

# The Vermont Residential Energy Code

The Vermont Residential Energy Code — officially called the “Residential Building Energy Standards” (RBES) and generally referred to as simply the Residential Energy Code — initially was passed by the Vermont legislature in May 1997. It is a minimum standard of energy efficiency that has applied to virtually all new residential construction in Vermont since July 1, 1998 with updates in 2006, 2011 and 2015. The 2015 Vermont Residential Energy Code is based on Vermont amendments to the 2015 International Energy Conservation Code (2015 IECC).

After December 1, 2015, Act 250 projects must comply with Vermont’s newly-developed Stretch Code, which requires:

1. A higher level of thermal energy efficiency than the Base Code minimum, or a lower maximum Home Energy Rating Score (see Table 5-3 or Table 7-2)
2. Maximum air leakage rate based on a blower door test (see Section A.1)
3. Electric vehicle charging for multifamily developments of 10 or more dwelling units (see Section A.2)

## What Buildings Must Comply?

- ★ Detached one- and two-family dwellings.
- ★ Multi-family and all other residential dwellings three stories or fewer in height.
- ★ Additions, alterations, renovations and repairs to existing buildings.
- ★ Factory-built modular homes not on a permanent chassis.
- ★ Residential buildings commencing construction on or after March 1, 2015 must comply with this code. Buildings for which construction commenced before March 1, 2015, if not complying with this code must comply with the previous version of RBES.
- ★ Act 250 projects commencing construction on or after December 1, 2015 must comply with the Stretch Code. Projects for which construction commenced before March 1, 2015, if not complying with this code must comply with the previous version of RBES. If after March 1, 2015, but before December 1, 2015 the new base code would apply.
- ★ In towns that require a certificate of occupancy (COO), a RBES certificate is required before the COO can be issued.

*This is a summary; see Chapter 1 for details.*

## What Buildings Are Exempt?

- ★ Commercial and high-rise residential buildings (over 3 stories), however these must meet the Commercial Building Energy Standards. Residential portions of a mixed use building that is three stories or less must meet the *Residential* Energy Code. Residential portions of mixed-use buildings include the living spaces in the building and the nonliving spaces in the building that serve only the residential users such as common hallways, laundry facilities, residential management offices, community rooms, storage rooms, and foyers.
- ★ Mobile homes on a permanent chassis with (except for site-built components such as conditioned basements or crawl spaces).
- ★ Buildings or additions with very low energy use (those designed for a peak energy use of less than 3.4 Btu/h [1 Watt] per square foot of floor area).
- ★ Unconditioned buildings.
- ★ Hunting camps or summer camps.

*This is a summary; see Chapter 1 for details.*

## The Basic Steps for Meeting the Code

The Vermont Residential Energy Code encompasses two requirements: a **technical requirement** (i.e., minimum standards for energy-efficient building components and construction practices); and a **certification requirement** for reporting compliance. It is one of the few codes in the country in which the builder *self-certifies* compliance.

The law recognizes that it is the builder's responsibility to understand the Residential Energy Code, to build to the minimum technical efficiency standards, and then to certify (on a one-page form) that the building complies with the law. No plan reviews or final inspections by Code officials are involved.<sup>1</sup> The whole process can be summarized as follows:

1. Determine whether you need to comply (Chapter 1);
2. Follow the Basic Requirements (Chapter 2);
3. Follow the minimum ventilation and combustion safety requirements (Chapter 3);
4. Follow the Existing Homes requirements for additions, alterations and repairs (Chapter 4).
5. Select and complete the Compliance Method that works best for you (Chapters 5-7); and
6. Fill out, file and post the required compliance certificate (Chapter 8).

## Compliance Methods

The technical requirement of the Residential Energy Code consists of four components:

- ★ **Basic Requirements:** a list of fixed requirements applicable regardless of compliance path selected (see inside front cover).
- ★ **Ventilation & Combustion Safety Requirements:** (see Chapter 3).
- ★ **Existing Homes:** requirements pertaining to additions, alterations and repairs.
- ★ **Prescribed Requirements:** requirements that vary based on the compliance method selected (Chapter 5).

In order to comply with the Residential Energy Code, a home, *as built*, must meet all of the Basic Requirements, Ventilation & Combustion Safety Requirements, and the Prescribed Requirements using one of the compliance methods. Additions, alterations and repairs must meet the Existing Homes requirements pertaining to the portion(s) of the home affected.

Three different methods of complying with the Residential Energy Code have been designed. These all describe the thermal and efficiency values that are necessary to meet the minimum standards of the Code. These vary in simplicity of use, as well as in the level of efficiency above the minimum standard that must be achieved. In general, the simplest methods specify the highest levels of efficiency, while the more complex methods are closest to the minimum efficiency standard of the Code. The three compliance methods are:

**Prescriptive Method** The simplest approach. Allows you to incorporate a prescribed set of features. Minimal calculations. (See Chapter 5.)

**REScheck Software Method** Use your computer with REScheck software to easily analyze almost any design and determine whether any modifications are needed to meet the Code. (See Chapter 6.)

**Home Energy Rating Method** This approach gives full credit for air tightness, efficient heating, cooling and domestic water heater, and solar orientation. A certified Energy Rater is required to complete this approach. (See Chapter 7.)

The Residential Energy Code is both simple and flexible in the ways a home can meet the technical requirement. There are three methods that can be used to comply. You select the one that works best for your design.

<sup>1</sup> While the Residential Energy Code does not require inspections by code officials, it does not eliminate inspections related to Act 250 projects, spot checks for enforcement of other applicable codes, or inspections required by state or local codes.

## Residential Energy Code Updates

The statute that governs the Vermont Residential Energy Code provides for regular review and updates to the provisions in the Code. The review of the Residential Energy Code is administered by the Vermont Public Service Department. Please address all comments and inquiries to:

Vermont Public Service Department  
Planning & Energy Resources Division  
112 State Street  
Montpelier, Vermont 05620-2601  
802-828-2811

## Technical Assistance

Technical assistance with the Residential Energy Code is available at no charge. Please contact:

Energy Code Assistance Center  
128 Lakeside Ave., Suite 401  
Burlington, VT 05401  
855-887-0673 ~ *toll free*  
802-658-1643 ~ *fax*

The Energy Code Assistance Center (ECAC) services include:

- ★ Toll-free assistance hotline: 855-887-0673.
- ★ Workshops for builders on how to comply with the Vermont Residential Energy Code.
- ★ Handbooks, forms, software and other Code-related materials.
- ★ Professional advice on how to easily meet the Code.
- ★ Information about state-of-the-art construction techniques and building details.
- ★ Referral to energy-efficiency programs.
- ★ Sources for energy-efficient products.
- ★ Customized workshops and presentations on energy-efficient building practices.

## E-CALL Hotline 855-887-0673

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The E-CALL Hotline is staffed from 8 a.m. to 5 p.m. Monday through Friday. A voice mail is available at all other times. Call for free assistance with any Code-related questions or concerns you may have.

**Energy Code**   
**Assistance Center**