



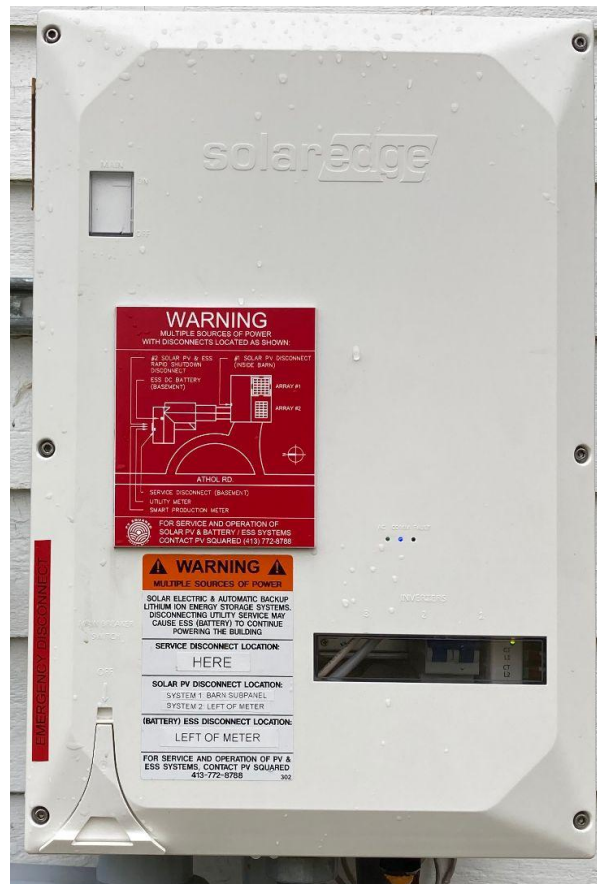
Solar Edge Energy Hub Inverter with Battery Backup How to simulate a Power Outage

Regardless of how many batteries you have, when there is a grid outage, having a PV System with battery backup and without the addition of a fossil fuel powered generator is like glorified camping. The number of hours you have to draw from your battery reserve is largely dependent on how quickly you take power from the batteries. The ability for the PV system to recharge the batteries is dependent on usage, snow coverage, and available sunlight. This is why we strongly recommend that you periodically simulate a grid outage so that you can experience what it is like operating without the grid as a back up but still be able to reconnect to the grid if you need to.

You should simulate an outage at least twice a year to experience differences operating it in different weather conditions. Try it when snow is covering the modules, try it when we have wonderful summer sun, try it when we have torrential rains. The more you practice when you have the luxury of reconnecting to the grid, the more comfortable and confident you will be in understanding how it works when you can't flip a switch and reconnect. Our service team is happy to support with questions during normal business hours, but at this time we are not able to provide 24/7 support if the grid goes down and you have battery questions at night or on the weekend.

To simulate a grid outage, locate your BI-E or Backup Interface shown below:
Example of BI-E in Grid connected “normal” operating mode:

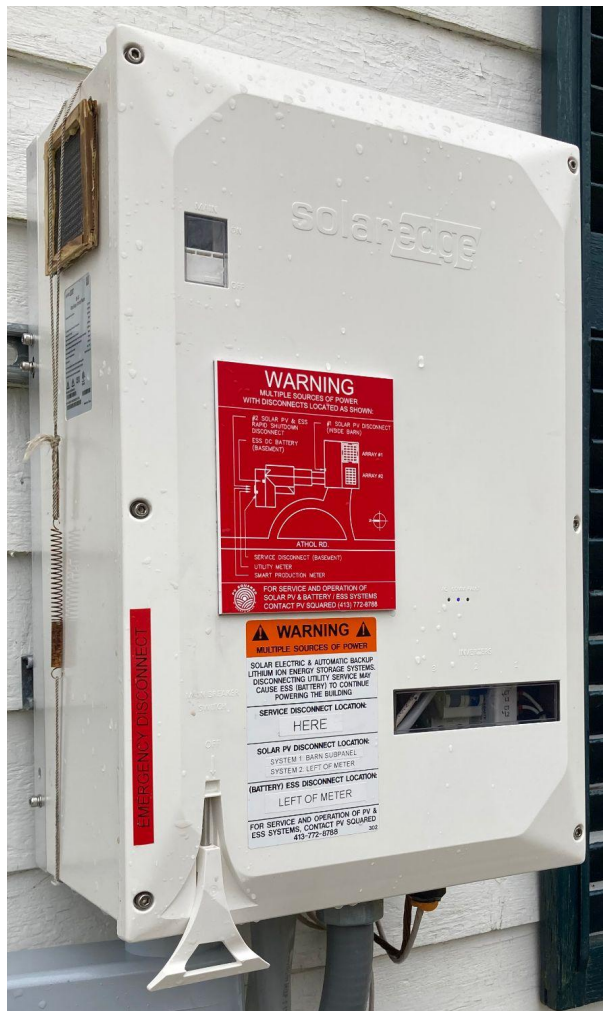
Main ON



Pull down on the Main Breaker Switch in the lower left hand corner. This will disconnect your property from the utility company. Note that the window in the upper left hand corner now indicates that the Main Disconnect is Off see example below:

Example of BI-E in Grid Disconnect “grid outage simulation” mode:

Main Off



Handle pulled down

The SolarEdge Backup Interface should produce power within 20 seconds of being disconnected from the grid.

When the system is either in or switching to battery backup mode, if the system detects an overdraw of instantaneous power (kW) the system will continue to try to initiate backup mode up to 5 times within a couple of minutes. If it is unsuccessful due to the current loads, the inverter will go into a **Lock State** which will need a hard reset in order to resume normal operation. If the system does not start producing power after 5 minutes and you see a red light on the inverter, it likely went into a **Lock State**. If that happens, follow the guide titled:

How to Power Cycle the SolarEdge EnergyHub with Battery System when the system shuts down due to a power draw overload in battery backup mode

If the Backup Interface switches successfully, you should see an alert on your MySolarEdge app indicating the grid is down.

Start experimenting with your loads and use lots of power to see how quickly you can draw the battery down.

At the time of this writing MySolarEdge app gives you an estimate of how many hours you can operate the battery at current conditions.

- Watch that estimate change as you use more or less and have or don't have support from the Sun.
- Go to bed and see how much power you have left in the morning.
- Try using lots of power at night without the PV System replenishing the power in your battery.
- Turn off major loads like the ones listed below. Label those breakers as ones you should turn off in the event of a grid power failure.
 - electric-based heating/cooling systems (HVAC)
 - electric vehicle charging
 - electric stove/oven
 - hot tubs/pool pumps (depending on type)
 - some well pumps (depending on size/capacity)

Finally, remember to turn on the Main Breaker Switch at the Backup Interface and see that the system connects back to the grid. You should receive an alert on your MySolarEdge app indicating the grid is back up.

Have fun with this activity. Take screenshots of what you see on your smart device if you have questions regarding what you see and let us know the next day how it went.