



Solar Notes:

1. The inverters shall be UL 1741 compliant.
2. The external load break disconnect shall provide a visible open between its contacts, have the ability to be locked in the open position and have 24/7 ready access for utility workers.
3. A separate service is required for onsite auxiliary loads (tracker motors, heaters, monitoring, etc.)
4. One-line diagram must meet the minimum requirements of PSC 119.10
5. A laminated copy of the one-line diagram must be located near metering equipment and protected from the environment.

Customer Substation Notes:

1. Full list of requirements can be found here: <https://www.we-energies.com/partners/builders/pdf/custsubmanual.pdf>
2. Transformers less than 3000kVA shall be grounded wye primary, grounded/ungrounded wye secondary with a triplex core. See customer substation manual for further details.
3. Arresters shall be installed on the line side of the customer owned load break switch. Please see chart 160.10 in the customer substation manual for arrester voltage ratings base on service voltage.
4. One-line shows the minimum overcurrent protective requirements.
5. Customer loadbreak switch and fuses can be replaced with a recloser with line side disconnect switches.
6. Utility owned equipment shown in Blue.
7. Customer owned equipment shown in Black.

160.10) Surge Arresters

NOMINAL CIRCUIT VOLTAGE (V)	SURGE ARRESTER		Notes
	Duty Cycle Voltage Rating (kV)	MCOV Rating (kV)	
3,810Y/2,200	3	2.55	1
4,160Y/2,400	3	2.55	1
8,320Y/4,800	6	5.1	1
12,470/7,200	10	8.4	1
13,200Y/7,620	10	8.4	
13,800Y/7,970	10	8.4	
13,200	10	8.4	
13,800	15	12.7	
24,940Y/14,400	18	15.3	
26,400	21	17	
34,500	36	29	
34,500Y/19,920	27	22	

Note 1: By special permission only. Please contact the local We Energies office before designing for these voltages.

One Line Diagram – Primary Metering – We Energies
Overhead solar customer substation with secondary service for customer loads