



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- | | |
|--|---|
| <input type="checkbox"/> International Building Code | <input type="checkbox"/> International Mechanical Code |
| <input type="checkbox"/> ICC ANSI A117.1 Accessibility Code | <input type="checkbox"/> International Fuel Gas Code |
| <input type="checkbox"/> International Existing Building Code | <input type="checkbox"/> NFPA 54 National Fuel Gas Code |
| <input checked="" type="checkbox"/> International Residential Code | <input type="checkbox"/> NFPA 58 Liquefied Petroleum Gas Code |
| <input type="checkbox"/> International Fire Code | <input type="checkbox"/> Wildland Urban Interface Code |
| <input type="checkbox"/> Uniform Plumbing Code | |

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

Section(s):

[Chapter 2 Definitions](#)
[R309.6M1905](#) (new)

Title:

[Dedicated Circuit for Electric Vehicle Charging-Ready Equipment](#)

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

Proponent: Kathleen Petrie

Title: Program Manager, Green Building Communitywide

Date: 4-8-22; [modified 5-26-22](#)

3. Designated Contact Person:

Name: Kathleen Petrie

Title: Program Manager Green Building Communitywide

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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) | IRC | Section(s) |
|---------|-----|--|
| | | <u>Chapter 2 Definitions</u> <u>R309.6M1905</u> (new) |

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

CHAPTER 2 **DEFINITIONS**

~~**Electric Vehicle Supply Equipment.** The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electrical vehicle.~~

~~**CHAPTER SECTION 30919** **GARAGES AND CARPORTS** **SPECIAL APPLIANCES, EQUIPMENT AND SYSTEMS**~~

~~**R309.6M1905** **DEDICATED CIRCUIT FOR ELECTRIC VEHICLE CHARGING** **SUPPLY EQUIPMENT**~~

~~**R309.6M1905.1 Application**
Electric Vehicles supply equipment for new construction. The provisions of this section shall apply to the construction of new dwelling units per Section R101.2 one and two family dwellings and townhomes with attached private garages ~~and or~~ attached private carports.~~

~~**R309.6.1M1905.1.1 Dedicated circuit for electric vehicle charging supply equipment.** A minimum of one 40-ampere dedicated 208/240-volt branch circuit Electric vehicles supply equipment shall be installed in the electrical panel for each dwelling unit ~~required parking space, in accordance with the National Electrical Code, Article 625.~~~~

5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Washington is a zero-emission vehicle state (ZEV). This means that 100% of car sales by 2030 will be electric vehicles. It is necessary to equip new homes with the infrastructure to charge these vehicles.

Based on feedback from the IRC TAG on May 23, 2020, the proposal has been modified in the following ways:

- The code section has been relocated from Chapter 19 to Chapter 34.
- The section now only requires a minimum of one 40-ampere dedicated 208/240-volt branch circuit instead of all the apparatus described in the EVSE definition, and the definition has been removed.
- Cost information has been updated to reflect the new requirement.
- The reference back to the NEC has been removed due to that the IRC and NEC are not correlated.

To require the apparatus between the panel and the charging outlet will be much less costly at the time of construction vs. having to alter the building later.

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:

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

- 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.
- 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

The cost of a 40-ampere 208/240-volt dedicated branch circuit can be as low as \$50. The cost of installation can vary greatly depending on a multitude of reasons

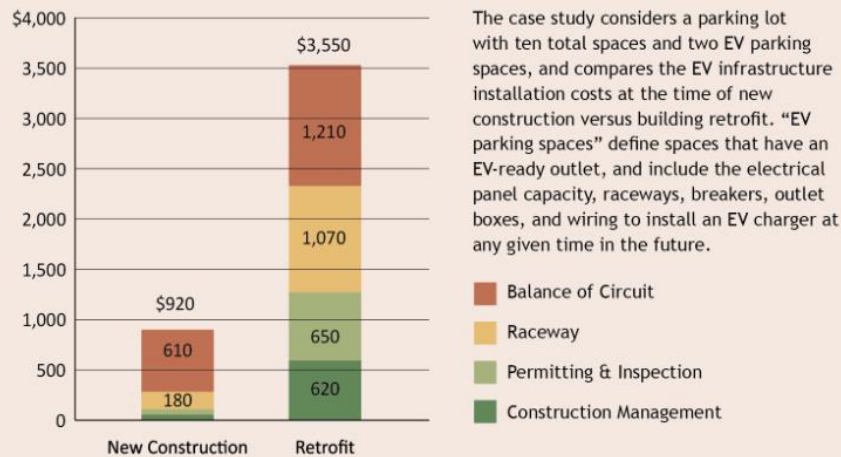
<https://www.swenergy.org/transportation/electric-vehicles/building-codes>

<https://electrek.co/2020/01/15/international-code-council-calls-for-all-new-homes-to-be-ready-for-240-volt-ev-charging/>

Retrofit:

Cost per EV Parking Space: New Construction vs Retrofit

Case Study prepared for the City and County of San Francisco (2016)



Source: Plug-In Electric Vehicle Infrastructure Cost-Effectiveness Report for San Francisco

<http://evchargingpros.com/wp-content/uploads/2017/04/City-of-SF-PEV-Infrastructure-Cost-Effectiveness-Report-2016.pdf>

- Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application: Impacts are nominal to review and inspect.
- Small Business Impact.** Describe economic impacts to small businesses: None
- Housing Affordability.** Describe economic impacts on housing affordability: This proposal makes it more cost effective if the infrastructure is already installed in a new building. It may impact the cost of new construction minimally.
- 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: This will help to reduce greenhouse gas emissions and is in alignment with the Zero Emission Vehicle State requirements.

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.