PV SQUARED
HEART & SOLAR

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What to do if your system is not connected to the internet

Internet connectivity is an important part of long term solar array support and maintenance. We encourage you to maintain this connection over time, as it will allow you to keep an eye on your system's functionality and performance, reduce down-time in the event of a hardware issue, and reduce service fees by enabling our team to perform remote diagnostics before rolling a truck out to your site. In some cases, internet connectivity is also required in order to be eligible for manufacturer rebates and stipends for repair work, or other aspects of your system's equipment warranties.

Is your solar array working properly?

Issues with internet connectivity are common and generally fairly simple to resolve. It is possible however that the lack of connection could be indicative of, and even obscuring, a broader production issue. The first thing you should do is determine whether or not your system is otherwise working, please refer to the guides below depending on your inverter type.

Is the internet working at your site?

If you are having general connectivity issues on site, this may cause your system to disconnect, or only send data intermittently. Connectivity issues can crop up or become more pronounced in bad weather especially if the signal strength is tenuous to begin with. This is especially true for cellular or wireless connections, but can also impact hard-wired systems.

Is there an obvious reason for your connectivity issue?

Sometimes a system will disconnect for inexplicable reasons, but if there is a specific cause that you are aware of this will help with troubleshooting. Common examples include:

- Changes to connectivity equipment (new router or service provider)
- Recent power outages or other power fluctuations (such as lightning strikes)

Is everything plugged in?

It might sound silly, but we get a lot of calls about connectivity issues where something is simply unplugged. As a starting place, always trace the connectivity route of your system to make sure that each component is firmly connected and powered on. Ethernet connectors can slip out easily, critical components can get unplugged accidentally, etc.

How does your system usually connect?

Connecting your solar equipment to the internet is not a one-size-fits-all task, especially in the more rural areas where we work. Your system may have a simple cellular card or Ethernet cable connection, or we may have needed to add in other intermediate connectivity devices to enable you to utilize the online monitoring capabilities of your system.

In order to troubleshoot your system's connectivity, you will need to first determine how your system is supposed to connect.

- Cellular connection
    - System includes a cell card and utilizes cellular network to communicate rather than an internet signal.
- LAN/Ethernet hardwired connection
    - Generally reliable but not always possible based on site conditions
- WiFi connection (SunPower and Enphase only)
    - Solar system components have internal wifi receiver and can connect directly to your wireless network
- Ethernet-Over-Powerline Adapter (aka EOP or PLA)
    - Works as a set of two, using electrical wiring to transmit internet signal from one outlet to another
- Wifi Range Extender
    - Receives wifi signal from router/modem, then has an ethernet "out" port to bring that signal to your solar equipment
- Ethernet Switch (aka Splitter)
    - Takes internet signal from one Ethernet/LAN cable and splits it into multiple outputs so that you can connect multiple devices
- Wireless Gateway (SolarEdge only, updated version of Zigbee)
    - Antenna plugged into router sends wifi signal to corresponding antenna on inverter
- Zigbee (SolarEdge only, no longer available)
    - Antenna plugged into router sends wifi signal to corresponding antenna on inverter

Refer to in depth troubleshooting guides here: Troubleshooting Internet Connectivity by Equipment Type