

2020 Vermont Residential Building Energy Standards (RBES) Certificate

This certificate is for projects started on or after September 1, 2020.

Before completing this form, refer to the instructions in Chapter 8 of the Residential Energy Code Handbook (5th edition).

For additions, alterations, renovations or repairs, only fill out applicable portions of certificate.

17 Grumman Lane, Waitsfield, VT 05673

Property Address (Street, City, ZIP Code)

11/1/2023

12/28/24

N

Construction START Date

Construction FINISH Date

Act 250 (Y/N)

Act 250 Permit #

1 1 1500

3

Units # Stories # Conditioned Sq. Ft. # Bedrooms

Applicable Code: Base Stretch

Project Description

Single family

Renovation / alteration*

Multi-family

Addition*

Log home

Repair*

*Existing Home Project Description: _____

Foundation: Basement Slab On Grade Crawl Space Other: _____

Compliance Method

MUST select Option 1, Option 2, or Option 3

Option 1: Package-Plus-Points

Ref. RBES for full requirements of each point option

BASE / STRETCH (circle one) Points required: 5 (Base requires 4-10pts / Stretch 6-12pts, Package # 1 Points achieved: 7 see Handbook Tables 5-2 and 5-5)

Option 2: REScheck software (cannot be

used for Stretch Code) Passes
_____ UA result _____ Max. UA

Option 3: HERS/ER/

_____ HERS Result (Overall)
_____ HERS without Renewables
_____ REM/Rate Version #

IAF incorporated into model

Approved Rater Name: _____

(Maximum HERS: 61 Base, 54 Stretch)

Envelope: Slab, R-10 under all (1pt)

ACH50 ≤ 2.0 and qualifying HRV/ERV (3pts for Base OR 1pt for Stretch)

Envelope: Walls-Upgraded, R20+12 (2pts)

ACH50 ≤ 1.0 and qualifying HRV/ERV (4pts) Solar ready (1pt, Base only¹)

Envelope: Walls-High-R, R-40 (3pts)

ENERGY STAR DHW (1pt)

On-site generation (1-4pts)

Envelope: Ceiling, R-80 flat / 60 sloped (1pt)

ENERGY STAR electric DHW (2pts)

_____ kW _____ pts

Envelope: Windows 0.27 (1pt, Base only)

Low flow fixtures (1pt)

Solar hot water (2pts)

Envelope: Windows 0.22 (2pts)

Drain water heat recovery (1pt)

Building energy monitoring (1pt)

Pre-drywall blower door (1pt), result _____

User-demand hot water recirculation (1pt)

Level 2 EV-ready (1pt)

ENERGY STAR heating and cooling (1pt)

Water certification (2pts)

6 kWh battery backup (1pt)

Advanced heating and cooling (3pts)

List cert. type _____

¹See RBES for MF exception

Thermal Envelope

Basement: R-N/A Basement / Crawl Space Walls

Basement Insulation Depth (ft)

U-N/A Basement Windows NFRC Default

Slab: R-15 Unheated Slab (Under)

R-_____ Heated Slab (Under)

R-15 Perimeter Slab Edge

Wall/Ceiling: R-21+6.6 Above-Grade Walls

R-_____ Flat Ceilings ⁰ Area (sq ft)

R-49 Sloped Ceilings _____ Area (sq ft)

Other: R-N/A Floors over Unheated Spaces

R-_____ Attic Access Hatch / Door NA

Fenestration U-.28 Windows NFRC Default

U-.23 Doors NFRC Default

U-N/A Skylights NFRC Default

Air Sealing / Blower Door Test

1.6 ACH50

Date of test 10/11/2024

(must report either ACH50 or CFM50/sq ft for Base Code)

388 CFM50/sq ft of building shell (6 sides)
Both measurements are required for Stretch Code

Air Leakage Tester Name:

Jacob Robichaud

Ventilation System

Balanced, SRE _____%

Flow verification: Rated, OR Measured → _____ Exhaust air flow (total cfm) _____ Supply air flow (total cfm)

(must select one) Exhaust-Only

Flow verification: Rated, OR Measured → _____ Exhaust air flow (total cfm)

Combustion Safety

(verify all)

Exterior (outdoor) air supply is provided for solid fuel-burning appliances and fireplaces, OR NA (no solid fuel burning appliance or fireplace in home)

Solid fuel burning appliances and fireplaces have gasketed doors with compression closure, OR NA (no solid fuel burning appliance or fireplace in home)

Spillage testing conducted on combustion equipment not directly-vented, OR NA (no equipment, or all equipment directly-vented)

Mechanical System

(must complete all)

Design Load Calculation Method: ACCA Manual J, OR Other Approved Method (List) _____

Calculation details: (Ref. RBES R302 for design temperature exceptions)

-11 Winter design temp, outdoor dry-bulb (VT range: -11 to 1°F)

84 Summer design temp, outdoor dry-bulb (typ. max. 84°F), OR No cooling

68 Winter design temp, indoor (max 72°F)

72 Summer design temp, indoor (min. 75°F), OR No cooling

42,000 Heating design load, Btu/hr

16,000 Cooling design load, Btu/hr, OR No cooling

44,000 Primary heating system size, Btu/hr

48,000 Primary cooling system size, Btu/hr, OR No cooling

7.25 HSPF or COP or AFUE (circle which)

17 SEER or COP (circle which), OR No cooling

Programmable thermostat, OR Exempt; list reason _____

Ducts

Ducts located completely within conditioned space, OR NA (no ducts)

_____ Duct airtightness test result (CFM @ 25 Pa)

Test performed at Rough-in (max 3 CFM per 100 sq ft of cond. floor area), OR Post-construction (max 4 CFM per 100 sq ft of cond. floor area)

Other Requirements

Mandatory (Base and Stretch): Mechanical system piping, min. R-3

Multi-family: EV charging requirement is met: _____ # spaces

90% of lamps high efficacy

Automatic or gravity dampers for vent. system intake and exhaust

Mandatory (Stretch Code Only): Single-family: Solar ready

Single-family: One Level 1 EV-charging space

Where applicable: Circulating service hot water piping, R-3 Pools: All requirements per R403.10 are met Automatic controls for snow-melt systems

I certify to Mavis LLC, Travis Kingsbury (Owner) that the above information is correct and that the premises listed have been constructed in accordance with the Vermont Residential Building Standards (RBES) created under 30 V.S.A. § 51.

Date: 12/28/24

Signature: _____

Printed Name: Kurt Bergstrom

Company: Labrador Builders LLC

Phone: 802-793-9852

30 V.S.A. § 51 requires this certificate label to be permanently affixed to the inside electrical service panel or heating or cooling equipment or nearby in a visible location. Copies of the certificate (and Home Energy Rating Certificate if Option 3 is used) also must be provided to 1) the Dept. of Public Service, 112 State St., Montpelier, VT 05602, and 2) the town clerk of the town where the property is located.

NOTE: Noncompliance with RBES may result in action for damages under 30 V.S.A. § 51. This label does not specify all 2020 RBES requirements. QUESTIONS? CALL the Energy Code Assistance Center at 855-887-0673 or the VT PUBLIC SERVICE DEPARTMENT at 802-828-2811.

17 10/11/2024
Grumman Ln
Waitsfield, VT 05673

Energy Audit Assessment

		Pass/Fail
CFM50	388	PASS
ACH	1.6	PASS
CFM75/SF		

Tests conducted

Blower door test:

A blower door is a powerful fan that mounts into the frame of an exterior door. The fan pulls air out of the house, lowering the air pressure to -50 pascals. A pascal is a unit of pressure. The outside air pressure then flows in through all unsealed cracks and openings.

Cubic feet per minute (CFM50):

This number represents the amount of air in cubic feet per minute that the fan must move to change the pressure in the home to 50 pascals.

Air exchange per hour (ACH):

This is the number of times, per hour, that the entire volume of air in the home is exchanged with outside air when the blower door is running.

Relatively speaking, ACH5 - ACH9 is a moderately leaky home, and anything over that is leaky.

Air-sealing and insulation recommendations:

- Attic.
- Attic access (hatch/pulldown stairs).
- Recessed light/bath fan fixtures.
- Knee wall floors/walls.
- Chimney/Flue penetrations.
- Doors. Windows.
- Wall penetrations. Drop ceilings/soffits.
- Base and ceiling moldings.
- Fire place. Band Joist.
- Basement/Crawlspace.
- Cantilevered floors. other.



Jacob Robichaud is BPI Certified Building Analyst, Envelope Professional, and Healthy Home Evaluator.

<p>Vermont building energy Code.</p>	<p>https://codes.iccsafe.org/content/VTCES2020P1/chapter-4-ce-commercial-energy-efficiency</p> <p>https://publicservice.vermont.gov/sites/dps/files/documents/2020-VT Residential Energy Code Handbook v8.pdf</p> <p><i>JR</i> <i>10-11-2021</i></p>
<p>Notes:</p>	
<p>Signature</p>	<p>Jacob Robichaud</p>

Additional Notes: R-values may fluctuate depending on contractor's foam products.

