

ELECTRICAL BULLETIN

2018-01

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Date: March, 2018

Subject: Adoption of the 2018 Canadian Electrical Code, Part 1- 24 th Edition

Effective May 1, 2018, the 2018 Canadian Electrical Code, Part 1- 24 th edition (CEC) will be adopted per the Electrical Code Regulations which are made under the authority of section 6 of the Electrical Installation and Inspection Act.

Compliance to the 2018 CEC will be required for any electrical work, installation or equipment within Nova Scotia and per any bulletins issued by this office or the electrical inspection authority.

To ensure uniformity in electrical inspections the code is adopted with no amendments.

Limited direction on new rules may be provided in this bulletin. Future bulletins may be issued from this office or the electrical inspection authorities to provide clarity and direction on how various rules are interpreted and should be reviewed by all users of the code.

Electrical work that started prior to May 1, 2018, may be inspected to the 2015 CEC if an electrical permit was obtained for that electrical work, and where applicable, the plans were accepted by the electrical inspection authority, prior to May1, 2018

Where electrical work starts or plans are submitted on or after May 1, 2018 design, review and inspections shall be per the 2018 CEC regardless of when the permit was issued.

The electrical inspection authority reserves the right to determine whether electrical work was started on any installation prior to May 1, 2018.

As in previous editions where a change to a section or rule has been made from the previous code the change is identified. In the 2018 CEC changes are identified by a small triangle located in the left- hand margin.

The following are **brief summaries** of some of changes in the 2018 CEC.

Code users should review all code changes identified in the code and incorporate them into their design and installations where appropriate.

-Section 2 –General rules- changes were made to require marking of electrical equipment to indicate the maximum continuous loading permitted when not the same as the fuse or breakers continuous rating

-Section 2 -Working space around electrical equipment- the 1 m working space rule was revised to apply to all electrical equipment that requires maintenance or examination or where a disconnect or operating means exists

-Section 4- Conductors-changes were made to include Tables D17A -D17N for direct buried cables when applying temperature limitations on termination

-Section 8-Circuit loading and demand factors-changes were made on maximum circuit loading to ensure applicable rules apply to all conductors chosen in section 4 not just those in Tables 1-4

- and changes were also made to clarify branch circuit requirements for automobile heater receptacles and to allow electric vehicle management systems to be used

-Section 10- Grounding and bonding-was completely rewritten and a new Table 16 added -the rewrite did not in general create any changes in bond or ground wire sizes from those required in the 2015 CEC

-Section 12- Wiring methods-changes were made to include HDPE conduit and to include extra low voltage suspended power distribution systems

-Section 16 -Class 1 and Class 2 circuits -changes were made to include Power over Ethernet (PoE)

-Section 18 – Hazardous locations-revisions were made to remove Zone references

-Section 24- Patient care areas-changes were made to align with section 46 on the separation of life safety circuits and clarify what is permitted

-Section 26- Installation of electrical equipment-the requirements for tamper resistant receptacles was expanded beyond child care facilities to include guest rooms and suites of hotels and motels and for preschools and elementary facilities

-Section 26 cont'd- AFCI protection was only expanded to require such protection for new receptacles installed within existing dwelling units where the existing branch circuit has no AFCI protection

-it should be noted that the requirements for all circuits within a dwelling unit to require AFCI protection **did not** get accepted into this version of the code and therefore the 2018 CEC does not require any additional AFCI protection for **new** construction other than what was required for in the 2015 CEC.

-Section 32 -*Fire alarm systems, fire pumps and smoke alarms*-changes were made to allow smoke alarms or combination smoke and carbon monoxide alarms that have integral battery backup to now be connected to a branch circuit that is AFCI or GFCI protected

-conductors from the emergency power source to the fire pump were increased in size from 125% of FLA to 200% of FLA **but was deleted just prior to publishing.**

-Section 36-*High voltage installations*-a new rule was added to clearly indicate that high voltage conductors cannot be installed over buildings

-Section 62-*Fixed electric heating systems*-was amended to require GFCI protection for heater controls and heating devices installed within specified distances of sinks, tubs and showers

-Section 64-*Renewable energy systems*-was revised to allow a maximum of 1500 VDC for photovoltaic systems

-and several rules were revised to clearly indicate disconnecting means requirements and location and to clarify the location for PV rapid shutdown device

-Section 68- *Pools, tubs and spas*-was revised to allow up to 3 cord connections for hydro massage bathtubs

-Section 78- *Marinas, yacht clubs, wharves etc.*-was completely rewritten to provide clarity of the scope and provide definitions as required

-Table 16 -*Bonding conductor size*-was deleted and a new Table 16 introduced -this new Table does not change the general requirements for bond conductor sizes in most instances

These changes are just a few of the high- level changes coming in the 2018 CEC and only provides a brief description of the actual changes and does not include in some instances further requirements or details specific to the code change.

To fully understand all the proposed changes in the 2018 CEC it is strongly recommended that all affected or interested parties sign up for a code seminar when offered.

As in the past, code seminars are typically offered by NSPI, CSA, Electricity Forum and Dalhousie University starting in the early spring after the code is published.

Any questions regarding the CEC portion of this bulletin may be forwarded to the:
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Electrical safety website: <http://novascotia.ca/lae/electricalsafety/electricalbulletins.asp>