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Manufacturer's Declaration

Zero Feed-in Mode (Zero Export) for PV Systems

With the Sunny Boy 1.5 / 2.0 / 2.5 (SB1.5-1VL-40 / SB2.0-1VL-40 / SB2.5-1VL-40) from firmware version 2.3.2.R and a connected SMA Energy Meter, it can be ensured that the feed-in of locally generated PV power to the utility grid is reduced to a minimum. This makes it possible to realize PV systems with almost 100% self-consumption.

In Zero Export mode, it is ensured that the PV power currently generated by a Sunny Boy 1.5 / 2.0 / 2.5 always matches the current power consumption of the household. If an active load/appliance in the household is switched off, the grid feed-in of excess PV power will automatically be reduced to a value less of than 2% of nominal PV system power within a reaction time of 1.5 to 2.5 seconds.

For PV systems with two or three Sunny Boys 1.5 / 2.0 / 2.5 in Zero Export mode, the mean grid feed-in must be 0 Wh after a reaction time of about six seconds when switching a load on and off. A grid feed-in of up to +/- 120 W is possible due to the control algorithm.

This control characteristic is valid under the following conditions:

1. An SMA Energy Meter is used to measure grid purchase and grid feed-in power levels at the grid-connection point and is connected properly to the Sunny Boy 1.5 / 2.0 / 2.5.
2. There are no other PV inverters than the Sunny Boy 1.5 / 2.0 / 2.5 in the PV system.
3. All necessary installation measures are carried out and checked in accordance with the installation manual of the Sunny Boy 1.5 / 2.0 / 2.5.
4. Configuration of the active power limitation settings to 0% is done by a qualified technician.

Niestetal, 2019-03-11
SMA Solar Technology AG

i.V. Sven Bremicker

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Head of Technology Development Center