



## 2017 Energy Efficiency Additional Measures Requirements

All new dwellings and areas that are added to existing dwellings shall meet the envelope requirements of ORSC Table N1101.1(1). Portions of existing dwellings that are affected by new construction shall meet the envelope requirements of ORSC Table N1101.2. In addition, Additional Measure Requirements per ORSC N1101.1 (for new construction) and N1101.3 (for additions) are required as follows:

- Construction of **New Residential Structure**: Complete Sections A and B
- Construction of **Large Additions** (additions of 600 SF or more, or additions that are more than 40% of the existing heated floor area, whichever is less): Complete Sections A and B
- Construction of **Small Additions** (additions that are between 400 and 600 SF, or between 15 to 40% of the existing heated floor area, whichever is less): Complete Section C, or either Section A or B (for entire structure).
- Exempt Additions**: Additions that are less than 15% of the existing heated floor area or 200 square feet in area (whichever is less), have no additional measures required.

All Energy Efficiency components must be reflected on the plans. All permanently installed lighting fixtures shall contain high-efficacy lamps. Screw-in compact fluorescent and LED lamps comply with this requirement.

### Section A: Envelope Enhancement Measure, Table N1101.1(2) (Select One)

- 1 High Efficiency Walls:**
  - Exterior walls: U-0.045 / R-21 cavity insulation + R-5 continuous
- 2 Upgraded Features:**
  - Exterior walls: U-0.057 / R-23 intermediate **OR** R-21 advanced, **and**
  - Framed floors: U-0.026 / R-38, **and**
  - Windows: U-0.28 (average UA)
- 3 Upgraded Features:**
  - Exterior walls: U-0.055 / R-23 intermediate **OR** R-21 advanced, **and**
  - Flat ceiling: U-0.017 / R-60, **and**
  - Framed floors: U-0.026 / R-38
- 4 Super Insulated Windows and Attic OR Framed Floors:**
  - Windows: U-0.22 (Triple Pane Low-e), **and**
    - Flat ceiling: U-0.017 / R-60, **OR**
    - Framed floors: U-0.026 / R-38
- 5 Air Sealing Home and Ducts** (*cannot be combined with Measure B*)
  - Mandatory air sealing of all wall coverings at top plate and air sealing checklist, **and**
  - Mechanical whole-building ventilation system with rates meeting M1503 or ASHRAE 62.2, **and**
    - All ducts and air handlers contained with building envelope, **OR**
    - All ducts sealed with mastic
- 6 High Efficiency Thermal Envelope UA**
  - Proposed UA is 8% lower than the code UA

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## Section B: Conservation Measure, Table N1101.1(2) (Select One)

- A High Efficiency HVAC System:**
  - Gas-fired furnace or boiler AUE 94%, **OR**
  - Air source heat pump HSPF 9.5 / 15.0 SEER cooling, **OR**
  - Ground source heat pump COP 3.5 or Energy Star rated
- B Ducted HVAC Systems Within Conditioned Space:** *(cannot be combined with Measure 5)*
  - All ducts and air handlers contained within building envelope
- C Ductless Heat Pump:**
  - Ductless heat pump HSPF 10.0 in primary zone of dwelling
- D High Efficiency Water Heater:**
  - Natural gas / propane water heater with UEF 0.85, **OR**
  - Electric heat pump water heater Tier 1 Northern Climate Specification Product

## Section C: Small Additions Additional Measures, Table N1101.3 (Select One)

- 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 system as specified in Table N1101.2 & install 100 percent of permanently installed lighting fixtures as CFL, LED, or linear fluorescent or a min. 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 6.0 air changes per hour @ 50 Pascals.
- 5** Seal and performance test the duct system.
- 6** Replace existing 78 percent AFUE or less gas furnace with a 92 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.
- 8** Replace existing electric forced air furnace with an air source heat pump with a minimum HSPF of 9.5.
- 9** Replace existing water heater with a water heater meeting Conservation Measure D [Table N1101.1(2)].