



Solar Readiness for New Construction

Disclaimer:

These are guidelines only and are not intended to guarantee that the new construction project will be compatible with solar. This document is not a replacement for the review of a qualified Professional Engineer.

1. General Recommendations:

Follow these guidelines when choosing a roof type and layout:

- Orient the largest roof surfaces directly South.
- Do not install vents on the Southern roof face. Where vents are unavoidable, install them within 3' of the peak of the roof whenever possible.
- All common roof types are compatible with solar, including composition shingle, standing seam metal, or ribbed metal.
- All metal roofs should be 26 gauge or larger (this is required per the International Building Code).
- Minimize shading on the south side of the building, such as planting trees, installing satellite dishes, etc. Shading on the north side of the home is acceptable.

2. Structural Recommendations:

Manufactured homes are easy to put solar on as long as they are properly designed for the proper loads for their AHJ, including seismic, wind speed, and snow loads. There are no special requirements for structural documents, however one option to be sure that the roof will be able to support solar is to utilize a manufactured home design template that is designed for even higher snow loads than required by the AHJ, and then using the extra snow load as a justification for the additional solar (for example, installing a home designed for a ground snow load of 30psf, whereas the local ground snow is actually 20psf).

Manufactured commercial or warehouse buildings need special attention for solar compatibility. For these buildings, we highly recommend asking a structural engineer to include a 5-10psf adder for the inclusion of the solar array and 26 gauge or thicker metal roofing. For flat roofs using a membrane roofing, adding 10-15psf for solar is recommended.

3. Electrical Recommendations:

We recommend the following for a residential, solar-ready main service panel:

- Install an exterior meter/main combination with a 200A busbar and 200A main breaker. Eaton MBT48B200BTS is an example of a meter/main combination that meets these requirements.
- Leave **an open two-pole breaker space** in the main service, at the opposite end from the main breaker for the new solar breaker.

For a commercial and community scale projects, please get in touch with us directly for specific recommendations for your unique project.

Contact:

Please contact Donald Harkness dharkness@gridalternatives.org or (815)-988-9998 for assistance with developing your solar project.