

Hidden Springs Summit Owners Association

Hidden Springs Summit Owners Association (HSSOA)

Solar Energy System Architectural Guidelines

Definitions

Solar Energy Devices are defined as 1) Photovoltaic (PV) panels/modules, 2) Solar Water Heating (SWH) panels/modules, and 3) Integrated Photovoltaic Systems (IPS) (i.e. photovoltaic "shingles, tiles, or siding", or "thin-film laminates").

Prohibitions

Hidden Springs Summit Owners Association (HSSOA) will not allow ground mounted or pole mounted systems.

Tracking platforms or mechanisms that allow devices to tilt seasonally, permanently, or by time of day are not allowed.

General Considerations

General Requirements. An [HSSOA Architectural Review Request form](http://www.hssoa.org/files/Architectural-Review-Req-Form.pdf) found on our website, <http://www.hssoa.org/files/Architectural-Review-Req-Form.pdf>, is necessary prior to the installation of a Solar Energy System on homeowner property. The system must also meet the following general requirements:

1. Each Solar Energy System must meet [Energy Trust of Oregon solar electric installation requirements](https://insider.energytrust.org/wp-content/uploads/sle_rq_pv_sysreq.pdf) (https://insider.energytrust.org/wp-content/uploads/sle_rq_pv_sysreq.pdf) and must be installed in conformance with all applicable governmental rules, laws, regulations, and ordinances, including but not limited to manufacturer's requirements, applicable zoning, building, electrical and fire codes.
2. Solar Energy System may be installed after the following have been submitted in writing using the [HSSOA Architectural Review Request form](http://www.hssoa.org/files/Architectural-Review-Req-Form.pdf) found on our website, <http://www.hssoa.org/files/Architectural-Review-Req-Form.pdf>, to the ARC for review and have been approved in writing:
 - a. An illustrated specification sheet for the proposed equipment that will be installed on the exterior of the house (i.e. solar modules, racking system, inverters)
 - b. Construction drawings showing the array size and location of all system components that will be mounted on the exterior of the house
3. No Solar Energy System installed on homeowner property may threaten public health or safety or violate any applicable law.

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4. 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.
5. Each Solar Energy System must be visually integrated with the architecture of the house regarding style, location, size, and color; and as much as possible minimize visibility from the street.
6. Prior to the installation of any devices, the roof surface should be verified to have a minimum roof life of 10 years. Roof life shall be determined by proof of roof installation date, professional roofer certifications, *and/or* professional home inspector certification, in each case in form and substance acceptable to the ARC.
7. No Solar Energy System may be installed on any homeowner property until all permits and approvals required by law have been issued.
8. Solar Energy System must be owned by the homeowner; leased products from third parties are not allowed

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

- Each Building-Mounted Solar Energy System must meet the General Requirements informed by Energy Trust of Oregon, set out in this addendum.
- Each Building-Mounted Solar Energy System installed on a pitched-roof must be parallel to the plane of the roof (flush mounted), 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. (Oregon solar installation code allows 18")
- Each Building-Mounted Solar Energy System must not extend beyond the perimeter boundary of the roof section to which it is attached, must not extend above the roof peak, and must terminate such distance from the edge of the roof as required by any applicable building and fire codes.
- Each Building-Mounted Solar Energy System must have a frame, brackets, and racking that is anodized bronze or black color which are commonly available in the marketplace - see General Requirements #5.
- Per [Section 5.4 of our HSSOA CC&Rs](http://www.hssoa.org/files/HSSOACCR.pdf) (<http://www.hssoa.org/files/HSSOACCR.pdf>), all exterior conduit should be painted in a color scheme consistent with the structure and materials adjacent to the pipes, i.e. conduit on walls should be painted the color of the walls while conduit on the roof should be the color of the roof.

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Technical Guidelines

- Solar Energy System installations must comply with applicable building codes; all necessary permits must be obtained. Installations should also comply with both Energy Trust of Oregon.
- The minimum system size for a PV system should be 2kW (8 to 10 panels). * The minimum panel efficiency for a PV system should be 10%. The maximum panel tolerance for a PV system shall be +3/-3.
- The minimum system size for a SWH system should be 2 panels. SWH systems should have on-mechanical overheat and freeze protection mechanisms
- All PV installations should have a minimum manufacturer's power performance warranty of 20 years. All SWH installations should have a minimum manufacturer's power performance warranty of 10 years.

* Technical Information Regarding Panels/Modules: Ratio of panels to energy generation is 100 sq ft of panel to every 1kW generated. Therefore, a system required to generate 2kW of power would be approximately 200 sq ft in size for the total array of panels.

Aesthetic Guidelines

- Solar Energy System panels must have a non-reflective surface
- Where possible, the maximum panel clearance (distance from the roof surface to the top surface of the panel) should be 12 inches.
- The maximum number of roof planes used for a single type of installation should be 2
- Panels must be installed on the plane of roof material and may not extend above the ridge line of the roof. Panels (collectors) must be a continuous unit without gaps.
- All conduit or pipe runs should be internal/concealed (non-visible from the outside) or, if external, be painted to match background color
- PV systems require that the inverter should be placed either inside or within 3 feet of the existing utility meter, preferably on the same plane as the existing utility meter
- Inverters and additional utility meters should not be installed in plain sight from the street

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Submission Requirements

- A completed application/[HSSOA Architectural Review Request form](#) must include:
 - A color visualization and/or simulated image of the installation.
 - The Solar Energy System must be accompanied by a professional construction drawing(s) to scale for the proposed installation showing exact location, number of collectors, means of attachment to the roof structure, and location of all exterior components.
 - A site map is also required, showing the orientation of the home in relation to other properties.
 - A Street View of the home showing how it will look to passers-by
 - The Site Map and Street View can be created using web-based applications such as Google maps.
 - Copies of all applicable permits
- Specifications for the installation must include:
 - Verification of a minimum 10-year roof life
 - Documentation that the system meets the required technical guidelines
 - Current roof material and color
 - Proposed panel manufacturer and panel color, including stock photos of the panel from the manufacturer's website
 - Proposed panel frame color and material

[Energy Trust of Oregon Solar Ready Checklist](https://energytrust.org/wp-content/uploads/2016/12/ENH_FM0631R.pdf) (https://energytrust.org/wp-content/uploads/2016/12/ENH_FM0631R.pdf)

Please direct questions to:

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