

# Residential Building Energy Standards (RBES) Update Webinar

## Q&A

February 21, 2014

- 1. Q: Are towns prohibited from adopting something higher than the base code but different than the stretch code?**

A: No. Towns are not restricted to do as they choose.

- 2. Q: Will the definition of Net Zero include biomass heating? Net Zero Energy or Net Zero fossil?**

A: There is not yet a definition for “net zero energy” in Vermont. There is a lot of discussion of this concept, including a group working on this for North America.

See <http://www.netzeroenergyhome.ca/>

- 3. Q: Will the disparity of HERS scores vs. the energy footprint of the residents of the building be addressed? They are quite different.**

A: The issue of house size is addressed through the ENERGY STAR Homes Program and green building programs that reference ENERGY STAR Homes. Currently, house size as part of the code has not been addressed. While occupant behavior can have a significant effect on the amount of energy used in a home, we are not aware of any reasonable way to account for it in codes, where for the most part compliance is determined before a building is occupied; also, occupancy may fluctuate over time. This issue could be raised and discussed in the upcoming stakeholder meetings scheduled for March 12 and 14.

- 4. Q: What would the HERS target be for compliance in this update?**

A: Base Code = HERS 60.

Stretch Code = HERS 54

- 5. Q: I thought the 2015 IECC adopted a HERS Index 54 for compliance in climate zone 6?**

A: This is correct. However, the code update team believes that moving to HERS 54 in the next version of the code would be too big of a leap all at once, thus the proposed HERS 60 for the base code, with HERS 54 as the stretch code for Act 250 projects (in accordance with Act 89 of 2013) and those towns that wish to adopt the stretch.

- 6. Q: Is there any plan moving forward to assist people in the pre-building phase to develop minimum R-values to meet code from a HERS rating standpoint?**

A: This assistance is currently available by participating in the Efficiency Vermont Residential New Construction Program or by contacting the Energy Code Assistance Center.

**7. Q: Objective is to move to net zero on a linear path. Have cost estimates been conducted to achieve net zero objective? If so, is this a lineal path paralleling HERS reductions?**

A: No, there have been no cost estimates to achieve net zero in Vermont we are aware of. However, the US Department of Energy estimates the incremental cost for a 2,400 sq. ft. house to build to 2012/2015 IECC over current RBES will be approximately \$2,500. Annual energy savings are projected to be approximately \$700. If this cost were included in the mortgage, the annual cash flow would be around \$570 annually, providing positive dollar savings in year one. For more details on the US DOE analysis, see "VermontResidentialCostEffectiveness.pdf".

**8. Q: Blower door qualification? HERS Rater, BPI certified, other?**

A: In order to demonstrate compliance with the 2015 IECC, duct and envelope testers will need to be qualified and certified. These details have not yet been determined, but certainly HERS Raters and BPI Certified contractors should be recognized to be able to provide these services.

**9. Q: Blower door requirement for tiny remodel jobs is problematic at best?**

A: Requiring blower door tests for remodeling projects is problematic. The thresholds for when a blower door will be required need to be determined. The code update team welcomes recommendations on blower door thresholds as part of the stakeholder input process.

**10. Q: Will the code require a third-party blower door test or can the test be performed by the general contractor or subcontractor involved with the project?**

A: This detail has not yet been determined, but if RESNET standards are followed, a third-party would not need to be used if this fact were disclosed to the homeowner. The code update team welcomes input on whether a third-party solely should be required for testing.

**11. Q: What percentage of households "required" to be code compliant are in towns that require a certificate of occupancy?**

A: In towns that require Certificates of Occupancy, 100% of new homes will be required to be energy code compliant before a certificate of occupancy is issued, per Act 89 of 2013.

**12. Q: What is "Grade 1" insulation installation?**

A:

See [http://www.resnet.us/standards/RESNET Mortgage Industry National HERS Standards.pdf](http://www.resnet.us/standards/RESNET_Mortgage_Industry_National_HERS_Standards.pdf) page 174.

**13. Q: Who has the authority to grade insulation installation as grade 1?**

A: This has not yet been determined for RBES. HERS Raters have historically graded insulation for HERS Ratings.

**14. Q: Is ASHRAE 62.2 referenced in the 2015 IECC?**

A: No, it is not at this time, but is included in another part of the building code that Vermont has not adopted. The code update team recommends including ASHRAE 62.2 directly in RBES to clarify Vermont's mechanical ventilation standard. Comments on this approach are welcome.

**15. Q: It seems counter-productive to trade off higher ACH50 for renewables installation. Why is this being proposed?**

A: If Vermont is going to achieve net zero energy by 2030, it will need to be through a combination of efficiency and renewables. We have tried to strike a balance by requiring a certain initial amount of efficiency (HERS 65), and then allow builders to meet the base or stretch code targets (HERS 60 for base and HERS 54 for stretch) through any combination of efficiency and renewables. We welcome suggestions that would strike the right balance at the March stakeholder meetings.

**16. Q: Is there going to be an RBES certificate just for renovations, along with clarifications on when an RBES certificate must (should) be filed.**

A: This is a good idea. The code update team will consider this recommendation.

**17. Q: Whatever path reduces energy should be on the table. Renewables or not. It should be the consumer choice. I don't need protection from my own preferences about creating energy vs. reducing it. Same goes for wood from my woodlot.**

A: The code update team wants to ensure that there is some minimum level of efficiency as part of the energy code so that we don't build under-insulated leaky buildings loaded with renewables; a building should last 100 years but the equipment likely will need to be replaced in periodically. We welcome input to strike the right balance between efficiency and renewables. The question of wood is also one open to consideration. However, being mindful that if the next homeowner(s) chooses not to cut and burn wood, we want to ensure a minimum level of energy efficiency is built into the home.

**18. Q: Using renewables or burning my own wood has the same net effect in reducing energy on society.**

A: We are open to suggestions on the role wood should play in RBES and how to strike the right balance between efficiency, and renewables, including wood. The code update team welcomes input on this and other topics either prior to or at the March stakeholder meetings.