



## Solar PV System Management for On-Site Staff

### SMA Inverters

This resource should be physically available to on-site staff who manage SOMAH Program-incentivized solar PV systems with SMA inverters.

This resource includes information on the following sections:

1. Understanding Inverter LED Indicators
2. Troubleshooting Guide
3. Resources

#### 1. Understanding Inverter LED Indicators

SMA inverters have three LED indicator lights: green, blue and red. Meanings for the indicators are as follows:

- Static **green** LED = inverter is operating (producing electricity)
- Static **blue** LED = inverter is communicating
- Any **red** LED = inverter error
- No lights = Possible loss of AC power

On-site staff should periodically verify at each inverter that the **blue** and **green** lights are on and solid. If a **red** light is on or blinking, then there may be an inverter error.

If the system is running properly, the **green** and **blue** LEDs should **always** be **ON**. See image below.

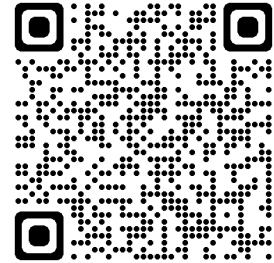


Many factors can impact system production, including external conditions (i.e., weather, shaded solar panels), utility grid or other system errors. Not all errors or error codes imply a production problem.



*Note: Solar PV systems do not produce energy during the night.*

During normal hours of solar availability, around 9 a.m. to 3 p.m., if the LEDs at the bottom of the inverter are NOT solid **green** and **blue**, you may refer to SMA's guide for a full description of inverter LED indicator codes by scanning the QR code. If any LED indicator anomalies are observed other than the solid green and blue lights, on-site staff should document any anomalies or indications of errors and contact the solar installer with the findings.



### Quick Q&A

**Q: Where can I find the inverters?**

**A:** The inverters are often on the building's exterior or in an electrical room near other solar equipment. For SMA systems, look for the units as shown in the photo.



## 2. Troubleshooting Guide

*Disclaimer: **Do not** attempt to repair the inverter or power optimizers without a SMA-certified installer or electrician. While SMA systems comply with all safety regulations, handling electrical equipment and components requires a certified installer or electrician. **Always** refer to your inverter's manual for accurate descriptions of error codes and troubleshooting procedures.*

This section will address these common questions:

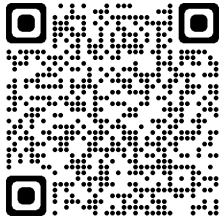
- My inverter has a red light or no lights.
- My system's monitoring app isn't showing production.
- My inverter has an alert or error code.
- My system isn't working.

Before troubleshooting, follow the steps below to check that all the solar PV system's components are activated and showing power:

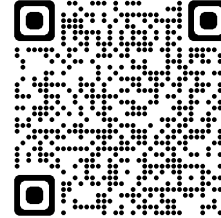


1. Locate the circuit breaker inside your building's main service panel (or subpanel if applicable). Make sure the main service panel is in the ON position, and not tripped. Your solar breaker will generally be located at the bottom of the service panel and may be labeled as such.
2. Check the AC disconnect box outside by the electric meter. The knife switch should be UP in the "ON" position.
3. Confirm that:
  - a. There is sunlight.
  - b. Electricity in the rest of the building is operating normally and there is not a grid outage.
  - c. The arrays are clear of snow or other debris.

If everything is properly powered on, you can proceed with a system reset called a power cycle. Most inverter challenges can be corrected with a power cycle. For a step-by-step guide on power cycling your PV system, follow these SMA inverter guides from StraightUp Solar by scanning the QR code applicable to your inverter:



**Power Cycling SMA Inverters < 10kW**



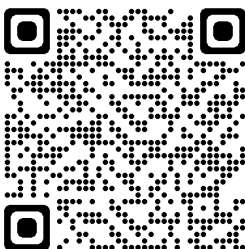
**Power Cycling SMA Inverters > 10kW**

*We **do not** recommend anyone to power cycle inverters over 50kW in size for safety reasons without a qualified technician present. Consult your solar installer before power cycling to ensure the best course of action.*

### 3. Resources

If additional support is needed to navigate the SMA monitoring platform or troubleshoot your system, please use the resources below to request SOMAH's Technical Assistance and Support Services.

- [calsomah.org/TA-request](https://calsomah.org/TA-request)
- QR code:



**SOMAH TA and Support Services Request Form**