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## **New Electrical Loads Installation (NELI) Form**

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This Bulletin outlines the process and documentation required under an Electrical Permit to request adding new electrical loads to existing buildings of 5 units or greater.

### **Background**

To expedite electrical permit reviews and enhance permit application submissions, the New Electrical Load Installation form (NELI) must be provided to City staff for existing multi-unit buildings, of 5 or more units, pursuant to the following:

- Electrification of existing fuel combustion space heating and domestic hot water systems
- New electrical heating, ventilation, air conditioning systems (HVAC)
- New electric vehicle charging systems
- Installation of new or modification of other electrical loads (in excess of 3000 watts within unit)

The new form is intended to standardize the information gathering procedure and expedite and enhance permit applications. It is also intended to support submissions for new electrical loads identified under the [Strata electrical planning report](#).

The Electric Permit Webpage can be found here:

<https://vancouver.ca/home-property-development/electrical-permit.aspx>

The NELI form can be found here:

<https://vancouver.ca/files/cov/new-electrical-load-installation-neli-form.pdf>

### **Requirements**

The NELI form is required to be submitted at the electrical permit application stage for buildings of 5 or more units, installing new electrical loads. It is not required when reducing net loads, such as removing baseboard heaters and switching to heat pumps, provided the net load is reduced.

Load calculation(s) must be provided and must include such information (where applicable) as:

- Existing and upgraded consumer's service ratings, ratings of feeders and branch circuits,
- Increased electrical load,
- Where an Energy Management System is used, provide explanation of how it can manage the net additional load increase and fail-safe mechanisms,
- Remaining electrical capacity after the installation is complete.
- Note: Electrical load calculations are only required to be applied in dwelling units where new loads are being added.

The single line diagram(s) must be provided and must include such information (where applicable) as:

- Existing consumer's service and distribution affected by proposed new additional loads,
- Proposed distribution equipment including overcurrent protection and conductor sizing of new additional loads,

- Components of any Energy Management System, if applicable.
- Hand-drawn single line diagrams are acceptable

The NELI form must be submitted to City Staff under an electrical permit, at the time of installation of new electrical loads as per the above.

*Note: A customer cannot increase the electrical load at their premises by more than 15kW or 20%, whichever is greater, without prior approval from BC Hydro. Additionally, the total load must not exceed 80% of the rated capacity of the customer's main switch. Any increase beyond these limits requires advance approval from BC Hydro. (See BC Hydro Electric Tariff Section 7.1)*

As part of this form, the Building Owner or Strata President must acknowledge that the proposed scope of work within the current electrical capacity of the building is approved and acknowledge that additional installations may restrict the future electrical capacity of the building(s) and addition of new loads may not be possible in the future.

**Explanation**

This form will help electricians, electrical engineers and city staff when submitting electrical permit applications for new loads. It standardizes information already collected into a single document and formalizes what City staff request at the time of application. In addition, this document will be associated with the parcel, allowing reviewers to reference previous submissions when new applications arise, helping building owners and managers keep track of their electrical capacity as well as past and future projects.

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