Northwest Solar Communities

Solar: Simple, Fast, and Cost Effective

Making Solar Permits Easy for Oregon

In Oregon, rooftop solar photovoltaic (PV) installations are growing at a rate of over 30% annually, providing an ever increasing number of jobs and becoming a more common clean energy choice for homeowners. As residents and businesses increasingly choose to install solar electric systems, jurisdictions are searching for new systems to efficiently meet increased customer demand for permits. Responding to this challenge, Northwest Solar Communities (NSC) convened a team of jurisdictions, industry partners, and citizen groups to develop standardized solutions that make the process of going solar simple, fast, and cost effective for customers and the jurisdictions that serve them.

The Solar Permit Packet was developed by the NSC participating jurisdictions over a series of work group sessions and consultation with building code officials, solar installers and industry advocates. This packet is intended to present solutions that can be adopted by any jurisdictions to ensure all of Oregon is open for solar business. Solutions include:

1. Adopt a permit checklist for solar installations
2. Establish reasonable building permit fees
3. Provide solar permit information online
4. Train permit staff in solar
5. Implement online or e-permitting system

Oregon Solar Code

In October 2010, the Oregon Solar Installation Specialty Code was implemented and became the first statewide solar energy code in the nation. In April 2015 the solar code language was incorporated into the Oregon Structural Specialty Code. The code is intended to reduce uncertainty and inconsistencies in both the technical aspects of installing a solar PV system and the procedural aspects of obtaining a building permit. The code defines minimum structural requirements for the installation of PV components and support systems and prescribes how jurisdictions should process building permit applications and determine fees.

- **Prescriptive Path Installations**
  In order to streamline and standardize the permit process for the most common types of PV installations, the code defines a prescriptive path for permitting of simple roof-mounted systems on conventional light-frame construction. Prescriptive path installations meet clearly defined structural requirements, such as maximum wind and snow loading, spacing of roof framing members, and weight of the solar array. These prescriptive installations do not require an engineered design or full plan review, and can be quickly processed over-the-counter or electronically.

- **Non-Prescriptive Path Installations**
  For larger, more complex solar installations that do not meet the prescriptive path criteria, the code defines standard requirements that must be included in the permit application.

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
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Five Simple Solutions

❶ Adopt a Permit Checklist for Solar Installations

Jurisdictions should provide a checklist of permit requirements to ensure submitted applications are complete and consistent with the Oregon Structural Specialty Code. The Oregon Building Code Division created a Checklist for Solar PV Installations that provides a list of building permit application requirements for prescriptive installations. This checklist is available for jurisdictions to use as a template and modify as appropriate.

A number of jurisdictions have gone beyond the building permit checklist to create comprehensive guides for solar installers that cover the technical installation requirements for prescriptive and non-prescriptive projects, the building and electrical permit application process, zoning and land use information, and other resources.

Example

The **City of Portland** offers a solar Program Guide for commercial and residential installations. The guide provides an explanation of Portland's permit application, review, and inspection process for new construction and alterations. It also contains information on the technical requirements for different applications along with sample drawings. The Program Guide for residential construction can be found here: http://www.portlandoregon.gov/bds/article/195360

❷ Establish Reasonable Building Permit Fees

Jurisdictions' building permit fees should not exceed the amount necessary to cover the costs of administering and enforcing the building permit process. In order to ensure statewide consistency, the code provides a specific methodology for calculating building permit costs:

1. **Flat fee for prescriptive installations.** For solar installations that qualify for the prescriptive path, the code requires a flat fee be charged for the permit. The amount of the fee should be calculated by the local jurisdiction so that it is sufficient to cover the cost of permit review and a single inspection.
2. **Valuation based fee for non-prescriptive installations.** For non-prescriptive solar installations, a valuation-based fee can be charged for the permit. Building permits fees are often based on the total project cost, assuming this accurately represents the scale of the project and the level of permit review required. However, with a rooftop solar PV installation, the equipment costs are much higher than with conventional projects of similar scope. Therefore, the permit fee should be calculated based on valuation of the structural components and labor only, excluding the value of the electrical components (i.e., solar modules and inverters) that are not part of the structural review.

Example

In support of a growing solar economy, in 2006 the **City of Hillsboro** adopted an ordinance to exempt renewable energy devices from city permit fees. Initially, the City Manager had concerns about waiving fees. However, renewable energy permits are a small percentage of the total services provided, and the impact to funding for the Building Department will be monitored and addressed if it becomes a burden.

In **Clackamas County**, prescriptive solar permits are charged a flat fee based on 2-hours of time spent to review, process, issue and inspect. The typical building permit fee, including the State Surcharge, is $190. Non-prescriptive solar permit fees are based on the total value of the project, excluding solar panel and inverter costs. For example, based on a value of $50,000 the total permit fee (including plan review and state surcharge) would be $749.

3 Provide Solar Permit Information Online

Information on fees, application requirements, and the permit process should be easily accessible on the jurisdiction's website in order to share information with both solar installers and customers. This online information also enables an applicant to accurately prepare permit application materials in advance without requiring a visit to the permit office. A solar-specific web page may include the following items:

- solar permit application checklist
- solar permit fee information
- contact information for solar-related permitting questions
- state, federal, and/or utility incentive information
- list of qualified solar contractors
- Links to helpful educational websites

Example

The City of Portland has a solar-specific website that educates consumers about different solar ownership models, incentives and tax credits, and how to select a contractor. The Bureau of Development Services' solar permitting website will be geared towards solar contractors and others who would need to apply for a permit. The website is currently under construction with an expected completion date of October 2014.

See also: City of Bellevue, WA: http://www.ci.bellevue.wa.us/solar_photovoltaic_systems_permitting.htm

City of Edmonds, WA: http://www.edmondswa.gov/additional-links/rooftop-solar-installations.html

4 Train Permit Staff in Solar Installations

Training building department staff and inspectors on the specific concerns for solar installations helps to reduce the time and cost of permit issuance and ensures projects are reviewed in a consistent manner. In addition, cross-training of building and electrical inspectors allows the inspection of solar installations to be completed in a single visit rather than two separate visits.

The Oregon Building Codes Division (BCD) is the sole provider of continuing education requirements needed to maintain certifications for building officials, inspectors, and plan reviewers working in the 130+ local building inspection programs currently operating throughout the state. Upon adoption of the 2010 Oregon Solar Installation Specialty Code, BCD held trainings around the state for building officials, inspectors, plan reviewers, and solar installers. More recently, BCD provided "skills enhancement" training on solar. Additional requests from local building departments for training on solar can be scheduled based on availability of trainers.

Required "code change" training for the 2014 Oregon Electrical Specialty Code includes aspects of solar, such as overcurrent protection, disconnects, and battery storage. In addition, BCD's electrical cross-training program for building inspectors contains a module on "special systems" that includes solar. To view a list of scheduled trainings or to request a training, go to: http://www.bcd.oregon.gov/programs/training.html

Example

The City of Eugene Building Permit Services is working to cross-train inspectors to complete both the building and electrical portions of a solar inspection in a single visit. Once fully implemented, this will reduce staff time and save money for both the city and the customer.

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5 Implement Online or E-permitting System

Moving to a fully online permitting system can significantly reduce travel time for solar installers and jurisdiction staff who would otherwise need to schedule in-person appointments. A fully online system would enable all aspects of the permit process - application submittal, plan review, fee payment, and delivery of approved permits - via email or a website within a short period of time.

The Oregon Building Codes Division offers an e-permitting system that local building jurisdictions can subscribe to. The ePermitting software include applications for different types of building permits, including solar. Features of the ePermitting system include:

- Online access to apply, pay for and receive building permits 24/7
- Automated inspection scheduling by phone or computer
- Comprehensive permit tracking and data collection
- Electronic plan submission and review

Example

Before implementing a full plan review and permit issuance website system, the City of Eugene Building Permit Services tested a more simple electronic review process for prescriptive installations. During the pilot program, solar contractors submitted their solar permit applications and plans via email. The plans were then reviewed electronically, fees were collected over the phone, and the approved plans were emailed back to the customer in the same day. The simple process saved staff time for both the City and the solar contractor who didn't need to schedule an in-person appointment for plan review. Eugene's full e-permitting system will be launched in October 2014.

In addition, the Oregon Building Codes Division partners with local jurisdictions to provide training to contractors on how to register for and use the ePermitting system.

For More Information

Northwest Solar Communities
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- **State of Oregon Building Codes Division**
  Green Building Coordinator
  503-373-7418
- **City of Portland**
  Bureau of Development Services, Permitting Services
  503-823-7300
- **City of Hillsboro**
  City Manager's Office, 503-681-5209
- **City of Eugene**
  Building Permit Services
  541-682-8398
- **Clackamas County**
  Department of Transportation and Development
  503-742-4400

Resources

Solar America Board for Codes and Standards (Solar ABCs): The Solar ABCs is a collaborative effort among experts to formally gather and prioritize input from the broad spectrum of solar photovoltaic stakeholders. This includes policy makers, manufacturers, installers, and consumers and results in coordinated recommendations to codes and standards making bodies for existing and new solar technologies. The U.S. Department of Energy funds Solar ABCs as part of its commitment to facilitate widespread adoption of safe, reliable, and cost-effective solar technologies. www.solarabcs.org