



Residential Solar Photovoltaic (PV) System Plan Submittal Checklist

This checklist is only a basic list of items needed for a solar PV system plan review and is **not** all inclusive. Having all the items listed on this checklist does **not** guarantee a permit will be issued and any additional plans, information, and/or requirements may be requested or required by City of Orem at any time.

1. **Site plan:** A detailed site plan showing the location of the home and all PV system components on the property is required.
2. **Mounting system:** Provide detailed information on the module mounting system and also the weight of all components on the roof. Note if the home roof rafters are engineered trusses or provide information on the type and size of the roof rafters if they are other than engineered trusses. Also note the type of the roof covering (shingles, metal, or tile) and how many layers of the covering there are.
3. **One-line diagram:** A detailed one-line diagram is required and must show: The type of PV system being installed (a single inverter system with one or more strings of modules connected in series, a micro inverter system, or an AC module system): the **exact** number and layout of modules and how they are connected together (in series or in parallel); all wire types, all wire sizes, conduit types and sizes; the locations of all circuits and system components on or in the house; and the ratings of all fuses or breakers. Also note which home electrical panel the PV system will backfeed and give the location and rating of that panel.
4. **Module spec sheets:** Provide the module manufacturer's specification sheets showing the modules' rated watts (Pmp), volts (Vmp), amps (Imp), open circuit voltage (Voc), and short circuit current (Isc).
5. **Inverter spec sheets:** Provide the inverter manufacturer's spec sheets showing the amount of watts and volts the inverter can safely handle, and also noting what the inverter's maximum rated AC output amps and voltage is. Utility-tied inverters must be listed as "utility interactive" meeting UL 1741, and have ground fault protection.
6. **Total array power:** (This is not required for systems with micro inverters.) Provide the total amount of watts, amps, volts, open circuit voltage (Voc at the coldest possible outside temperature-see NEC 690.7), and short circuit current that the array can produce.
7. **System components:** Provide information on the different types of components that will be used in the system and how they are to be installed. Also show that all equipment is listed and rated for the type of voltage (AC or DC), amount of voltage, and the amount of current that it could be subjected to.