

A large array of solar panels is mounted on a rocky, sloping hillside. The panels are arranged in a grid pattern and are tilted towards the sun. The background features a dense forest of pine trees under a cloudy sky. The foreground shows some dry grass and a small patch of snow.

In-District Example of PV Disconnects and labeling

2000 Switzerland Park Rd

The purpose of these slides is to show an example of a photovoltaic system in SLFPD

Background Info

- Ground-mount panels (separate from house)
- Grid-tie (no batteries)
- 10KW – 40amp, 240v max production (bring your welder!)
- Inverters separate, not integrated into panels (older style)
- Disconnects located between panels and inverters, between inverters and the 240v line between panels and house, and at the house (code)
- PV Disconnect on outside of house next to meter (code)
- Main disconnect for house located inside garage (met code in 1970)

Panels not immediately adjacent to house, and may not be obvious at night.

House

Panels



Meter and
PV disconnect
located on
outside of
garage

PV
Disconnect

Meter



Main
disconnect
inside
garage
(on the other side
of the wall from
the meter)



Main Labeling

(all info shown is required by code)



Electrical
under
panels

240v AC
shutoff

Inverters (3)

panel shutoffs (3)



DC Disconnect Labeling

all info shown required by code

PI Powered
PVP3500

CAUTION

Inverter
for 2 rows of
panels

Middle Two Rows
of Panels

SERVICE
DISCONNECT
DESCONEXION
DE ACOMETIDA

HEAVY DUTY SAFETY SWITCH
INTERRUPTOR DE SEGURIDAD DE SERVICIO PESADO

600 Vac / V_c - 600 Vdc (m)

DC Disconnect
(panel side 200 - 500 volts)

Operating Voltage: 228 volts
Operating Current: 6.7 amps
Short-circuit Voltage: 365 volts
Short-circuit Current: 11.8 amps

panel shutoff

DC Disconnect
(panel side 200 - 500 volts)

Operating Voltage: 228 volts
Operating Current: 6.7 amps
Short-circuit Voltage: 365 volts
Short-circuit Current: 11.8 amps

AC Disconnect Labeling



AC Disconnect
Operating voltage 240 volts
Operating current 42 amps

AC Disconnect

- Standard 240 breaker panel
- Standard breakers that trip when too much current flows through them
- 100-amp main plus three 30-amp breakers, one for each inverter





For questions or a tour, call John or Janet

North Boulder