

ELECTRICAL INSPECTION BULLETIN

B-2-014

Electrical Plan Submittals



(Effective 13/12/2019)

1.0

At least one set of electrical plans shall be submitted to the inspection department for examination and retention by NSPI for inspection purposes in accordance with the minimum requirements of this bulletin.

2.0

Plans are examined for conformability to the latest adopted edition of the Canadian Electrical Code, Part 1 and other applicable standards and regulations including but not restricted to NSPI Underground and Overhead Standards, NSPI Metering Standards, and inspection related bulletins issued by NSPI and the Department of Labour and Advanced Education.

3.0

All plans shall be well prepared, legible and in good form and shall comply with the Inspection Department's minimum requirements of this bulletin. Plans that have been poorly prepared may be returned to the submitter for rework prior to completing the compliance review. Whenever possible the wiring permit number should be provided at the time the plans are submitted.

4.0

Plans and related specifications shall be submitted for the following:

Consumer Services (See Note 1)

- All three phase consumer service and/or sub-service installations with an equipment nameplate rating equal to or greater than 400 amperes.
- All single phase consumer service and/or sub-service installations with an equipment nameplate rating equal to or greater than 600 amperes.
- All temporary consumer service and/or sub-service installations with an equipment nameplate rating equal to or greater than 400 amperes.
- All consumer service and/or sub-service installations with an equipment nameplate rating equal to or greater than 750 volts.
- For the purpose of this bulletin each subdivision of a consumer's main service, through a utility owned metering device, shall be considered a sub-service.

Generators (Non-Renewable) (See Note 2)

- All new three phase generator installations with an equipment nameplate rating equal to or greater than 400A.
- All new single phase generator installations with an equipment nameplate rating equal to or greater than 600A.
- All new generator installations with a nameplate rating equal to or greater than 750 volts.

Equipment / Feeders

- Where the installation of new equipment has a rated capacity in excess of 250KVA.
- Where the combined rated capacity of all new equipment is in excess of 250 KVA.
- All new equipment installations with a nameplate rating equal to or greater than 750 volts.
- Plans are not required for the replacement of electrical equipment, provided the electrical equipment characteristics are the same as the original installation.

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Hazardous Locations

Plans and related specifications shall be submitted where electrical wiring or electrical equipment is installed in a hazardous location, as defined in Sections 18 and 20 of the Canadian Electrical Code, Part 1 for the following:

- New installations.
- Extension of an existing classified area.
- Reclassification of existing locations.
- Drawings are not required where approved electrical wiring or electrical equipment is installed in an existing classified area provided the area does not require a new classification due to a change in the process.
- Requirements for drawings to be designed and stamped by a Professional Engineer are outlined in the Nova Scotia Department of Labour and Advanced Education Bulletin 2002-01 (Requirements to submit Drawings for Hazardous Locations).

Dwelling Units

Plans and related specifications shall be submitted for residential type installations where:

- A single building contains 10 dwelling units or more, or
- A group of buildings where the combined occupancy is 10 dwelling units or more and is fed from a common consumer's service.
- Plans are not required for single dwellings.

Alternative Energy Sources (Renewable)

- All Utility Interactive energy sources in accordance with NSPI Class 1 and Class 2 Net Metering Applications,.
- All Utility Interactive energy sources in accordance with NSPI Comfit / Community Building Interconnection Guidelines.
- All Utility Interactive energy sources in excess of 100 Kilowatts.
- All (Off Grid) Non-Utility Interactive alternative energy sources of any size.

5.0

The Inspection Authority may, in addition to the requirements of this bulletin, request the submission of plans and specifications for any proposed electrical installation.

Additional information may be requested in order to complete the plans review process where such information is deemed necessary to confirm the application of any associated equipment or wiring methods. This process may involve direct communication with architects, consultants, builders, electrical contractors, owners and other persons or organizations as required.

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6.0

Plan submittals shall include, but not limited to the following information:

- Complete Single line diagram
- Load calculations
- Site plan
- Service entrance equipment layout
- Wiring methods, including raceway size (if applicable), conductor size and material
- Underground installations shall reference the applicable ampacity table used
- Overcurrent protection
- Grounding / Bonding
- Transfer scheme for generator installations (Where applicable)

7.0

A cover sheet shall be provided with all plan submittals meeting the criteria outlined in **NSPI Bulletin B-2-014.1**. The plan review process may be delayed if inadequate information is provided, or, if errors, omissions, or code violations are found during the review process.

8.0

Electrical engineering consultants are encouraged to have electrical plans accepted by the inspection department prior to the job tendering process.

9.0

As early as possible during the design stage, site plans and service requirement details should be submitted to NSPI to ensure availability of service when required. Service requirement details shall include, but not restricted to, voltage, phase, ampacity and calculated load.

Note: Pad-Mount transformers require a 16-20 week delivery.

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Notes

1) Additional requirements are outlined in Bulletin 2014-01 issued from the Department of Labour and Advanced Education in relation to service entrance requirements not specifically detailed in this bulletin.

<http://novascotia.ca/lae/electricalsafety/docs/ElectricalBulletin-2014-01.pdf>

2) Where an installation requires an emergency power supply as mandated by the *National Building Code of Canada*, the installation shall also be in compliance with Section 46. This Section is intended to apply to the installation, operation, and maintenance of emergency power supplies, such as batteries or generators that are required by the *National Building Code of Canada* to provide emergency power for the operation of life safety systems. Installers shall also consider the requirements of standard CSA C282 for the installation of stand by generators when used for this purpose.

3) Installations in Health Care Facilities shall be in compliance with the requirements of Section 24 of the CE Code Part 1. Users of this Code should also consult CSA Z32, as it recommends additional precautions to take in the design, construction, use, and maintenance of electrical systems in such areas.

4) Where equipment in an existing installation, meeting the submittal criteria of this bulletin is being changed or repaired, and there is no change in the equipment characteristics, or the designation of the area in which the equipment is being installed has not changed, then typically a plans review will not be required. Replacement of electrical equipment shall not be such that it reduces the minimum clearances as determined by the equipment nameplate rating.

5) Where service conductors or feeders in an existing installation, meeting the submittal criteria of this bulletin are being replaced with like for like, the ampacity of the conductors or cables shall be based on the latest adopted edition of the CE Code Part 1. Where due to existing conditions or installation methodology it is not possible to meet these requirements consultation with the inspection department is required

6) Consultation with the inspection department should be considered when variables outside the parameters of this bulletin exist to confirm if plans review is required. In all cases, including new and existing installations, where a plans review is not required by this bulletin, the installation shall meet the applicable requirements of the latest adopted edition of the Canadian Electrical Code Part 1.

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Submittals

Plans and related specifications are to be submitted to the Inspection Department in one of the following manners:

- Electronically (preferred) – plansreview@nspower.ca
(These files must be in **PDF** format, under 10Mb per email. Please note **.zip** files are blocked by NSPI firewall)
- Fax: 902-428-7503
- Hard copy (paper), CD/Data Stick mailed or delivered to:

Nova Scotia Power Inc.
Attention: Inspection Services
25 Lakeside Park Drive
Lakeside, NS
B3T1M9