

Smart Loads

Smart Loads are loads that the user wants to intelligently, strategically, and automatically enable and disable for the purposes of Load Shedding and Power Shedding in order to maximize Time of Use savings, Off-Grid operation, or maximize or minimize power sold back to the grid.

Load Shedding allows the user to reduce the load on the ESS in Backup or Off-Grid mode. For example, turning off a hot water heater, EV charger, or non-critical water pump to conserve energy and keep batteries full for other priorities.

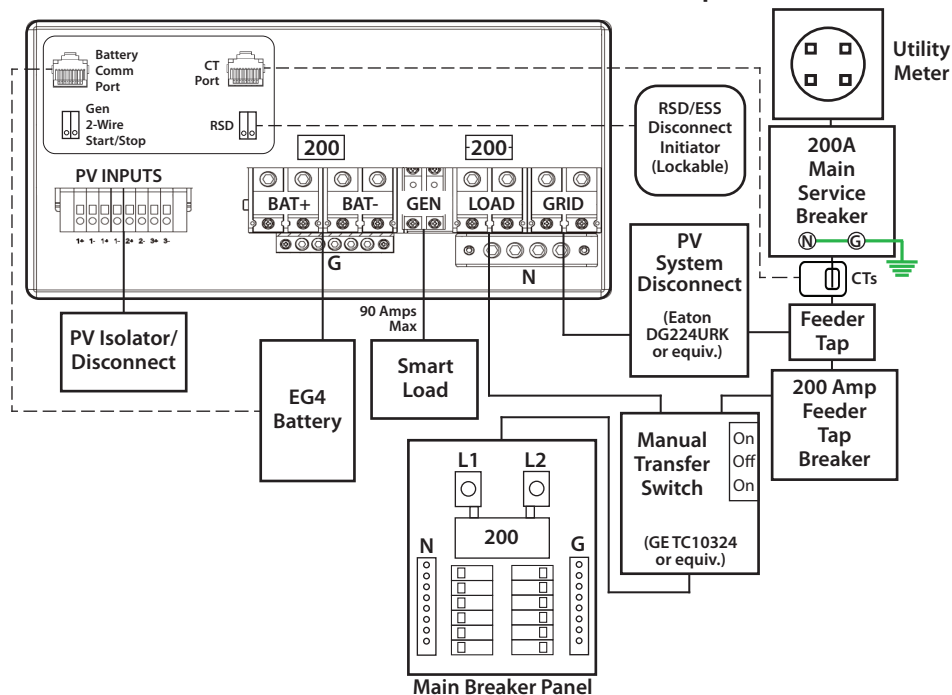
Power Shedding allows the user to turn on loads when the batteries are full and PV is producing power. For example, turning on a hot water heater, EV charger, or water system pump so excess PV does not go to waste when sell-back is not economical or possible.

With the EG4 18kPV Inverter, the user can shed up to 90 Amps (21.6kW) of load or power by using the Generator (GEN) port as a Smart Load port. (50 Amps with the EG4 12kPV and 6000XP Inverters).

The EG4 Grid BOSS Microgrid Interconnect Device (MID) has four 240VAC Smart Load ports, two that accommodate a 20-60 Amp breaker (up to 14.4kW ea.), one that accommodates a 20-80 Amp breaker (up to 19.2kW), and the fourth, a 20-125 Amp breaker (up to 30kW).

The user can control load and power shedding using the EG4 Inverter's Time Of Use (TOU) and/or battery State Of Charge (SOC) parameters. These parameters allow the user to automatically shed loads (turn them off) or shed power (use excess PV) during periods of high energy cost (e.g. 3-9 p.m.) and/or to conserve stored energy. The Grid and PV can also be used to power Smart Loads when the conditions are economically favorable. Smarter control of the Smart Loads is pending in future upgrades adding PV present, PV Threshold, Grid Present, and load priorities to Smart Load functionality.

EG4 18kPV Inverter with Smart Load Attached to GEN Input



EG4 Grid BOSS with Four Smart Loads

