

# Utah County

## Residential Solar Photovoltaic (PV) System

### Plan Submittal Checklist

This checklist is only a basic of items needed **to begin** 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 Utah County at any time.

1. **Site plan:** A detailed site plan showing the location of the home, electrical meter panel, any back-fed sub-panelboards, and all PV system components on the property including systems that are ground mounted or on adjacent structures is required.
2. **Mounting system:** Provide detailed information on the module mounting system and also the weight of all components on the roof. The support manufacture specs must also specify the required support spacing based on the local wind and snow loads. 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. If the racking system has integrated grounding/bonding, please also provide spec sheets showing such. If ground mounted, provide engineering for the footing and support structure.
3. **On-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, detailed info on the grounding wiring and connections, the locations of all circuits and system components on or in the house, and the ratings of all fuses or breakers.
4. **Elect. Panel to be back-fed:** Note which home electrical panel the PV system will backfeed and give the location and rating of that panel. **Please provide pictures** of the service panel with a picture of its interior label also. **Please also provide photos of labels of any sub-panel that will be back-fed.**
5. **Module spec sheets:** Provide the PV module (solar panels) spec sheets showing the modules' **STC** rated watts (Pmp), volts (Vmp), amps (Imp), open circuit voltage (Voc), and short circuit current (Isc). Modules must be listed UL 1703.
6. **Inverter spec sheets:** Provide the inverter manufacture spec sheets showing the amount of watts and volts the inverter can safely handle, and also noting what the inverter's max rated AC output amps and voltage is. Utility tied inverters must be listed as "utility interactive" meeting UL 1741, and have ground fault protection.
7. **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.
8. **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.

Submit Building Permit Application with a site plan to: Utah County, 51 S University Ave., Ste 117, Provo, UT 84601 Office (801)851-8342 Email: shaunal@utahcounty.gov

Ground Mounted Solar Systems or systems that have underground wiring methods will need Environmental Health Department sign off on the permit application: 151 S University Ave., Ste 2600 Office (801)851-7525