RESIDENTIAL PHOTOVOLTAIC SOLAR PANEL REQUIREMENTS & APPLICATION

Community and Economic Development
City of Arlington • 18204 59th Ave NE • Arlington, WA 98223 • Phone (360) 403-3551

The City of Arlington requires a building permit to install Photovoltaic (PV) Solar Panel(s) for residential and commercial uses. This policy governs Residential uses only.

Other permits may be required per Washington State Labor and Industries or Utility Providers.

SUBMIT ELECTRONIC FILES AND THE NUMBER COPIES REQUIRED FOR EACH OF THE FOLLOWING:

	QTY	REQUIRED DOCUMENTS
☐	1	City of Arlington Solar Panel Application
☐	2	Roof Plan and Construction Documents
☐	2	Manufacturer's installation specifications
☐	2	Engineering (if required, see below)
☐	1	USB Flash Drive or email a link to ced@arlingtonwa.gov

ROOF PLAN AND CONSTRUCTION DOCUMENTS

Documents shall include the following:

- Panel layout with spaces as required per IFC 611; Include emergency disconnect location and identification
- The dead load of the rooftop-mounted photovoltaic panel systems, including rack support systems, shall be indicated on the construction documents
- Engineering shall consist of the following:
    a. The ability of the roof to support the additional weight of the panels combined with how it affects the rooflive load and;
    b. If panels do not extend to the ridge or the eave, engineering to address the probability of ice damming and specify methods of preventing or modifying the roof to eliminate damage and;
    c. If there are other roofs, obstructions or structures below, engineering to address impact loading, drifting snow and other snow load issues as deemed necessary by the engineer.

CODE REQUREMENTS

The codes sections below are not all encompassing; it is the responsibility of the homeowner or contractor to adhere to the International Fire Code (IFC), International Residential Code (IRC), International Building Code (IBC), Revised Code of Washington (RCW), Washington Administrative Code (WAC) and additional codes as may be required.

Solar Panels 64.38.055 RCW

- Solar Panel visibility is prohibited from any part of a roof-mounted solar energy panel above the roofline
- Solar Panels shall not be visible from the street directly in front of the structure
- A solar energy panel frame, a support bracket, or any visible piping or wiring to be painted to coordinate with the roofing material

R324.3 Photovoltaic Systems. Installation, modification, or alteration of solar photovoltaic power systems shall comply with this section and the *International Fire Code* Section.

- Section R104.11 alternate materials and methods of this code shall be considered when approving the installation of solar photovoltaic power systems.
- Photovoltaic systems shall be designed and installed in accordance with *International Residential Code*, Sections R324.3.1 through R324.6, 51-51-03240 WAC and chapter 19.28 RCW.

- Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

EXCEPTION: Detached, non-habitable Group U structures shall not be subject to the requirements of this section for structural and fire safety. A residential ground mounted system shall be deemed a Group U structure per IBC 312.

R324.3.1 Equipment Listing. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703.

R324.4 Rooftop-mounted Photovoltaic Systems. Rooftop-mounted photovoltaic panel systems installed on or above the roof covering shall be designed and installed in accordance with IRC R907, 51-51-03240 WAC and 19.28 RCW.

EXCEPTION: The roof structure shall be deemed adequate to support the load of the rooftop solar photovoltaic system if all of the following requirements are met:

1. The solar photovoltaic panel system shall be designed for the wind speed per the Residential Design Requirements, and shall be installed per the manufacturer's specifications.
2. The ground snow load does not exceed 70 pounds per square foot.
3. The total dead load of modules, supports, mountings, raceways, and all other appurtenances weigh no more than 4 pounds per square foot.
4. Photovoltaic modules are not mounted higher than 18 inches above the surface of the roofing to which they are affixed.
5. Supports for solar modules are to be installed to spread the dead load across as many roof-framing members as needed, so that no point load exceeds 50 pounds.

R324.4.1 Roof Load. Portions of roof structures not covered with photovoltaic panel systems shall be designed for dead loads and roof loads in accordance with Sections R301.4 and R301.6. Portions of roof structures covered by photovoltaic panel systems shall be designed for the following load cases:

1. Dead load (including photovoltaic panel weight) plus snow load in accordance with Table R301.2(1).
2. Dead load (excluding photovoltaic panel weight), plus roof live load or snow load, whichever is greater, in accordance with Section R301.6.

R324.4.1.2 Wind Resistance. Rooftop-mounted photovoltaic panel or module systems and their supports shall be designed to resist the component and cladding loads specified in Table R301.2(2), adjusted for height and exposure in accordance with Table R301.2(3).

R324.5 Building-integrated Photovoltaic Systems. Building-integrated photovoltaic systems that serve as roof coverings shall be designed and installed in accordance with Section R905.

R324.5.1 Photovoltaic Shingles. Photovoltaic shingles shall comply with Section R905.16.

R324.7 Ground-mounted Photovoltaic Systems. Ground-mounted photovoltaic systems shall be designed and installed in accordance with Section R301. Fire separation distance requirements apply.

RESIDENTIAL PHOTOVOLTAIC SOLAR PANEL

Property Address: _____ Project Valuation: _____

Lot #: _____ Parcel ID No.: _____ Subdivision: _____

Project Scope of Work:

Primary Contact: ☐ Owner ☐ Contractor

Owner Name: _____ Office No.: _____

Email Address: _____ Cell No.: _____

Mailing Address: City: State: Zip:

Contractor Name: _____ Office No.: _____

Email Address: _____ Cell No.: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

L&I Contractor License Number: _____ Expiration Date: _____

Existing Roof Structure: _____ Existing Roof Material: _____

Building Square Footage: Number of Stories:

INSPECTION REQUIREMENTS

Roof mount panels require two (2) inspections minimum

1. The first inspection is for the roof mount racking hardware to verify compliance and attachment. *(You may schedule this inspection for the day the panels are being installed. You may begin mounting panels over the racking prior to inspection but there must be enough racking exposed for the inspector to verify compliance.)*
2. The final inspection shall be scheduled when the project is complete and after Labor and Industries has approved the electrical.

I hereby certify that I am the ☐ Owner ☐ Contractor and authorized to sign this application and that the above information is correct and construction on, and the occupancy and the use of the above-described property will be in accordance with the laws, rules and regulation of the State of Washington, and the City of Arlington.

Signature Print Name Date

	FOR STAFF USE ONLY	
PERMIT #	**ACCEPTED BY:**	**DATE STAMP**