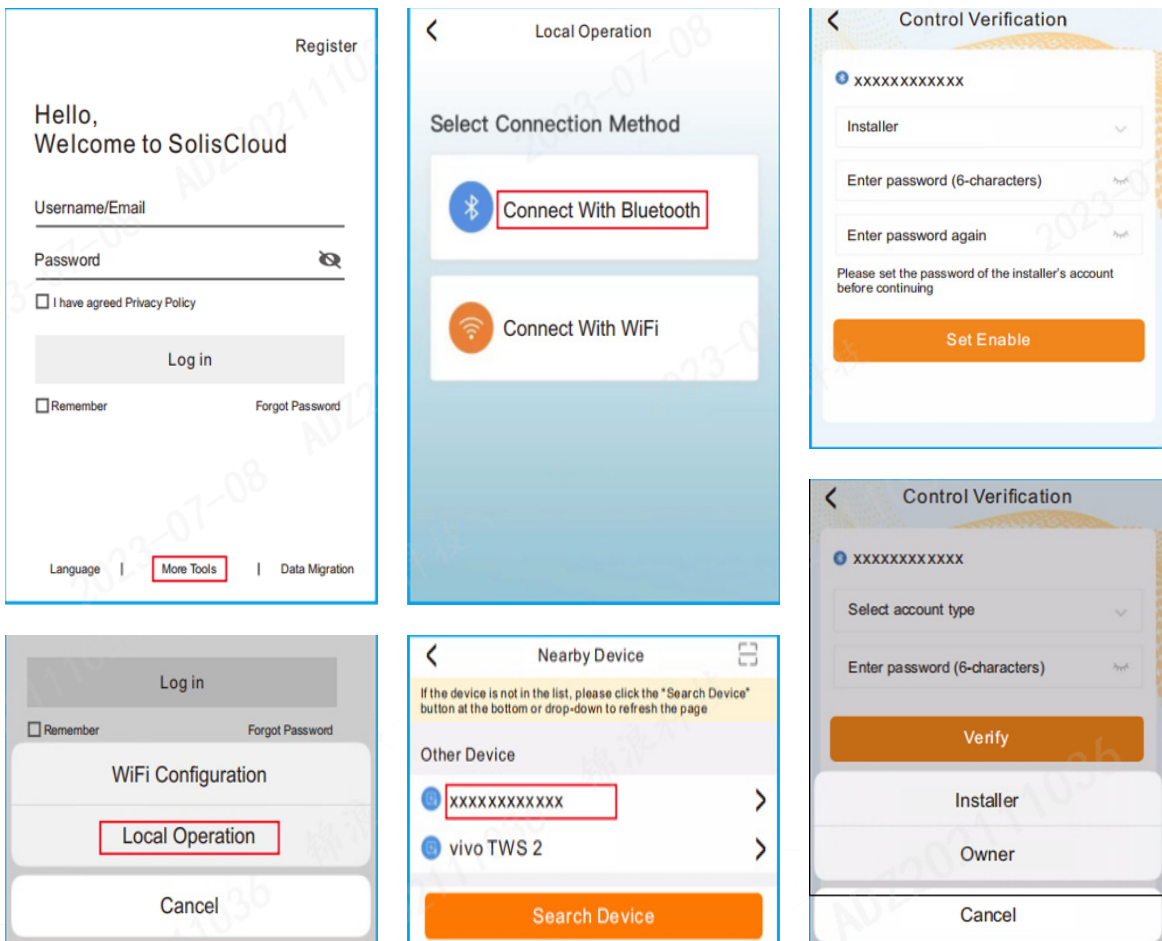
### Compatible Solis Inverters

The battery reserve function is available in Solis energy storage inverters from the fifth generation onwards. These inverters are essential for regions with unstable grids and frequent natural disasters, ensuring reliable energy security for residential, commercial, and utility scenarios.

### Setup Process

To activate the battery reserve function:

- 1) Open the SolisCloud App and connect to the inverter via Bluetooth.



2) Navigate to the Battery Model screen and choose Self-Use Mode or Feed Priority Mode based on your inverter's hybrid mode.

3) Enable the Battery Reserve switch and set the desired Reserved SOC value (e.g., 70%).

The screenshot displays the 'Battery Model' configuration interface. On the left, a navigation menu includes 'Inverter Time', 'Work Mode Status', 'Self-Use Mode', and 'Feed in Priority Mode'. The main area is split into two panels: 'Feed in Priority Mode' and 'Self-Use Mode'. Both panels feature a 'Charging & Discharging Setting' section with two time slots: '00:00 - 08:00' (Charging) and '08:00 - 22:00' (Discharging). Below this, there are toggle switches for 'Allow Grid Charging' and 'Battery Reserve switch', and input fields for 'Reserved SOC' (set to 80%) and 'Grid charging power limit' (set to 8000W).

Following these steps ensures optimal spare capacity management, preventing overcharging, and maximizing battery longevity, thereby enhancing energy reliability and security.