



**SOLAR HOT WATER AND  
PHOTOVOLTAIC PANELS  
INSTALLATION GUIDELINES  
FOR RESIDENTIAL ZONES**

# Solar PV Permit Process

- **Step 1:** Please see Enquiry Staff who will assess your building and determine the type of permit necessary and submission requirement
  - *An Electrical Permit is always required*
- **Step 2:** Gather all complete submission requirements and submit to Enquiry Centre
- **Step 3:** Get your Permit

# Owner Responsibilities

- Owners, or their agents, must obtain permits as required for work done on their property.
- Owners need to ensure that the location and design of the panel system takes into consideration the system's access to sunlight, the effect of surrounding trees and vegetation, and the development potential of adjacent lots.

# Zones with Outright Use

Outright zones go straight to Enquiry Centre for building permit assessment:

- Single family homes and garages in RS-1, RS-1A, RS-1B, RS-6, RS-7
- Single family homes and garages built under the outright density provisions of the bylaw in RS-3, RS-3A and RS-5
- RS-5 (also applies to RS-3 and RS-3A), RS-6 and RS-7 design guidelines were adopted in the 90s and 2001. Housing existing at that time are considered existing outright development. Design guidelines do not apply unless additions at conditional density are, or have been provided.

# Design Considerations

- Design guidelines would favor locating panels toward the rear yard or garage to minimize effect on streetscape. However - front locations will be accepted where rear locations compromise performance of panels due to site orientation.
- Panels will be reviewed to meet building code setbacks from roof edges.
- Staff will be monitoring neighbor feedback (if any) and may modify design requirements in the future if there is concern.

# Design Considerations

- Panels should be parallel to roof pitch for sloped roofs for urban design and structural reasons. Flat roof installations can be mounted at an angle.
- Buildings listed on the VHR or in a Heritage Conservation Area should be referred for further consultation with planning and heritage staff as they may not be suitable for panel installations.

# Outright Submission Requirements

Planner will circle which requirements necessary on submission checklist

- For 1 and 2 family homes – clear, legible and precisely dimensioned sketches may be acceptable
- Site plan, roof plan and affected elevations (all street-facing elevations)
- Show proposed panel lay-out on roof
- Include spec sheet / roof rack attachment detail drawing
- Architectural schedule B not required for 1 and 2 family dwellings.

# Building Permit Requirements

There are 3 categories when a BP is required:

- Full BP when upgrading roof
- BP without structural engineer involvement (meet conditions)
- BP with structural comfort letter (meet conditions)



# Full Building Permit Required

- 1 Full Building Permit Required** if any of these:  
(incl. signed and sealed drawings with a Schedule B)
  - Roof structure changed or reinforced to allow panels and/or part of a building alteration
  - Building is not a 1 or 2 family building
  - Panels not mounted on the rooftop (wall etc.)
  - Flat roof
  - Panels are connected via ballast
  - Building is proposed to not have a BC Hydro electrical hook up.

# Building Permit may not be required

2

**Building Permit may not be required** if ALL of the following criteria are met (straight to electrical permit)

- Roof is designed in compliance with the 1987 VBBL or newer
- Shingle or lightweight rooftop material
- Panel unit weight shall not exceed 5 pounds/sq. foot
- Max point load is < 70lbs per roof connection
- Parallel to the roof and the space between the top of the roof and underside of the panel system  $\leq$  6 inches
- Capable of resisting CoV climatic loads and installed in compliance with instructions
- Panels are placed a min. of 2 ft. from the perimeter of a roof or a roof peak
- Panels are CSA/ULC approved for the prescribed installation



# Building Permit may not be required

3

**Building Permit may not be required** with a Comfort Letter signed and sealed by a Professional Engineer if all of the following are met. (generally pre-1987 homes)

- Confirmation that it is a Part 9 building
- Wind uplift forces must be transferred to the roof structure using mechanical fasteners
- Footing base plates shall be manufactured from steel which is at least 0.95mm thick
- Plus all criteria (excluding 1987 or newer VBBL) met from category #2

# Conditional Submission Requirements

Building Review officer will circle requirements on the submission checklist for applicant which will include:

- [http://bylaws.vancouver.ca/bulletin/S009\\_c.pdf](http://bylaws.vancouver.ca/bulletin/S009_c.pdf)
- Clear, legible and precisely dimensioned sketches are generally acceptable for 1 and 2 family homes
  - Site plan, roof plan, elevations
- System component specification sheet including total kW capacity of the panels for collectors, inverters and controllers.
- Rack or ballast detail of spec sheet including installed system weight
- Schematic or sketch of system layout
- Schedule B drawings required only when full Building Permit category

# Conditional Submission Requirements

- Comfort Letter template can be used, or a letter from a PEng. containing the same information as the template is acceptable
- Template:  
[http://bylaws.vancouver.ca/bulletin/S009\\_a.pdf](http://bylaws.vancouver.ca/bulletin/S009_a.pdf)
- Comfort Letter does not require signed and sealed drawings
- Owner or owner's rep. shall demonstrate that:
  - The roof is covered by only one layer of shingles

# Summary

- Contact the Enquiry center to help determine the zoning of your buildings
- Use this checklist to help determine your building permit requirements [https://bylaws.vancouver.ca/bulletin/S009\\_b.pdf](https://bylaws.vancouver.ca/bulletin/S009_b.pdf)
- Use this checklist to help determine your document submission requirements [https://bylaws.vancouver.ca/bulletin/S009\\_c.pdf](https://bylaws.vancouver.ca/bulletin/S009_c.pdf)
- Use this checklist to help determine submission requirements for solar hot water  
[https://vancouver.ca/files/cov/solar\\_hotwater\\_retrofit\\_checklist -  
1 and 2 family.pdf](https://vancouver.ca/files/cov/solar_hotwater_retrofit_checklist_-_1_and_2_family.pdf)

# Review: Solar PV Permit Process

- **Step 1:** Please see Enquiry Staff who will assess your building and determine the type of permit necessary and submission requirement
  - *An Electrical Permit is always required*
- **Step 2:** Gather all complete submission requirements and submit to Enquiry Centre
- **Step 3:** Get your Permit