

**From:** Richard Wayte <[rwayte@ospreyelectric.com](mailto:rwayte@ospreyelectric.com)>  
**Sent:** Monday, August 21, 2023 11:51 AM  
**To:** Stuart McLean <[stuart.mclean@rdn.bc.ca](mailto:stuart.mclean@rdn.bc.ca)>  
**Subject:** Solar Rooftop Systems - RDN Building Permit Process

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**EXTERNAL** Verify links before clicking.

Hello Stuart,

I'm not sure where to direct my frustration, but as the Chair of the Climate Technical Action Committee I've selected you as the lucky recipient of this email. My name is Richard Wayte and I manage the Solar Division of Osprey Electric, an electrical contractor based in Parksville doing a tremendous amount of work in the RDN.

The solar industry started to really boom in BC and specifically Vancouver Island roughly 2 summers ago when the federally launched Greener Homes Grant took hold. Last summer (June 2022) the RDN killed the advantage the Grant provided and put the brakes on enabling clean renewable energy by adding/modifying the building permit requirement for rooftop solar systems, demanding a complete structural review by a professional engineer.

We recently filed our 4<sup>th</sup> permit application and have at least 3 more in our development queue. Unfortunately, we've had roughly a dozen projects terminated by the homeowner because they found the fees associated with the permit process, to be excessive. The average system in the City of Parksville costs the homeowner roughly \$24,000, the same system in the RDN costs roughly \$29,000.

We'd like to see the RDN adopt a permitting structure like that of Vancouver that sets a list of criteria identifying when permitting should or should not be required. In the City of Vancouver, any system on a sloped roof under 5 pounds per sq foot does not require a structural review or permit (see attached; there are other relevant criteria but this one is key). If over the 5 pounds threshold, or a flat roof, then the structural review would be necessary. Below is our cost structure using a Nanaimo based engineer to complete the necessary site visits and documentation including a roughly 20% markup which equates to roughly \$5,190 + GST to the customer. The variation in costs from engineer to engineer is subtle, we might save \$250 per stage, but we doubt it as we have an independent with greater control of overhead. Best case we reduce the overall client cost to approximately \$4,000.

1. What kind of consultation did the region do with other municipalities, the engineering community and solar industry before setting the permit process in place?
2. Can we get the RDN to reconsider their permit process with respect to rooftop solar installations?

Thanks for your time & consideration.

	A	B	C	D	E	F	G	H
	Phase Code	Cost Type	Phase Description	Item Description	Qty	Unit	Ext	Margined
19	9	P	General	Permit - RDN Building Permit Processing Fee (\$20,001 to \$50,000 project)	1	450.00	450.00	542.17
20	9	P	General	Permit - RDN Building Permit Processing Fee (\$50,001 to \$100,000 project)	0	500.00	0.00	0.00
21	9	P	General	Permit - RDN Building Permit Fee (\$0 to \$20,000 project)	0	150.00	0.00	0.00
22	9	P	General	Permit - RDN Building Permit Fee (>\$20,000 project)	0	250.00	0.00	0.00
23	9	P	General	Permit - RDN Building Permit Additional Value of Construction (1% * Construction Value)	0	420.00	0.00	0.00
24	9	P	General	Permit - RDN Building Permit Fee Reduction (subtract 5% of Permit Fee for engineering)	0	33.50	0.00	0.00
25	9	P	General	Permit - Archived Record Request - RDN Drawings	1	40.00	40.00	48.19
26	9	S	General	Subcontract - Structural Engineering Review - Phase 1 - Assessment	1	1550.00	1,550.00	1,867.47
27	9	S	General	Subcontract - Structural Engineering Review - Phase 1 - Travel Fee	1	30.00	30.00	36.14
28	9	S	General	Subcontract - Structural Engineering Review - Phase 1 - Mileage	1	10.00	10.00	12.05
29	9	S	General	Subcontract - Structural Engineering Review - Phase 2 - Detail Design	1	1550.00	1,550.00	1,867.47
30	9	S	General	Subcontract - Structural Engineering Review - Phase 2 - Review	1	550.00	550.00	662.65
31	9	S	General	Subcontract - Structural Engineering Review - Phase 2 - Travel Fee	1	20.00	20.00	24.10
32	9	S	General	Subcontract - Structural Engineering Review - Phase 2 - Travel Costs	1	10.00	10.00	12.05
33	9	L	General	RDN Permit Filing Labour	2	49.00	98.00	118.07

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**DEVELOPMENT SERVICES, BUILDING AND LICENSING DEPARTMENT**

If you have any questions regarding the information requested on this form, please call 604-873-7611.

**NOTE: An Electrical Permit is always required**

<b>Project Address:</b>		<b>Permit Number:</b>	
<u>Criteria</u>		<u>Notes</u>	
<b>1) Full Building Permit Required if one or more of the following criteria are met</b>		Yes	No
Panels are the sole source of energy to the building			
The building is NOT 1 or 2 family			
The panels are not on a rooftop (wall mounted, mounted in the backyard)			
The panels are part of an addition or building alteration			
The panels are connected via a ballast versus direct connection to the roof			
Panel installation will trigger the need for a change in roof structure or for roof reinforcement			
The roof where the panels will be installed is flat			
<b>2) Building Permit may not be required if all of the following criteria are met (Post-1987) (Note: Documentation may be required to confirm the following items where applicable)</b>			
Roof is designed in compliance with 1987 VBBL (enacted May 5, 1987) or newer	Owner or owner's representative shall demonstrate that the roof framing system and loads applied to the roof framing system have not been altered subsequent to the house' original construction		
Shingle or lightweight rooftop material	Owner or owner's representative shall verify that the roof is covered by only one layer of shingles.		
The unit weight of the PV panel system, including all cables and support framing shall not exceed 0.24kPa (5 pounds per square foot)			
Max Point Load is < 70 lbs per roof connection	(see note 1 below for more information)		
The PV panel system is installed such that it is parallel to the plane of the roof and the maximum space between the top of the roof and the underside of the PV panel system does not exceed 150mm (6 inches)			
The mounting structure used is engineered for solar electric, is capable of resisting the climatic loads applicable to the City of Vancouver and installed in compliance with instructions	PV panel rail support system is capable of supporting the self-weight of the system plus a snow load of 1.19kPa (25 pounds per square foot) and 0.82kPa of wind uplift force (17 pounds per square foot)		
Panels are placed a minimum of 2ft. from the perimeter of a roof or a roof peak	(see Note 1 below for details)		
Panels are CSA / ULC approved for prescribed installation	CSA-SPE-900-13 outlines best practices for rooftop PV systems		

Solar Photovoltaic Panel Permit Category Criteria

<b>Project Address:</b>		<b>Permit Number:</b>	
<u>Criteria</u>		<u>Notes</u>	
<b>3) Building Permit May Not Be Required <i>with</i> a comfort letter signed and sealed by a Professional Engineer if all the following criteria are met (Pre-1987)</b>		Yes	No
1 or 2 family home and: - Building is no higher than the max of 3 stories of 12m (40 ft.) as defined by the VBBL - Max area of any one level shall not exceed 600 sq. m (6,460 sq. ft.) - Clear span of any structural member that supports the roof shall not exceed 12.2m (40 ft.) - Max total roof area shall not exceed 4,550 sq. m (49,000 sq. ft.)			
If records indicate the house was constructed prior to the 1987 VBBL (enacted May 5, 1987) a comfort letter signed and sealed by a Professional Engineer is required.  A Template letter is available through the building department.			
It shall be represented that the roof is covered by only one layer of shingles			
The unit weight of the PV panel system, including all cables and support framing shall not exceed 0.24kPa (5 pounds per square foot)			
The PV panel system shall be installed such that it is parallel to the plane of the roof and the maximum space between the top of the roof and the underside of the PV panel system does not exceed 150mm (6 inches)			
Max Point Load is < 70 lbs per roof connection		See Note 1 below	
Footing base plates shall be manufactured from steel which is at least 0.95mm (0.0374 inches) thick			
Wind uplift forces must be transferred to the roof structure using mechanical fasteners		Unless accompanied by a letter from a Professional Engineer, it is not permissible to resist wind uplift forces with ballast.	
Manufacturer or installer verification of the PV panel rail support system shall verify that the system is capable of supporting self-weight plus a snow load of 25 pounds per square foot. Installer/manufacturer verification system can withstand wind uplift forces of 17 pounds per square foot			
Panels are placed a minimum of 2ft. from the perimeter of a roof or a roof peak			
<b>Additional Information</b>			
** NOTE ** Work on/near the property line may require a Street Occupancy (Hoarding) Permit. Contact the Engineering Department at 604-873-7322 or 604-873-7773.			

<u>Decision</u>			<u>Initial of BRB staff</u>
Is a Building Permit Required? (BRB to fill out and initial)	Yes	No	
Is a letter of assurance from a professional engineer required?	Yes	No	
Does the project require development review and DE or DB Permit? (Planner/ECO to fill out and initial)	Yes	No	
Does the project require a height relaxation? (Planner/ECO to fill out and initial)	Yes	No	

Note 1:

The PV panel system shall be supported by a suitable rail system which shall transfer gravity point loads and wind uplift forces directly to structural roof members.

This shall be accomplished by fastening the rail system footings to underlying wood framing with a minimum of 2 - #10 wood screws with a minimum clearance of 100mm (4 inches) between screws. The length of each screw shall be such that a minimum of 50 mm (2 inches) of the threaded portion of the screw penetrates into the roof joist, rafter or truss.

The required screw length shall account for the thickness of the steel bearing plate, roof sheathing, sleepers and any other components that occupy the space between the top of the footing base plate and the top of the joist, rafter or truss.

The rail footings shall be spaced such that they support a maximum tributary area of 1.24 square meters (13.33 square feet) and they transfer gravity and uplift loads approximately equally to all joists, rafters or trusses that are beneath the PV panel system.

It is not permissible (unless a professional engineer is involved) to support the majority of the footings on girder trusses or beams (refer to Section 3.1 of background RDH report) for girder truss and beam definitions).

Vertical reactions due to the weight of the PV panel system should not exceed 310 Newtons (70 pounds).