

## Summary

### Off-Grid Solar Power System

Solar Panels
15 each
Trina DE15M(II) 415W

5.8 kW Power Capacity  
7 banks of two panels (14 connected)  
(15<sup>th</sup> panel for aux power or spare)

Power 5.8 kW  
Variable Voltage (typ 12-24 Volts DC)  
Wire: PV 12AWG  
Overcurrent: 7ea 20A CB

Combiner Box
1 each
Midnite MNPV12

Power 5.8 kW  
Variable Voltage (typ 24-48 Volts DC)  
Wire: 4AWG in metallic flex  
Overcurrent: 80A CB

MPPT Charge Controller
1 each
Midnite Classic 150

4.1 kW Power Capacity  
86 Amps - Max Output Current at 48 Volts

Power 4.1 kW  
48 Volts DC  
Wire: 4AWG in metallic flex  
Overcurrent: 100A DC CB

Batteries
4 each
KiloVault HLX+
2.4kWh 200 Ah 12V

9.6 kWh Energy Storage

Energy 9.6 kWh  
48 Volts DC  
Wire: 2-0 on board  
Overcurrent: 175A DC CB plus 175A 20KA IC 250V fuse

Inverter
1 each
Magnum MS4448PAE

120/240 VAC split phase ( $\pm 5\%$ )
100 msec surge current (amps) L-N: 75, L-L: 40
5 sec surge power 8.5 kW
30 sec surge power 6.0 kW
5 min surge power 5.4 kW
30 min surge power 4.8 kW
Cont. amps output at 25° C 4.4 kVA

Amps L-L
35.4
25.0
22.5
20.0
18.3

Power 4.4 KVA  
120/240 Volts AC  
Wire: 10AWG in metallic flex  
Overcurrent: 30A AC CB

Distribution Panel
1 each
120/240VAC 60Amp

Power 4.4 KVA  
120/240 Volts AC

