There can be a lot of uncertainty and misinformation when new energy codes take effect. Below is an easy-to-understand summary of the most important changes impacting the building envelope requirements of Oregon’s 2017 Residential Specialty Code (ORSC). The date for compliance with the new code started on January 1, 2018.

**WHAT ARE THE TOP 2 TAKEAWAYS OF THE NEW ENERGY CODE?**

1. **Prescriptive Insulation Improvements**
   - The thermal envelope is improved to include R-21 walls, R-49 ceilings, and U-0.30 windows.

2. **Additional Measures**
   - The menu of additional requirements is also updated to include more stringent packages of requirements that keep the focus on improving the thermal envelope and HVAC systems. Options for solar PV and solar water heating were removed from this section.

**MORE EFFICIENT WALL ASSEMBLY OPTIONS**

- **Intermediate Framing**
  - With intermediate framing, studs are at 16 inches on center, exterior corners are fully insulated, the area where interior partitions join the exterior wall is completely insulated, and headers are insulated to a minimum of R-4, or alternatively, R-15 when using a single member header.

- **Advanced Framing**
  - With advanced framing, the requirements are the same as intermediate framing, except that studs are at 24 inches on center and ceiling insulation is at full depth over the top plate (pictured above right).

**WANT TO LEARN MORE?**

Read the new code language here: [https://codes.iccsafe.org/public/chapter/content/10141](https://codes.iccsafe.org/public/chapter/content/10141)
### Key Changes to Building Envelope Requirements of the 2017 ORSC

#### Prescriptive

<table>
<thead>
<tr>
<th>Code Path</th>
<th>2017 Code Section</th>
<th>Change Summary</th>
</tr>
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</table>
| N1101.1(1) - Walls | R-values & U-factors have been improved  
• Above grade walls - R-21 with intermediate framing / U-0.059  
• Below grade walls - R-21 / C-0.063 or R-15 continuous |
| N1101.1(1) - Ceilings | R-values & U-factors have been improved  
• Flat ceilings - R-49 / U-0.021  
• Vaulted ceilings - R-30 / U-0.033 (most will need raised heel trusses) |
| N1101.1(1) - Windows + Skylights | U-factors have been improved  
• Windows - U-0.30  
• Skylights - U-0.50 |
| N1104.2.9 | New requirements for attic stairs  
Pull down stairs insulated to R-10 / U-0.10 and weather-stripped |

#### Select One Option from Each of the 2 Sections Below:

**Envelope Enhancement Measures:**

- 1. High efficiency walls  
  R-21+5 / U-0.045  
- 2. Upgraded features  
  • Walls - R-23 / U-0.057 with intermediate framing or R-21 advanced framing  
  • Floors - R-38 / U-0.026  
  • Windows - U-0.28  
- 3. Upgraded features  
  • Windows R-23 / U-0.055 with intermediate framing or R-21 advanced framing  
  • Flat ceiling - R-60 / U-0.017  
  • Floors - R-38 / U-0.026  
- 4. Super insulated windows and attic or framed floors  
  • Windows - U-0.22 windows  
  • Flat ceilings - R-60 / U-0.017 or Floors - R-38 / U-0.026  
- 5. Air sealing home and ducts  
  Air sealing checklist completed;  
  All ducts air sealed with mastic or within conditioned space (refer to code for checklist and details)  
- 6. High efficiency thermal envelope UA  
  Proposed UA that is 8% lower than the code UA

**Conservation Measures:**

- A. High efficiency HVAC system  
  Minimum 94% AFUE or minimum 9.5 HSPF / 15 SEER or minimum COP 3.5 ground source heat pump or Energy Star rated  
- B. Ducted HVAC system within conditioned space*  
  All ducts and air handlers contained within the building envelope  
- C. Ductless heat pump  
  Minimum HSPF 10.0 ductless heat pump  
- D. High efficiency water heater  
  Minimum 0.85 UEF gas or minimum 2.0 UEF electric heat pump water heater

*Cannot be combined with Envelope Enhancement Measure 5.  
(Note: 5% of ductwork is permitted to be outside of conditioned space.)