

To: Washington State Building Code Council

From: Gary Heikkinen, PE-NW Natural
Energy Code TAG Member

Date: September 25, 2019

Subj: Proposal WSEC-R36 on Section R406 Credits

This proposal would change the method to award additional credits in section R406 to be based on carbon emissions.

New section R406.2 would add a carbon emission normalization provision and establish a base normalization between fuels used to define the equivalent carbon emissions of the options specified. A new Table R406.2-Normalization Credits-would award credits based on the baseline heating system as shown below.

TABLE R406.2
FUEL NORMALIZATION CREDITS

<u>System Type</u>	<u>Description of Primary Heating Source</u>	<u>Credits</u>	
		<u>All Other</u>	<u>Group R-2</u>
<u>1</u>	<u>Combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.3.2(4) or C403.3.2(5)</u>	<u>0</u>	<u>0</u>
<u>2</u>	<u>For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(1)C or C403.3.2(2)</u> <u>or</u> <u>Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590</u>	<u>1.0</u>	<u>1.0</u>
<u>3</u>	<u>For heating system based on electric resistance only (either forced air or Zonal)</u>	<u>-1.0</u>	<u>-1.0</u>
<u>4</u>	<u>For heating system based on electric resistance with a ductless mini-split heat pump system in accordance with Section R403.7.1 including the exception</u>	<u>0</u>	<u>N/A</u>
<u>5</u>	<u>All other heating systems</u>	<u>-1</u>	<u>-0.5</u>

These carbon emission normalization credits were calculated using an emissions factor of 0.7 lbs/kwh for electricity. I am on the record and have testified that this emissions factor is not the correct factor for use in the code and have proposed a higher emissions factor of .97 lbs/kwh.

Regardless of which emissions factor is ultimately approved, awarding a full credit for a heat pump just meeting minimum federal standards is fundamentally and philosophically wrong. The prescriptive and mandatory provisions in the code would require the installation of this minimum efficiency heat pump to begin with. It does not make sense to then award an additional credit for doing nothing. Also, if the normalization credits were recalculated using even a slightly higher emissions factor of .8 lbs/kwh, it would not result in a credit for the code minimum heat pump.

It is recommended that the Council takes the following action:

1. Eliminate section R406.2 Carbon emission equalization and Table R406.2 Fuel Normalization Credits and approve the rest of section R406 as shown in the Proposed Rulemaking, CR-102 dated 8/6/2019.

Please don't hesitate to contact me if you have any questions.