

August 24, 2020

To the members of the code review committee and the staff of the Building Codes Division,

This proposal would modify the Additional Measures section to include more measures, assign points to each measure and require differing amounts of credits based on the size of the home. The use of credits would allow measures with high levels of savings to be accounted for and it aligns with previous code proposals submitted for the 2017 ORSC by the Oregon Home Builders Association and the Northwest Energy efficiency Alliance. Both of those proposals suggested use of credits in lieu of trying to make all additional measures equal. The four additional measures are listed as options 7, 8, 9 and 10 in the proposed Table N1101.1(2) seen below. Also included in the proposed table revisions are point values for each measure.:

**TABLE N1101.1(2)  
ADDITIONAL MEASURES**

1	<b>HIGH EFFICIENCY HVAC SYSTEM</b> a. Gas-fired furnace or boiler AFUE 94%, or b. Air source heat pump HSPF 10.0/14.0 SEER cooling, or c. Ground source heat pump COP 3.5 or Energy Star rated	1 credit
2	<b>HIGH EFFICIENCY WATER HEATING SYSTEM</b> a. Natural gas/propane water heater with minimum UEF 0.90, or b. Electric heat pump water heater with minimum 2.0 COP, or c. Natural gas/propane tankless/instantaneous heater with minimum 0.80 UEF and Drain Water Heat Recovery Unit installed on minimum of one shower/tub-shower	1 credit
3	<b>WALL INSULATION UPGRADE</b> Exterior walls—U-0.045/R-21 conventional framing with R-5.0 continuous insulation	1 credit
4	<b>ADVANCED ENVELOPE</b> Windows—U-0.21 (Area weighted average), and Flat ceiling e—U-0.017/R-60, and Framed floors—U-0.026/R-38 or slab edge insulation to F-0.048 or less (R-10 for 48"; R-15 for 36" or R-5 fully insulated slab)	1 credit
5	<b>DUCTLESS HEAT PUMP</b> For dwelling units with all electric heat provide: Ductless heat pump of minimum HSPF 10 in primary zone replaces zonal electric heat sources, and Programmable thermostat for all heaters in bedrooms	1 credit
6	<b>HIGH EFFICIENCY THERMAL ENVELOPE UA</b> Proposed UA is 8% lower than the code UA	1 credit
7	Glazing area (measured as the total of framed openings) is less than 12% of conditioned floor area	1 credit
8	<b>3 ACH AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION</b> Reduce the 3rd-party tested air leakage to 3.0 air changes per hour maximum and a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.66. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	1 credit
9	<b>2 ACH AIR LEAKAGE CONTROL AND HIGHLY EFFICIENT VENTILATION</b> Reduce the 3rd-party tested air leakage to 2.0 air changes per hour maximum and a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.85. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	2 credits
10	<b>HIGHEST EFFICIENCY WATER HEATING SYSTEM</b> a. Natural gas/propane water heater with a UEF of .95 or greater and a Drain Water Heat Recovery Unit that is certified to the CSA B55.2 standard and is tested according to the CSA B55.1 standard installed on a minimum of one shower/tub-shower, or b. Electric heat pump water heater with minimum 2.9 COP, or	2 credits

Additionally, we propose to modify the instructions on the use of Table N1101.1(2) to read as follows:

N1101.1 General. The provisions of this chapter regulate the exterior envelope, as well as the design, construction and selection of heating, ventilating and air-conditioning systems, lighting and piping insulation required for the purpose of effective conservation of energy within a building or structure governed by this code.

All conditioned spaces within residential buildings shall comply with Table N1101.1(1) and ~~two additional measure~~ from Table N1101.1(2), shall comply with sufficient options from Table N1101.1(2) so as to achieve the following minimum number of credits:

1. Small Dwelling Unit: ..... 1 credit

Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area.

2. Medium Dwelling Unit: ..... 2 credits

All dwelling units that are not included in #1 or #3.

3. Large Dwelling Unit: ..... 3 credits

Dwelling units exceeding 5000 square feet of conditioned floor area.

The drawings included with the building permit application shall identify which options have been selected and the credit value of each option.

We believe that requiring 2 credits for most newly constructed homes will place Oregon code development on a more straight-line path towards the savings goals laid out by Governor Brown in EO 17-20 and EO 20-04.

Thank you for the consideration of this proposal.



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Zero Energy Ready Oregon coalition (ZERO).