



Code Amendment Proposal Application

Department of Consumer & Business Services

Building Codes Division

1535 Edgewater NW, Salem, Oregon

Mailing address: P.O. Box 14470, Salem, OR 97309-0404

Phone: 503-378-4133, Fax: 503-378-2322

Oregon.gov/bcd

Read the entire code amendment proposal application before completing this form. Please complete all parts before submitting your proposal and refer to the provided checklist.

APPLICANT INFORMATION

Name: Mike Stone

Date: November 4, 2022

Representing (if applicable): National Electrical Manufacturers Association

Work phone: (703) 841-3632

Mailing address: PO Box 227

Cell phone: (707) 495-8424

City: Dobbins

State: CA

Zip: 95935

Email address: mike.stone@nema.org

PROPOSAL INFORMATION

Specialty code: Oregon Electrical Specialty Code

Code section(s): 230.71(B)

Briefly explain the subject of your proposal: Delete the existing OESC amendment that removed the requirement for a single disconnecting means for services and adopt model code language.

INSTRUCTIONS AND CHECKLIST

Fill in all the information above and submit this page, signed and dated, with the required supplementary information for Parts I, II, III, and IV described on page 2 of this application. This application may be submitted by mail to the mailing address above, or by email to BCD.PTSPtech@oregon.gov.

Summary checklist for the applicant:

- Part I** Code amendment language is attached in the proper format.
- Part II** Amendment proposal requirements for amending the code have been reviewed.
- Part III** Amendment proposal criteria questions have been answered and are attached.
- Part IV** If applicable, additional ORSC energy efficiency amendment proposal information is attached.

Note: One application is required for each code section you are proposing to amend. If this proposal requires changes in other sections of the code for alignment, include those changes as part of this application.

APPLICANT SIGNATURE

Signature: *Mike Stone NEMA* Date: November 4, 2022

Copyright notice: By signing this Code Amendment Proposal Application, I understand and acknowledge that the work contained in this application is original, or if not original, I have the right to copy the work. By signing this work, I understand that any rights I may have in this work, including any form of derivative works and compilations, are assigned to the Department of Consumer and Business Services Building Codes Division. I also understand that I do not retain or acquire any rights once this work is used in a Department of Consumer and Business Services Building Codes Division publication.

Proposal – OESC Section 230.71(B)

1. Describe the concept and purpose of this proposal.

Existing OESC language:

~~“230.71 Maximum Number of Disconnects. Each service shall have only one disconnecting means unless the requirements of 230.71(B) are met.~~

~~(A) **General.** The service disconnecting means for each service permitted by 230.2, or for each set of service-entrance conductors permitted by 230.40, Exception No. 1, 3, 4, or 5, shall consist of not more than six switches or sets of circuit breakers, or a combination of not more than six switches and sets of circuit breakers, mounted in a single enclosure, in a group of separate enclosures, or in or on a switchboard or in switchgear. There shall be not more than six sets of disconnects per service grouped in any one location.~~

~~For the purpose of this section, disconnecting means installed as part of listed equipment and used solely for the following shall not be considered a service disconnecting means ...~~

~~230.71 (B) Two to Six Service Disconnecting Means. Entire section: Not adopted by the State of Oregon.~~

~~(B) **Single-Pole Units.** Two or three single-pole switches or breakers, capable of individual operation, shall be permitted on multiwire circuits, one pole for each ungrounded conductor, as one multipole disconnect, provided they are equipped with identified handle ties or a master handle to disconnect all conductors of the service with no more than six operations of the hand.~~

~~Informational Note: See 408.36, Exception No. 1 and Exception No. 2, for service equipment in certain panelboards, and see 430.95 for service equipment in motor control centers.”~~

Proposed language (model 2023 NEC):

“230.71 Maximum Number of Disconnects. Each service shall have only one disconnecting means unless the requirements of 230.71(B) are met.

230.71(A) General. For the purpose of this section, disconnecting means installed as part of listed equipment and used solely for the following shall not be considered a service disconnecting means:

- (1) Power monitoring equipment
- (2) Surge-protective device(s)
- (3) Control circuit of the ground-fault protection system
- (4) Power-operable service disconnecting means

230.71(B) Two to Six Service Disconnecting Means.

Two to six service disconnects shall be permitted for each service permitted by 230.2 or for each set of service-entrance conductors permitted by 230.40, Exception No. 1, 3, 4, or 5. The two to six service disconnecting means shall be permitted to consist of a combination of any of the following:

- (1) Separate enclosures with a main service disconnecting means in each enclosure

- (2) Panelboards with a main service disconnecting means in each panelboard enclosure
- (3) Switchboard(s) where there is only one service disconnect in each separate vertical section where there are barriers separating each vertical section
- (4) Service disconnects in switchgear or metering centers where each disconnect is located in a separate compartment

Informational Note No. 1: Metering centers are addressed in UL 67, Standard for Panelboards.

Informational Note No. 2: Examples of separate enclosures with a main service disconnecting means in each enclosure include but are not limited to motor control centers, fused disconnects, circuit breaker enclosures, and transfer switches that are suitable for use as service equipment.”

2. What problem in the existing Oregon code or national model code is this proposal solving? How does this amendment address the issue? If you have evidence demonstrating the problem, submit that information.

This proposal maintains the minimum life safety provisions in the 2023 NEC by retaining the same language in the 2023 OESC. The 2017 NEC and previous editions allowed up to six disconnecting means at a service before a single main disconnect was required. (This is commonly referred to as the “six-handle” rule). Section 230.71 now requires a single main service disconnect in some situations, depending on the configuration of the service equipment.

Helpful information

- a) If this proposal corrects any unforeseen or probable outcomes resulting from the application of a code section, explain how.

N/A

- b) If this proposal corrects inadequate application by a code section to a method, material or design, explain how.

N/A

- c) If this proposal eliminates conflicting, obsolete, or duplicative code provisions or standards between Oregon-adopted codes, statutes or regulations, explain why.

N/A

- d) If this proposal is for a fire or life safety matter, or is it otherwise needed to protect the health, safety, welfare, comfort and security of occupants and the public, explain why.

This is a life safety matter. Accidents involving electrical and utility workers having to work on live service equipment are all too common. Providing a method of deenergizing this equipment is an important safety consideration.

Part of the NEC Committee statement for this change included, "This reduces the likelihood of an incident with energized conductors or circuit parts in the service equipment, enhancing safety."

Part of the substantiation included for one of the NEC Public Inputs for this Section included, "The permission for six service disconnects in a single enclosure creates significant safety concerns, is no longer relevant or necessary and must be removed. This present allowance eliminates the ability to establish an electrically safe work condition for justified energized work that must be performed within service equipment enclosures with more than one service disconnect. The six main rule for a single enclosure makes it impossible to work in service equipment when applying electrical safe work practices in accordance with NFPA 70E."

e) If this proposal is necessary to address unique geographic or climatic conditions within Oregon, explain why.

N/A

f) If there are alternatives to this proposal that solve the problem, explain why this proposal is the best or a necessary solution.

N/A

g) If this proposal provides for the use of unique or emerging technologies, or promotes advances in construction methods, devices, materials and techniques, explain how.

N/A

h) If this proposal meets any energy conservation or indoor air quality requirements, explain how.

N/A

i) If this proposal involves the adoption of an electrical or plumbing building product, note if the appropriate advisory board approved the product.

N/A

3. Has this been proposed at the national model code level. If so, explain when it was proposed, what happened, and why it was not adopted. Provide all associated national model code hearing information and background.

The proposed language IS the model code language.

Implementation and fiscal impact

1. Explain how the proposed provisions would be enforced? Are additional inspections or permits required? Describe any necessary equipment, training, tests or special certifications.

These requirements would be verified at the plan review stage as well as subsequent field inspections.

2. What is the fiscal impact of this proposal? Provide a cost benefit analysis and include the resources or methods you used to determine the fiscal impact.

Fiscal impacts of this proposal will vary depending on the individual installation. Equipment such as switchboards, switchgear and panelboards are manufactured to meet these requirements.

Helpful information

- a) If this proposal adds to the cost of construction, explain how the added cost contributes to the health and safety of occupants, or is necessary to conserve scarce resources.

The health and safety impacts of this proposal are discussed in "Helpful Information, item (d)" above.

- b) If there are any other adverse fiscal impacts or cost savings passed on to the general public, the construction industry, local and state governments, and small businesses, an interested person must describe the added or reduced cost of a proposed code amendment, and describe the adverse fiscal impact or cost savings in relation to the current Oregon specialty code.

N/A

- c) If this proposal will affect the cost of development of a detached single-family dwelling, please indicate the cost. For the purposes of illustrating the change on the cost, please use a 6,000-square-foot parcel and the construction of a 1,200-square-foot detached single-family dwelling on that parcel. The information on the cost must be sufficient to assist the division in preparing a housing cost impact statement.

This proposal will not affect the cost of construction of a new single-family dwelling unit.

Impacted stakeholders and other specialty codes

1. It is important that proposals be shared with stakeholders that will be impacted by them. Was this proposal developed with people or organizations likely to be affected by it? Has it been

reviewed or shared with people or organizations likely to be affected by it? If so, who, and if not, why not?

This proposal was developed by NEMA members and staff. It aligns with the model NEC and has been reviewed by the respective Code Making Panel members and stakeholders during the 2023 NEC development process.

2. Does this proposal impact other specialty codes or statewide programs?

N/A