

Residential Energy Additional Measure Selection

Site Address: _____

Select the type of construction and select the applicable additional measures on the applicable table.

- ☐ New construction. All conditioned spaces within residential buildings shall comply with Table N1101.1(1), and one additional measure from Table N1101.1(2).

Note: If using Exception 3 of Section N1105.3 for the installation of ducts and air handling equipment, two additional measures shall be selected for compliance from Table N1101.1(2). Check the selected measure(s) on Page 2. Depending on the additional measure you have selected, there may be sub-options that you will have to specify. Check the appropriate box if provided.

- ☐ Additions. Additions to existing buildings or structures may be made without making the entire building or structure comply if the new additions comply with the requirements of this chapter. (N1101.3)
- ☐ Large additions. Additions that are equal to or more than 600 square feet (55 m²) in area, must comply with Table N1101.1(2) on Page 2.
 - ☐ Small additions. Additions that are less than 600 square feet (55 m²) in area, must select one measure from Table N1101.1 (2) on page 2 or Table N1101.3.
 - ☐ Exception: Additions that are less than 225 square feet (20.90 m²) in area are not required to comply with Table N1101.1(2) or Table N1101.3.

**Note: Depending on which Additional Measures you have selected, there may be sub-options that you will have to specify
Check the appropriate box if provided.**

TABLE N1101.3 - SMALL ADDITION ADDITIONAL MEASURES

1	Increase the ceiling insulation of the existing portion of the home as specified in Table N1101.2.
2	Replace all existing single-pane wood or aluminum windows to the U-factor as specified in Table N1101.2.
3	Insulate the floor, crawl space or basement wall as specified in Table N1101.2 & install 100 percent of permanently installed lighting fixtures as CFL, LED, or linear fluorescent or a minimum efficacy of 40 lumens per watt as specified in Section N1107.2.
4	Test the entire dwelling with a blower door and exhibit no more than 4.5 air changes per hour @ 50 Pascals
5	Seal and performance test the duct system.
6	Replace existing 80 percent AFUE or less gas furnace with a 94 percent AFUE or greater system.
7	Replace existing electric radiant space heaters with a ductless mini split system with a minimum HSPF of 10.0 or HSPF2 of 9.0.
8	Replace existing electric forced air furnace with an air source heat pump with a minimum HSPF of 9.5 or HSPF2 of 8.1.
9	Replace the existing water heater with one of the following. A. Natural gas / propane water heater with a minimum UEF 0.90 B. Electric heat pump water heater with minimum 2.0 COP.

TABLE N1101.1 (2) ADDITIONAL ENERGY MEASURES

	1	High efficiency HVAC system^a
		<ul style="list-style-type: none"> a. Gas-fired furnace or boiler AFUE 94%, or b. Air source heat pump HSPF 10.0/16.0 SEER cooling, or 8.5 HSPF2 / 15.0 SEER2, or c. Ground source heat pump COP 3.5 or Energy Star rated.
	2	High efficiency water heater
		<ul style="list-style-type: none"> a. Natural gas / propane water heater with a minimum 0.90 UEF, or b. Electric heat pump water heater with minimum 3.45 UEF, 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.
	3	Wall insulation upgrade
		Exterior walls — U-0.045 / R-21 conventional framing + R-5 continuous insulation. Provide exterior wall details.
	4	Advanced envelope
		Windows — U-0.21 (Area weighted average), and Flat ceiling ^b - U-0.017 / R-60, and Framed floors - U-0.026 / R-38 or slab edge insulation to F-0.48 or less (R-10 for 48"; R-15 for 36" or R-5 fully insulated slab).
	5	Ductless heat pump
		For dwelling units with all electric heat provide: A. Ductless heat pump of minimum HSPF 10 or HSPF2 9.0 in primary zone replaces zonal electric heat sources, and B. Programmable thermostat for all heaters in bedrooms.
	6	High efficiency thermal envelope UA^c
		Proposed UA is 8% lower than the code UA Calculation required. BCD Measure 6 thermal performance calculator. https://www.oregon.gov/bcd/codes-stand/pages/energy-residential-compliance.aspx
	7	2.75 ACH air leakage control and efficient ventilation
		Achieve a maximum of ACH50 whole-house air leakage when third-party tested and provide a whole-house ventilation system, including 2.75 heat recovery with a minimum sensible heat recovery efficiency of not less than 66 percent and total fan efficacy of 1.6 CFM/Watt (combined input for supply and exhaust).

For SI: 1 square foot = 0.093 m², 1 watt per square foot = 10.8 W/m².

- a. Appliances located within the building thermal envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.
- b. The maximum vaulted ceiling surface area shall not be greater than 50% of the total heated space floor area unless vaulted area has a U-factor no greater than U-0.026. **(U-0.026 = R-38 with advanced roof framing (full height insulation to wall.) Raised truss heels typically required.)**
- c. In accordance with Table N1104.1(1), the Proposed UA total on the Proposed Alternative Design shall be a minimum of 8% less than the Code UA total on the Standard Base Case.