Northwest Solar Communities

Solar: Simple, Fast, and Cost Effective

Utility Interconnection and Inspection

Rooftop solar photovoltaic (PV) installations are growing at a rate of over 30% annually in the Pacific Northwest, providing local jobs and raising energy-awareness among utility customers. As residents and businesses increasingly choose to install solar, utilities are searching for new processes to efficiently meet increased customer requests for interconnection. Responding to this challenge, Northwest Solar Communities (NSC) convened a team to develop interconnection practices that make the process of going solar simple, fast, and cost effective for customers and the utilities that serve them.

Best Practices

The following best practices are recommended for inverter-based PV systems with a nameplate capacity of 25kW or less. Some practices are already in place in Oregon or Washington, in which case we offer examples of the practice in action.

1 Metering Policy

- For utilities that are not already required to do so under state law, consider offering annualized net metering with monthly carry forward that is reset following a March or April billing cycle.
- Provide customers easy access to their own historical annual and monthly electricity consumption data.
- Net metered billing statements should clearly show the net energy consumed from the utility, and any energy or dollar credits carried forward as a result of solar generation in previous billing periods.
- Allow meter aggregation on contiguous sites with single owner. (See example.)
- For systems installed under a production-based incentive, combine the application for interconnection with the application for a production meter and/or net metering.

Example

Meter Aggregation Helps on the Farm

Some customers have more than one electric meter on the same or contiguous properties. Meter aggregation allows the monthly surplus generated from a net meter to be applied to a separate service meter owned by the same customer. For example, a customer with separate meters for a barn and a home could put the PV array on the roof of the barn and use the output to offset consumption on the barn meter and the residential meter. See Puget Sound Energy's Schedule 150 for a good example of meter aggregation.

2 Application Process

- Provide an expedited process for systems under 25kW with a max. review time of 3 business days.
- Keep the application simple. For a standard inverter-based rooftop solar system, the interconnection application should be no more than two pages plus terms and conditions.
- Make the application form easy to find online.

Permitting | Interconnection | Financing | Codes

Download templates and resources for free at: www.nwsolarcommunities.org

Communities

- City of Bellevue
- City of Edmonds
- City of Eugene
- City of Hillsboro
- City of Kirkland
- City of Portland
- City of Seattle
- Clackamas County
- Lake County

Electric Utilities

- Avista
- Eugene Water & Electric Board
- Pacific Power
- Portland General Electric
- Puget Sound Energy
- Snohomish PUD
- Seattle City Light

Facilitators

- Northwest SEED
- Washington State Energy Office
- Oregon Department of Energy
- Solar Oregon

Industry

- Solar Washington
- Sustainable Connections
- Energy Trust of Oregon
- Interstate Renewable Energy Council
- WSU Energy Extension
- Oregon RC&D-Wy'East
- And more!

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- Allow applications to be submitted electronically by email or through an online platform.
- Consider combining application process with incentive and / or permit applications.
- Provide a single point of contact for every aspect of interconnection and metering.
- Make it easy for the customer to check the status of the application.
- Eliminate submission of single line drawings with the following possible exceptions:
  - Systems that incorporate a battery backup
  - Systems installed under a production incentive with a designated production meter
  - Systems installed on a three phase service using single phase inverters

❸ Interconnection & Inspection

- Do not require any hardware that is not specifically required by locally adopted standards and codes including:
  - Visible, lockable AC disconnects
  - Rooftop disconnects
- Consider eliminating utility site inspections by accepting code and safety inspection results from the local jurisdiction.
- If a utility inspection is required, consider the following policies:
  - Complete the inspection within three days of the request.
  - Provide a specific time of inspection to the system installer.
  - Make information on inspection requirements easy to access.
  - Eliminate redundant site visits by combining inspections.

Example

Combined Inspection and Meter Installation Saves Time, Adds Value

A large Oregon utility typically conducts inspections coincident with the placement of bi-directional meters, thus eliminating the need for a separate scheduled inspection. Customers and installers appreciate the time savings!

For More Information

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Oregon Public Utilities Commission
http://www.puc.state.or.us/Pages/Index.aspx

Washington Utilities & Transportation Commission
http://www.utc.wa.gov/Pages/default.aspx

Resources

OPUC Net Metering Rules: http://arcweb.sos.state.or.us/pages/rules/oars_800/oar_860/860_039.html

WUTC Interconnection Rulemaking: http://www.utc.wa.gov/docs/Pages/InterconnectionRulemaking.aspx

Distributed Generation Interconnection Collaborative: http://www.nrel.gov/tech_deployment/dgic.html

External Disconnect Switch: Reasons to Eliminate the Requirement: http://www.solarabcs.org/about/publications/reports/ued/pdfs/ABCS-05_studyreport.pdf