



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- International Building Code
- ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized [energy code forms](#)

Section(s): 1107, 1107.1, 1107.1.1, 1107.1.2

Title: Lithium-ion technology energy storage systems, Early detection, Corrective action plan

2. Proponent Name (Specific local government, organization or individual):

Proponent: Ken Brouillette

Title: Technical Code Coordinator

Date: 9/6/2024

3. Designated Contact Person:

Name: Ken Brouillette

Title: Technical Code Coordinator

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4. Proposed Code Amendment. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

Code(s) 2024 IFC Section(s) 1107, 1107.1, 1107.1.1,
1107.1.2

Enforceable code language must be used.
Amend section to read as follows:

~~SECTION 1107~~
~~ENERGY STORAGE SYSTEMS~~

~~1107.1~~ **1207.12** **Lithium-ion technology energy storage systems.** The owner of an energy storage system (ESS) utilizing lithium-ion battery technology having capacities exceeding the values in Table 1207.1.3 and installed prior to the jurisdiction’s adoption of the 2018 or later edition of the *International Fire Code* shall provide the *fire code official* a failure modes and effects analysis (FMEA) or other *approved* hazard mitigation analysis in accordance with Section 104.2.2 for review and approval.

Exception: Detached one- and two-family dwellings and townhouses.

~~1107.1.1~~ **1207.12.1** **Early detection.** In addition to the requirements of Sections 1207.1.8.1 and 1207.1.8.2, the analysis shall include an assessment of the ability of the installed protection systems to provide for early detection and notification of a thermal runaway event in relation to the ability of emergency responders to safely mitigate the size and impact of a thermal runaway event.

~~1107.1.2~~ **1207.12.2** **Corrective action plan.** Where hazards are identified by the analysis, a plan that includes a timetable for corrective action shall be submitted to the *fire code official* for review and approval. The plan shall include actions and system improvements necessary for eliminating or mitigating any identified hazards, including listed methods for early detection and notification of a thermal runaway event.

5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.

The purpose of this proposal is to move the language from Chapter 11 over to Section 1207. The issue is not a building feature retrofit topic, it is one of ongoing operation and maintenance of energy storage systems which requires an operational permit from the fire code official. As an operational issue the language belongs in Section 1207 for application to the existing systems before operational permits are issued or renewed.

6. Specify what criteria this proposal meets. You may select more than one.

- The amendment is needed to address a critical life/safety need.
- The amendment clarifies the intent or application of the code.

- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. **Is there an economic impact:** Yes No

If no, state reason: The change proposed is to move an existing requirement addressing operational activities subject to an annual permit from Chapter 11 to Section 1207 for ESS.

If yes, provide economic impact, costs and benefits as noted below in items a – f.

- a. **Life Cycle Cost.** Use the OFM Life Cycle Cost [Analysis tool](#) to estimate the life cycle cost of the proposal using one or more typical examples. Reference these [Instructions](#); use these [Inputs](#). Webinars on the tool can be found [Here](#) and [Here](#)). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.
- b. **Construction Cost.** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

\$[Click here to enter text.](#)/square foot

(For residential projects, also provide \$[Click here to enter text.](#)/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

- c. **Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:
- d. **Small Business Impact.** Describe economic impacts to small businesses:
- e. **Housing Affordability.** Describe economic impacts on housing affordability:
- f. **Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

Please send your completed proposal to: sbcc@des.wa.gov

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.