

Homeowners Associations and Solar PV

Installing Photovoltaic (PV) Systems on Single Family Homes and Townhomes

Homeowners associations (HOAs) are groups of homeowners formed to govern private residential developments. Their formation and operation is governed by state law, and their responsibilities usually address common aspects of the community, such as private open space, private road maintenance, and storm water facilities. The governance and allocation of responsibilities for these common aspects of community life are set out in the HOA's Codes, Covenants, and Restrictions (CC&R).

When a homeowner resides in a community with an HOA, the HOA is typically involved in the homeowner's desire or decision to install a solar photovoltaic system (solar PV) on his or her property because modifications of the exterior of a home may impact the community and usually are governed by design or architectural provisions in the CC&Rs.

Understandably, HOAs are best situated to address residents' requests for solar PV installations if the HOAs have adopted specific guidelines or requirements consistent with state laws before applications are submitted for review.

The intent of this information sheet is to support HOAs in expressly addressing solar PV in their CC&Rs so that future requests for approval of PV installations may be addressed quickly and fairly. The information in this document and the attached model HOA resolution will also enable homeowners and designers to factor HOA requirements into their siting and installation design choices.

Reducing Red Tape for Rooftop Solar Installations

Northwest Solar Communities (<http://nwsolarcommunities.org/>) is a coalition of jurisdictions, utilities, industry partners, and citizen groups working together to make rooftop solar electricity more cost effective for all. The coalition grew out of the work of the Evergreen State Solar Partnership, one of 22 teams working under the U.S. Department of Energy's [Rooftop Solar Challenge](#) program to reduce the "soft costs" associated with installing rooftop solar electricity.

In 2013, Northwest Solar Communities expanded its scope to include both Oregon and Washington and became one of eight teams funded under the second round of Rooftop Solar Challenge funding. The U.S Department of Energy SunShot



Initiative “Rooftop Solar Challenge II” incentivizes regional teams to make it easier and more affordable for Americans to go solar, reducing “soft costs” by streamlining permit processes, updating planning and zoning codes, improving standards for connecting solar power to the electric grid, and increasing access to financing.

Northwest Solar Communities strives to accomplish the following objectives:

- Streamline and standardize local permitting processes and interconnection standards.
- Improve market conditions by creating business certainty for solar PV deployment across multiple jurisdictions.
- Facilitate the adoption of solar financing options to make solar energy affordable for all residents.

HOAs and Solar Installations

As discussed above, HOAs usually adopt CC&Rs to govern the appearance and use properties within the association for the purpose of establishing and maintaining the character of the development.

Implementation, enforcement and changes to these rules are adopted and administered by the private governing boards composed of homeowners who are elected by their neighbors to lead the association.

Over time the CC&Rs may come into conflict with the needs and desires of community residents and require modifications. New homeowners, changing lifestyles, technology advancements, and laws often prompt such change.

An increasing number of Americans are looking to add solar components to their properties to produce clean energy. Many of these homeowners live in communities governed by HOAs, so they must turn to their HOAs for approval under the HOA’s CC&Rs. Unfortunately, most CC&Rs are silent on the issue of solar PV, or contain outdated language.

In 2009 the Washington State Legislature enacted a law prohibiting HOAs for precluding solar installations – but it does allow them to regulate solar installations.¹ The legislature created a framework to allow homeowners associations to maintain the character of the association, while enabling solar installations. To date the Oregon legislature has not enacted laws directly related to the governance of solar installations in residential communities.

A solar PV system requires direct sunlight to produce electricity. Therefore, solar systems primarily face south and should

¹ See [RCW 64.38.055](http://apps.leg.wa.gov/RCW/default.aspx?cite=64.38.055) (<http://apps.leg.wa.gov/RCW/default.aspx?cite=64.38.055>)

not be shaded. Systems can be roof mounted or ground mounted.

Here is simple approach for an association to consider for compliance with Washington's statute:

- Allow a system to be installed on a south-facing roof, even if that roof is visible from the street,
- Keep panels low to and matching the plane of the roof,
- Ensure any exterior equipment is designed to blend with the color of the roof or house as much as possible without having a significant impact² on system output or cost.

The **Washington State** Statute is included in this document (see RCW 64.38.055). A model ordinance is also available.

Tool Kit Development:

The Planning and Zoning working group (P&Z Team) of Northwest Solar Communities is developing tools to help HOAs, cities, and counties address solar installations. Associations and communities that proactively develop guidelines for solar installations will be better positioned to meet the needs of their constituents while ensuring such

² Although HOAs should define what is significant, RCW 64.38.055(2)(c)(ii)'s indication that reductions of output greater than 10% are significant for ground-mounted systems should guide HOAs in connection with rooftop systems.

installations occur in a manner that best meets their own needs and interests.

RCW 64.38.055: Governing documents — Solar panels.

(1) The governing documents may not prohibit the installation of a solar energy panel by an owner or resident on the owner's or resident's property as long as the solar energy panel:

(a) Meets applicable health and safety standards and requirements imposed by state and local permitting authorities;

(b) If used to heat water, is certified by the solar rating certification corporation or another nationally recognized certification agency. Certification must be for the solar energy panel and for installation; and

(c) If used to produce electricity, meets all applicable safety and performance standards established by the national electric code, the institute of electrical and electronics engineers, accredited testing laboratories, such as underwriters laboratories, and, where applicable, rules of the utilities and transportation commission regarding safety and reliability.

(2) The governing documents may:

(a) Prohibit the visibility of any part of a roof-mounted solar energy panel above the roof line;

(b) Permit the attachment of a solar energy panel to the slope of a roof facing a street only if:

(i) The solar energy panel conforms to the slope of the roof; and

(ii) The top edge of the solar energy panel is parallel to the roof ridge; or

(c) Require:

(i) A solar energy panel frame, a support bracket, or any visible piping or wiring to be painted to coordinate with the roofing material;

(ii) An owner or resident to shield a ground-mounted solar energy panel if shielding the panel does not prohibit economic installation of the solar energy panel or degrade the operational performance quality of the solar energy panel by more than ten percent; or

(iii) Owners or residents who install solar energy panels to indemnify or reimburse the association or its members for loss or damage caused by the installation, maintenance, or use of a solar energy panel.

(3) The governing documents may include other reasonable rules regarding the placement and manner of a solar energy panel.

(4) For purposes of this section, "solar energy panel" means a panel device or system or combination of panel devices or systems that relies on direct sunlight as an energy source, including a panel device or system or combination of panel devices or systems that collects sunlight for use in:

(a) The heating or cooling of a structure or building;

(b) The heating or pumping of water;

(c) Industrial, commercial, or agricultural processes; or

(d) The generation of electricity.

(5) This section does not apply to common areas as defined in RCW [64.38.010](#).

(6) This section applies retroactively to a governing document in effect on July 26, 2009. A provision in a governing document in effect on July 26, 2009, that is inconsistent with this section is void and unenforceable.



HOMEOWNERS' ASSOCIATION [DESIGN / ARCHITECTURAL] REVIEW [BOARD/COMMITTEE]¹

**RESOLUTION OF BOARD OF DIRECTORS REGARDING GUIDELINES FOR SOLAR ENERGY SYSTEMS
(RESOLUTION NO. _____)**

State of _____
County of _____

RECITALS

A. The _____ Homeowners' Association (the "**Association**") recognizes the need and desire for renewable energy and to establish regulations for the exterior appearance of photovoltaic ("**PV**") solar energy systems located within the _____ community (the "**Community**") [and to provide for the rights of solar access to such systems, once installed]².

B. The Association recognizes that regulations are necessary for PV solar energy systems in order to balance the goals and desires of the Community while maintaining high-quality standards of architecture and streetscape in the Community.

C. The Association further recognizes that solar energy is a growing and changing industry and that as such energy technology changes, revisions to the regulations set out in this resolution may be necessary or desirable.

D. The Board of Directors of the Association (the "**Board**") desires to hereby establish guidelines for the regulation of PV solar energy systems to provide clear and definitive guidance to the Community members.

NOW, THEREFORE, effective _____, 201_, the Board has duly adopted the following guidelines for Solar Energy Systems (as defined below) within the Community. The following guidelines are hereby incorporated into and made part of the _____ [CC&Rs / Rules] effective as of the date of this Resolution.

1. Definitions. Capitalized terms not otherwise defined in this Resolution have the meaning assigned to them in this Section 1.

1.1. Solar Energy System. A panel device or system or combination of panel devices or systems that relies on direct sunlight as an energy source, including a panel device or system or

¹ This draft resolution could be used for single-family home HOAs, or townhomes that are separately owned to the exterior surface. They are not applicable to "apartment-style" condos, or other condos in which the association owns and controls the rooftops and common areas.

² Include bracketed language when HOA elects to include solar protection/solar access provisions as part of this Resolution.

combination of panel devices or systems that collects sunlight for use in (a) the heating or cooling of a structure or building; (b) the heating or pumping of water; or (c) the generation of electrical energy.³

1.2. Building-Integrated Solar Energy System. A Solar Energy System that is designed and installed as a building component that is part of the exterior envelope of the building.

1.3. Building-Mounted Solar Energy System. A Solar Energy System that is affixed to a principal or accessory building.

1.4. Ground-Mounted Solar Energy System.⁴ A Solar Energy System that is affixed to the ground surface of real property.

2. Approval of Installations.⁵ No Solar Energy System may be installed on property within the Community without prior approval of the Association’s Architectural Review Committee. Submittal and review of each proposed installation shall be consistent with the Association’s rules and procedures set out in _____, and in accordance with this Section 2.

2.1. Submittal of Installation Plans. No fewer than _____ (____) days before installing any Solar Energy System, the homeowner shall submit to the Architectural Review Committee detailed plans for the proposed installation, including a schematic drawing of the proposed installation and manufacturer’s installation and placement specifications for the Solar Energy System; the proposed location and number of collectors; the method of attachment to the roof structure; and the location of all exterior system components (all of the foregoing, “**System Specifications and Plans**” or “**SSP**”).

2.2. Architectural Review Committee Review Process. The Architectural Review Committee shall meet within _____ (____) days after the submittal by a homeowner of System Specifications and Plans for a proposed Solar Energy System to be installed on the homeowner’s property. Within _____ days after meeting and review of the SSP, the Architectural Review Committee will provide written notice to the homeowner of the Committee’s (a) approval of the System Specifications and Plans; (b) rejection of the System Specifications and Plans; or (c) request for further information.

2.3. Standard of Review by Architectural Review Committee. The Architectural Review Committee will review the SSP for compliance with the standards and requirements set out in this Resolution. Approval by the Architectural Review Committee may be conditioned upon reasonable modifications to the SSP, provided that such modifications (i) do not increase installation or construction costs by more than ten (10) percent of gross estimated installation or construction costs; (ii) decrease designed energy production by more than ten (10) percent; (iii) are not more restrictive than any

³ In Oregon, it may be appropriate to align this definition with ORS 105.880, which defines “solar energy system” as “any device, structure, mechanism or series of mechanisms which uses solar radiation as a source for heating, cooling or electrical energy.”

⁴ Optional option definition

⁵ All of the approval language drafted here is for discussion/consideration purposes only. Some HOAs may have existing approval processes that apply to all requests for structural/exterior changes, and some may not. Again, this is “model” language only, and not intended to be prescriptive.

applicable rule, regulation, or fire code; or (iv) delay by more than forty-five (45) days the estimated date of installation, maintenance, or use of the Solar Energy System.

2.4. Appeal of Decision by Architectural Review Committee. If any SSP submitted by a homeowner is rejected by the Architectural Review Committee, the homeowner may appeal such decision in accordance with _____ of the Association's CC&Rs.

3. Standards for Residential Building Integrated Solar Energy Systems. The owner of any residence with a Building-Integrated Solar Energy System will ensure that the residential Building-Integrated Solar Energy System installed on its residence (a) meets all general requirements for Solar Energy Systems set out in Section 6 below; (b) is an integral part of the building surface [or surface of an improvement or feature ancillary to the building, such as, but not limited to, awning, deck, or other feature of the residence]; (c) to the extent consistent with Section 2.3 above, covers from street-view any mounting hardware; and (d) includes exterior wiring, plumbing, and conduits painted a color to match the structural building components.

4. Standards for Residential Building-Mounted Solar Energy Systems. Each Building-Mounted Solar Energy System must meet the following standards:

(a) Each Building-Mounted Solar Energy System must meet the general requirements set out in Section 6 below.

(b) Each Building-Mounted Solar Energy System must be installed on the roof of the primary residential structure or accessory structure.

(c) Each Building-Mounted Solar Energy System should be located in a position least visible from any street or common area, so long as such location does not reduce annual energy production by more than ten percent (10%) over alternative locations (as determined by a publically available modeling tool provided by the National Renewable Energy Laboratory (<http://pvwatts.nrel.gov/>) or equivalent entity).

(d) Each Building-Mounted Solar Energy System installed on a pitched-roof must be parallel to the plane of the roof or otherwise conforms for the slope of the roof, and must not be greater than twelve (12) inches above the roof surface to which it is attached, or such height above the roof surface as may be allowed by local codes or ordinances.

(e) Each Building-Mounted Solar Energy System must not extend beyond the perimeter boundary of the roof section to which it is attached and must terminate such distance from the edge of the roof as required by any applicable building and fire codes.

(f) Each Building-Mounted Solar Energy System must have a frame, brackets, and visible piping or wiring that is of a color matching the surface upon which the Building-Mounted Solar Energy System is installed, or, if such a color is not commercially available, a bronze or black tone commonly available in the marketplace.

(g) Except as set out in subclause (h) below, each Building-Mounted Solar Energy System must not exceed the existing roofline in height.

(h) Except with respect to a Building-Mounted Solar Energy System installed on a flat roof, each Building-Mounted Solar Energy System must maintain the existing pitch of the roof⁶. Each Building-Mounted Solar Energy System installed on a flat roof may not exceed twenty degrees (20°) in pitch above the roof or be no higher than allowed by applicable zones, codes, or ordinances.

5. Residential Ground-Mounted Solar Energy Systems. Any Ground-Mounted Solar Energy System installed by a homeowner shall meet all applicable setback laws and regulations for accessory structures. In addition, the following requirements apply to each Ground-Mounted Solar Energy System:

- (a) A Ground-Mounted Solar Energy System must be shielded from any street abutting the property or any common area at street level by vegetation or fencing not less than _____ inches in height, which vegetation or fencing must be maintained by the homeowner in accordance with the Association rules and standards set out in _____.
- (b) A Ground-Mounted Solar Energy System must be installed so that the ground surface beneath the Solar Energy System and around the Solar Energy System may be maintained in accordance with HOA standards.
- (c) The ground surface beneath any Ground-Mounted Solar Energy System must allow for adequate drainage of rainwater and runoff from the Solar Energy System.

6. General Requirements. A Solar Energy System installed on homeowner property must meet the following general requirements:

- (a) Each Solar Energy System must be installed in conformance with all applicable governmental rules, laws, regulations, and ordinances, including but not limited to applicable zoning, building, and fire codes.
- (b) No Solar Energy System installed on homeowner property may threaten public health or safety, or violate any applicable law.
- (c) Each Solar Energy System must be maintained in good repair and working order. Any Solar Energy System damaged, destroyed, or disused must be removed or repaired within ninety (90) days after such initial damage, destruction or disuse.
- (d) No Solar Energy System may be installed until the building plans and specifications have been submitted in writing to the Architectural Review Committee for review and have been approved in writing.

- (e) No Solar Energy System may be installed on any homeowner property until all permits and approvals required by law have been issued.

Article ##: SOLAR SHADE CONTROL⁷

1. **Rights of Solar Access.** Except as set out in Section 2 below, after the installation of a Solar Energy System, notice of which is given in accordance with this Article ##, a person owning or in control of another property shall not allow a tree or shrub to be placed or, if placed, to grow on that property so as to cast a shadow greater than 10 percent of the collector absorption area upon that Solar Energy System collector surface at any one time between the hours of 10 a.m. and 2 p.m., local standard time.
2. **Existing Trees or Shrubs.** This Article ## does not apply to any of the following:
 - (a) A tree or shrub planted prior to the installation of a Solar Energy System;
 - (b) The replacement, using a tree or shrub of equivalent height at maturity, of a tree or shrub that had been growing prior to the installation of a solar collector and that, subsequent to the installation of the solar collector, dies, or is removed for the protection of public health, safety, or the environment; or
 - (c) A tree or shrub that is subject to a city or county ordinance.
2. **Notice to Neighboring Homeowners.** The owner of a residence where a Solar Energy System is proposed to be installed shall provide written notice by certified mail to each owner or tenant of a residence that may be affected by the requirements of this Article before the installation of the Solar Energy System. Such notice shall be given not fewer than thirty (30) days before the proposed installation of a Solar Energy System or more than ninety (90) days before such installation. Any such notice shall include the following information:
 - (a) Name, address, and telephone number of owner of residence where Solar Energy System is proposed for installation;
 - (b) Address of building and specific location where Solar Energy System will be installed;
 - (c) Anticipated installation date;

Any notice under this Section 3 shall be given by and to each subsequent owner of the residence on which the Solar Energy System is installed and each affected property upon actual knowledge of a transfer in ownership.

⁷ Although Oregon and Washington do not have solar shading statutes, this draft is intended to allow HOAs to be proactive in reducing the risk of disputes about neighbor obligations to avoid shading new systems. An HOA may include a notice-only provision, requiring a new system owner to give notice to neighbors, or include language stating that new trees that create shading are not allowed. Anything more than that may require a contract (easement) between the neighbors themselves.