

Solar Site Assessment Resources

Developed for Solar Possible Local Government Joint RFP Process

Installing solar PV at a local government facility, whether on the ground or on the roof, is an opportunity for environmental and economic benefits. Some sites may be more suitable for solar than others. If you are considering solar, this guide provides information to consider, assemble, and analyze as you begin.

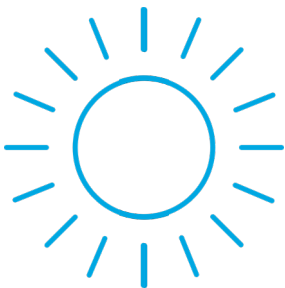


Before you begin: Where is your site? At minimum, know the Zip Code of the site you are considering.

If Your Building isn't Built Yet:

If you are considering solar on a building that hasn't yet been constructed, you may need to conduct an energy model and you should ensure that the building is built solar-ready. You can start with resources from [Grow Solar](#) and the [Minnesota Department of Commerce](#).

STEP 1 – General Screening Data



- ✓ Check whether your site is suitable for solar energy by entering the address of the desired site on the [Minnesota Solar Map](#). **If the roof is at least 80% unshaded, it is considered a potentially good site.**
- ✓ What is the total square footage of the unobstructed/minimally obstructed surface area?
- ✓ What is the distance (in feet) from the proposed site to the utility meter, mechanical room, and electrical service box?

A Note on Roof Obstructions:

When considering a roof for solar, it's important to consider equipment that may obstruct solar, including mechanical equipment, window washing tie-offs, roof entrances/exits, etc. Take time to identify potential obstructions to ensure the viability of solar.



**GREAT PLAINS
INSTITUTE**

Better Energy.
Better World.



CERT[®]
CLEAN ENERGY RESOURCE TEAMS



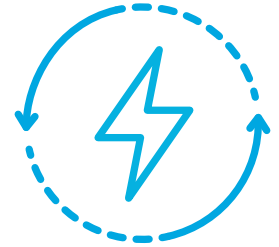
**DEPARTMENT OF
ADMINISTRATION**
ENTERPRISE SUSTAINABILITY

Solar Site Assessment Resources

Solar Possible Local Government Joint RFP Process

STEP 2 – Utility Data

- ✓ **Ideally:** Provide 12 contiguous months of utility bills.
- ✓ **At Minimum:** Provide scans of 2 utility bills for summer and winter months (July/June and December/January).
- ✓ **Consider:** Does your utility offer any incentive programs for solar PV (e.g. capacity, net metering, or production incentives)?



STEP 3 – Utility Rate Information

- ✓ What is the building's rate structure? It is either time of day, fixed, or peak control.
- ✓ What time of day do rates change?
- ✓ Are weekends and holidays off-peak?
- ✓ If the site has more than one meter onsite, what is the rate schedule? For example, general vs. small service.
- ✓ What are the kWh rates?
- ✓ What are the kW peak demand rates

Utility Rate Information:

There are many aspects of utility rates to consider. Work with your utility representative if you have questions about rate information.

STEP 4 – Electrical Information

- ✓ What is the voltage of the incoming power supply and the number of phases?
- ✓ Does the site have a minimum power factor required by the utility? Or is the power factor <1 for the metered site?

Minimum Power Factor: the ratio of real power flowing in AC towards load to apparent power in the circuit



Solar Site Assessment Resources

Solar Possible Local Government Joint RFP Process

Ground-Mounted Systems



- ✓ What is the approximate grade of the land?
- ✓ What is the current use of the land? What type of land is it?
- ✓ Describe activity of adjacent tenants (e.g. agriculture, mining, highway).

Roof-Mounted Systems

- ✓ What type of building is it?
- ✓ Is the tilt, angle, and orientation of the south facing flat roof area?
- ✓ What is the roof pitch?
- ✓ Are there any historic building issues? Is the building on a national registry?
- ✓ Roof Construction
 - What is the roof age and condition?
 - What is the rooftop construction material?
 - Are there rooftop units (HVAC)?
 - When was the rooftop last replaced?
 - Is a roofing replacement scheduled in the next 10 years?
 - How many stories is the building?
 - Does the roof have any leaks?
 - Are rooftop drawings available?
 - How often will people be working on the roof?

Roof Replacement Schedule:

It's important to consider how often and when the roof is scheduled to be replaced. Roofs that are neither brand new nor old should be considered with caution and may not be good locations until roof replacement.

