

To: Washington State Building Codes MVE Committee

From: Gary Heikkinen, PE

Date: June 10, 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 equalization provision and establish a base equalization between fuels used to define the equivalent carbon emissions of the options specified. A new Table R406.2-Fuel Emissions Credits-would award credits based on the baseline heating system as shown below.

**TABLE R406.2  
FUEL EMISSION CREDITS**

Option	Description	Credits	
		All Other	Group R-2
1	For heating system using Gas furnace with minimum efficiency in accords with federal standards (AFUE 80)	0	N/A
2	For heating system using a heat pump that meets federal standards	1.0	1.0
3	For heating system based on electric resistance only (either forced air or Zonal)	-1.0	-1.0
4	For heating system based on electric resistance with a DHP per section R403.7.1 including the exception (either forced air or Zonal)	0	N/A

These carbon emission equalization credits were calculated using an emissions factor of 0.7 lbs/kwh. 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.

Awarding a full additional credit for a heat pump 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. Also, if the equalization credits were recalculated using even a slightly higher emissions factor of .8 lbs/kwh, it would not result in a credit for the code heat pump.

Since the carbon emissions factor is still not fully resolved for use in either the commercial or residential sections of the code, I propose the following options to consider:

1. Modify the proposal to eliminate the equalization credits in Table R406.2 and approve as modified.
2. Table the proposal until such time as the emissions factor is finalized and then recalculate the equalization credits if the emissions factor changes.

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