

# Solar Installations in Condominiums

Brief: Condominiums pose unique challenges to installing Photo Voltaic (PV) solar arrays and water heating systems. This paper summarizes key issues to assist condominium associations and developers.

## Problem

Condominium owners and developers may want to install solar arrays for environmental, financial, and other reasons. However, barriers exist such as common ownership of roofs and other exterior spaces, metering methods, and state laws.

## State Condominium Laws

Each state has laws governing condominium development that are unique. Washington's condominium statutes are found in Chapter 64 Section 34 of the Washington revised code ([RCW 64.34.010](#) et seq.).

[Oregon Revised Statutes Chapter 100.005](#) et seq. sets out Oregon's condominium laws. In particular, ORS Section 100.405 addresses association approval requirements for modifying condominium buildings.

## Metering

Depending on the exact metering situation of the condominium, solar can present a number of challenges. Condominium buildings commonly have one of the following:

- 1) Master-metering: A single utility service is shared between tenants, who are billed by the condo association on an apportioned basis of square footage or other standard. Unfortunately this method provides the least incentive for individual efficiency since the electric load is aggregated.
- 2) Sub-metering: The condominium has a single utility account. Individual units have

sub-meters that measure and allocate the electrical use and costs.

- 3) Individual metering: Every unit is responsible for a utility account. This is most typical for newer condominiums, and often all the meters are centrally located.

For condominium owners wishing to install solar for their own individual use and benefit, an individually-metered arrangement will allow interconnection. However, while this may be possible, it can often be technically challenging due to the central metering location, requirements for disconnects, and lack of individually owned roof area or grounds.

Washington's meter aggregation rules allow "customer generators" to aggregate output from a single solar array and distribute it to multiple accounts; up to a maximum system size of 100kW<sup>1</sup>. This can be helpful for owners of individually metered units who want to install a single system and distribute power to other unit owners.

Oregon's, meter aggregation rules currently only allow a single "customer-generator"<sup>2</sup> to combine meters on contiguous property. This rule prohibits multiple condominium owners from installing a single solar array and distributing the benefits to individual accounts.

## Common Area Ownership

Because of the difficulties in metering and utility laws, it may be easiest if a rooftop PV installation is accomplished as a collective effort of the condominium homeowners' association (the "HOA") for the benefit of common areas under the control of the HOA. The costs to light, heat, and cool shared areas such as parking lots, hallways, swimming pools, and other shared community

<sup>1</sup> Revised Code of Washington: [80.60.030](#)

<sup>2</sup> Oregon Administrative Rules : [860-039-0065](#)

spaces are typically wrapped into condominium association fees. Connecting a PV array or solar water heating system to the meter that serves these shared loads will ensure everyone benefits from reduced loads and net metering. Ultimately the benefits will be reflected in lower future association fees.

Further, to maximize cost efficiency and optimize solar access it is typically best to incorporate solar into the condominium during its' initial design rather than trying to add it after-the-fact. If the developer cannot immediately install solar PV the next best thing is to provide "solar ready" construction to accommodate the future addition of solar. "Solar ready" means the rooftop, meter access, and other critical infrastructure are roughed-in and appropriate locations reserved during early construction to accommodate the installation of solar equipment at a later date. Even for older buildings, roof replacement may present a unique opportunity to incorporate solar on older condominiums.

Finally, be sure to check the HOA's covenants for the process to submit and obtain approval for shared improvements.

## Common Questions and Answers

*Q: I am a condominium unit owner interested in installing a rooftop PV system. What challenges should I expect as I propose the system to my HOA and Board?*

A: Each condominium HOA's covenants, codes and restrictions (CCRs) are unique. You will need to review the CCRs to find the answer to the following five questions to gauge the degree of challenge they present for you to install solar:

1. How do I obtain authorization to use the roof which is under common area?
2. How do I obtain authorization to use common areas for conduits and equipment?

3. How do I obtain authorization to use the roof when certain owners have exclusive use of the common area roof?
4. Can a group of owners proceed with an installation (individually or as a group), if the rest of the association does not want to?
5. Could we get approval for an association-owned system? In the alternative, how do we get approval for individually or collectively owned systems?

*Q: How do I start the process of proposing a solar installation on my condominium building rooftop?*

A: As a preliminary matter, first research state and local laws, the condominiums bylaws, and any restrictive covenants (CCRs). It is important to determine if there are restrictions that would prohibit installing equipment on the roof or would otherwise make the installation infeasible or cost-prohibitive, and to determine the process for making changes to allowable uses, if necessary.

Next, determine what HOA approvals will be needed for the project, and what percentage of its members must approve the project. The condominium bylaws should set out all voting requirements for the approval of any association- or individually owned system. Be ready to discuss with the HOA any need for an easement from the association and any individual homeowner over whose unit the solar project will be installed. Easements may also be necessary for interconnection, metering, wires, or other equipment needed to install the solar system on the roof.

Finally, don't forget to research your local utility interconnection and net metering procedures and requirements. These vary by utility.

*Q: Do we need legal counsel?*

A: Even if you have determined the site is suitable for solar and have not identified any

“deal breaker” issues, it is still valuable to seek legal advice to assess the risks and issues associated with solar development on common areas, individually owned areas, or mixed areas.

No matter whether the proposed installation will affect all rooftop space or only a portion –you may need legal assistance to consider liability, insurance, and real estate (in particular easement rights) implications for any solar installation on a common rooftop area.

*Q: What makes the site and building suitable for solar?*

A: A good site for solar will have unobstructed southern exposure, and be free of shading. Future building development potential and tree growth to the south should also be taken into account. The roof lifespan is also important, with a minimum of 15 years of warranted roof life remaining recommended. Many condominium buildings have roof-top heating and air-conditioning units. In planning a solar array, adequate setbacks from this equipment for maintenance, safety, and shading are also required.

As due diligence, engage a reputable licensed solar contractor with experience in multi-unit installations to conduct a site assessment; evaluate the roof condition and prepare a cost estimate with sizing to best meet your needs.

*Q: What resources and tools are there for site evaluation and condominium design?*

A: [National Renewable Energy Laboratories](#) (NREL) provides solar evaluation tools designed to help homeowners determine if there is sufficient solar resource on the roof (also known as “insolation.”)

*Q: If I am a developer of a new condominium building, how can I make my condominium, and its governing documents, ready for solar installation?*

A: A developer of a new condominium building should consider that solar generation equipment will likely take many forms in the coming decades. Solar shingles are already in production and we can foresee fixtures, such as awnings or patio covers, providing for solar generation and solar carports to serve electric vehicle charging stations.

When considering these possibilities, the developer must think not only of the building and structural components themselves, but also of the bylaws and any rules that may inhibit or support their further development. Association bylaws should be written to include flexibility but with sufficient guidance to allow the installation of solar generation equipment that has not yet been invented. Traditional association bylaws may cover rooftop installations, but new bylaws should consider how alternative installations, such as vertical installations could be addressed. Developers should consult with and work with counsel to draft bylaws that give guidance and flexibility to associations and individual unit owners.

*Q: When developing a new condominium, what financial incentives exist?*

A: Federal and state incentives and tax credits can be found at the [Database of State Incentives for Renewables and Efficiency](#). Local electric utilities may also provide other incentives for solar.

*Q: Are tenant-stockholders in a cooperative housing corporation and condominium owners eligible to claim federal residential tax credits?*

A: Yes, per [IRS Notice 2013-70](#), sections 25C(e)(1) and 25D(e)(5) treat a tenant-stockholder (as defined in § 216) in a cooperative housing corporation (defined in § 216) as making his or her proportionate share (as defined in § 216(b)(3)) of any expenditures of such corporation. Similarly, §§ 25C(e)(1) and 25D(e)(6) treat a member of a condominium

management association as having made the individual's proportionate share of any expenditures of such association.

## Other Ways You Can Support Solar

If individual unit condominium owners, developers or HOA associations cannot install solar, for whatever reason, there are still other ways to support solar (as locally available). These include the following:

- Purchase green power through your local utility. By switching a portion or all of your electricity, you can support the development of renewable resources in the region. In Washington, contact your local utility provider to learn about your green power options. In Oregon go to: <http://www.rnp.org/node/Oregon-green-power-options>.
- Support Community Solar projects. These projects allow you to financially contribute to and benefit from large PV arrays in optimal locations.
- Oregon law now allows for the formation of Renewable Energy Cooperatives, and new community solar options are being launched. Look for opportunities to join and contribute to projects in your area.
- Work with utility and local government to increase their solar commitments.
- Volunteer with or contribute to solar support organizations.

## Other Resources

[Solar Permitting & Installation Handbook](#),  
Cambridge, MA

[NW Seed](#)

[Solar Washington](#)

[Solar Oregon](#)

[Energy Trust of Oregon Solar Assistance and Incentives](#) <link to: <http://energytrust.org/public-sector/incentives/construction-renovation-improvements/custom/early-solar-assistance>>

[sector/incentives/construction-renovation-improvements/custom/early-solar-assistance](#)>

[Solar Ready Buildings Planning Guide](#) <link to: <http://energytrust.org/public-sector/incentives/construction-renovation-improvements/custom/early-solar-assistance>>