

Building Energy Code Study Committee Report Outline

PART I. EXECUTIVE SUMMARY

1. Increasing risk of health/welfare harm, particularly in single family homes.
2. Decreasing ability to meet State's climate goals.
3. Key problem is lack of single authority over construction, for consistent administration of energy codes.
4. Summary of recommendations
5. Explanation of energy code
 - A. Enabling legislation of RBES/CBES
(<https://legislature.vermont.gov/statutes/section/30/002/00051>)
 - B. History behind exclusion of authority from 30 VSA 51b and 53b
6. LEGISLATIVE CHARGE - (actual charge in appendix)
 - A. Consider and recommend strategies to increase awareness of and compliance with the RBES and CBES, including the potential designation of the Division of Fire Safety (DFS) in the Department of Public Safety as the statewide authority having jurisdiction for administration, interpretation, and enforcement, in conjunction with DFS' existing jurisdiction, over building codes;
 - B. Evaluate current cost-effectiveness analyses for the RBES and the CBES, whether they include or should include non-energy benefits such as public health benefits and the cost of carbon, and how that impacts the affordability of housing projects and provide recommendations; and
 - C. Assess how the building energy codes interact with the fire and building safety codes.

PART II. BACKGROUND/FINDINGS

1. **Defining the problem (what is wrong)**
 - A. Signs of the problem
 - i. LCAR hearings for next codes
 - ii. Articles in VT Digger
 - iii. Declining compliance report
 - B. Rising number of building failures; health and safety concerns
 - i. Photos of failures
 - ii. OPR complaints since April 2023
 - iii. AG CAP complaints
 - iv. Insurance claims
 - C. Lack of workforce training
 - i. Compare with other states
 - D. Lack of central authority
 - i. Compare with other states
 - E. Municipal authority is not clear
 - F. No ability to track projects statewide
2. **Causes of the problem**
 - A. Lack of unified authority for commercial construction

- B. No path for authority over single family home construction: lack of context for energy codes
- C. Lack of consistent builder training
- D. Lack of any state entity to adjudicate for builder competence
- E. No mechanism for interpretation, variance, or appeal
- F. Other

3. Effects of the problem

- A. Vermont has a severe divergence of code standards and workforce ability.
 - i. Other states have trained their workforce as energy codes get stricter.
 - ii. EAN 2023 report that VT is lagging in meeting energy goals
 - iii. VT used to lead with passive houses, now far behind.
- B. Builders who follow energy code are at a disadvantage (not “level playing field”)
- C. Customers given option to adhere to code at even slightly higher cost often choose not to
- D. Sick Vermonters and loss of savings.

4. History of trying to solve the problem

- A. Could reference the Vermont Energy Code Compliance Report (from 2012). Could also reference the VT Code Compliance Recent Initiatives 12-5-13 document (this has been an ongoing problem)
- B. What has is being done to date
 - i. EVT, BSAVT, VBRA, AGC trainings
 - ii. DFS requires CBES certificate for C of O
 - iii. Some municipalities require RBES certificate
 - iv. OPR builder registry (however it’s focused on fraud)
 - v. DOE grant

PART III. COMMITTEE RESPONSES

1. **Preamble?** Why we changed the order of the charges and broke #1 into 2 parts.
2. **Assessment of how Vermont’s building energy codes interact with the fire and building safety codes**
 - A. Public buildings
 - i. DFS directive in statute (description, citation)
 - a. Include definition of “public building”
 - ii. Only minimal interaction now with CBES/RBES (collect certificate)
 - B. Owner occupied single family homes
 - i. Currently 3 entities with partial authority; no authority for many aspects.
 - a. Graphic: Venn diagram
 - b. DFS: smoke alarms, plumbing
 - c. PSD: RBES promulgation, certificate collection, education
 - d. OPR: Builder registry but not for competence
 - ii. Need for unified authority over single family homes
 - a. Only state with no avenue for building code regulation at any level.
 - iii. Need for a single family home building code
 - a. Scaffolding for energy code
 - b. Not necessary to enforce actively (NH model)

- iv. Need single authority to oversee all aspects of codes (promulgation, variances, appeals, building trades, education, enforcement, records)
 - v. Impact on owner-built or owner-G.C.'d construction (reference other regs affecting this group: smoke/CO alarms, septic/sewer, other?)
- 3. Recommended designation of the Division of Fire Safety (DFS) in the Department of Public Safety as the statewide authority having jurisdiction for administration, interpretation, and enforcement, in conjunction with DFS' existing jurisdiction, over building code for all building construction – public and private – in Vermont.**
- A. Division of Fire Safety – to be renamed Division of Fire and Building Safety
 - B. Phase in authority
 - C. Make use of current funding (e.g., Efficiency VT through Public Service)
- 4. Recommended strategies to increase awareness of and compliance with the RBES and CBES**
(A residential energy code without a residential building code is not rational or sustainable long term.)

5 strategies:

- A. Increase public awareness that energy codes are mandatory
 - A1. Design bill stuffers for municipal property tax bills and utility bills.
 - A2. Include certifications on OPR's Contractor and DFS's Trades listing webpages.
 - A3. Use other existing state and municipal interfaces, such as zoning permit, septic design and sewer hookup applications, to emphasize RBES/CBES requirements.
 - A4. Require Contractors (OPR) and Trades (DFS) to disclose at registration and renewal whether they have obtained training and continuing ed in RBES/CBES appropriate to their trade.
- B. Make structural, statutory changes to Vermont's energy code
 - B1. Move authority to the Division of Fire Safety with a phased transition for promulgation and reporting to Legislature. See charts.
 - B2. Fund the Division of Fire Safety's oversight, including redirecting revenue from Efficiency Utilities to support the Division.
 - B3. Continue with a prescriptive RBES code (that does not sacrifice energy efficiency) for the short term until the workforce is trained and compliance goals are met.
 - B4. Amend the CBES/RBES update cycle to prioritize quick adoption of base (prescriptive) residential energy codes and optimized commercial and stretch codes.
- C. Improve administration of the energy codes
Ensure compliance certificates are easy to understand, include relevant details, and are easy to file in a centralized location. Change the process of design/permit/certification for both CBES and RBES.
 - C1. Create a central database for RBES/CBES compliance certificates, publicly available and searchable.
 - C2. Public buildings: include the energy analysis in the building permit
 - C3. Owner-occupied single family homes:
 - i. Add clause in the owner-builder agreement

- ii. Simple online application that builder submits (tying into the database)
- iii. Builder closes out (certifies) upon substantial completion
- iv. Eliminate filing in town records, or make it a requirement for owners to file
- v. Eliminate the notarization requirement for RBES certificates

D. Improve workforce training and support

D1. Develop funding mechanism for EEU's to enable builder training, support and meaningful incentives through the Division of Fire Safety (see also B2 above)

D2. Give DFS authority over all building trades certification

- i. Develop a certification for homebuilders (individuals)
- ii. Coordinate with OPR's registry for homebuilders (businesses)
- iii. DFS regulates competence, OPR regulates fraud
- iv. Develop certifications for and regulations of HERS raters, Energy Star consultants, weatherizers, solar installers, insulators, etc.

D3. Improve the existing EVT Energy Code Assistance Center by moving it under DFS and beginning to offer code interpretation and specific advice

D4. Improve and coordinate professional training through tech centers, efficiency utilities, professional organizations, and the proposed EVT Training Center.

D4. Utilize DOE-funded Vermont Energy Code Administration Project grant to EFG to support these efforts.

E. Increase support of and funding for performance-based projects (stretch code)

E1. Certify and train third-party energy consultants (energy auditors and consultants, HERS raters, Weatherization staff, HEAT Squad, etc.) to provide direct support to builders.

E2. Implement project-level support using energy consultants to —

- i. provide plan review and/or meeting prior to construction;
- ii. assist builder with filing application and completing the owner/contractor agreement;
- iii. do site inspection with blower-door test at critical junctures during construction. New builders would get visits at close-in prior to insulation, at insulation prior to interior wall cladding, and at substantial completion;
- iv. assist builder with closing out online application (certification).

2. Evaluation of cost-effectiveness analysis for RBES and CBES

- A. Inclusion of non-energy benefits such as public health benefits and the cost of carbon and impacts the affordability of housing projects
- B. Recommendations of cost-effectiveness analysis methodology for RBES and CBES

3. Implementation

- A. Timeline of recommendations **including phasing**
- B. Potential costs of the recommendations

Part IV. APPENDIX

- 1. Purpose/ logistics of Committee

- A. Six meetings. The first meeting was convened on July 14, 2023, and the final official meeting shall be held on or before October 31, 2023. Meeting minutes posted on PSD website
 - B. Committee members
 - C. List of committee members
 - D. [List of Act 47 committee member requirements? \(What is this?\)](#)
2. Link to PSD website for: Committee meetings notes, pitches (could be a matrix of pitches), resources and research on other states, cost effectiveness PowerPoint
3. Other strategies discussed but rejected:
- A. Enforcement mechanisms – doesn't work for VT
 - B. Title impact – not possible
 - C. Full builder licensure (credentials or competency testing) – not feasible
 - D. Existing certifications (LEED, NGBS, EnergyStar Home, Passive House) – proprietary information; not acceptable for OPR
 - E. Certificate of Occupancy (implying state-required building permit) – not feasible.