SLO Communications

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License Number 773985

[redacted] PV System
System Description

General: The [redacted] PV system is a standard grid interactive, battery-less system. It has only two components: The solar electric (photovoltaic) panels and the Trace Sun Tie inverter.

Photo voltaic system: The [redacted] system is comprised of 16 Siemens SR100 PV panels. These panels are mounted on the residence roof on racks of 8 each and interconnected in series strings of 4 each, Each series string is routed to the ST inverter individually and combined in the built in fused combiner network. The combiner network feeds a ground fault breaker as required by the NEC for mounting on the roof of a dwelling unit.

Each PV panel is 10 square feet and weighs just 24 pounds. Therefore, the panels exert only 2.4 pounds per square feet roof loading. The rack is secured to the roof with lags that penetrate to 2X6 blocking. The blocking is secured to the rafters with Simpson brand angle brackets.

Each series string is rated for 5.6 amps and 6.3 amps short circuit current. The DC interconnect wiring meets the specifications set by the inverter manufacturer and exceeds NEC requirements.

ST Inverter: The Trace ST1500 inverter is a battery less inverter. The DC power from the PV panels is converted to AC and connected directly to the grid through protective circuitry, a circuit breaker in the inverter, a utility required locking disconnect and another circuit breaker. The inverter is UL listed (UL-1741-1999) and CSA certified (C22.2 No. 107.1-95) and IEEE929 certified to protect utility workers against back feed and islanding situations. The inverter checks for presence of in-sync grid power each cycle before initiating a power cycle.

Attachments: Site map
System block diagram
ST inverter cut sheet
SR100 cut sheet

End of system description

B01-0498

PLANS ACCEPTED BY
CITY OF PASO ROBLES
DATE 06-25-01
BY WT
SET Builder