

PRELIMINARY IDEAS FOR RECOMMENDATIONS TO THE LEGISLATURE

Submitted by:
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This document is intended to provide preliminary/conceptual thoughts and insights from the architectural community as organized by AIA-VT; however, it must be understood that this is a draft document not yet formally endorsed by AIA-VT. We know that compliance with RBES/CBES is less than desired (much less for RBES than CBES) and declining as the codes become stricter. We also know that there is not a system in Vermont for review and compliance with RBES/CBES, or for the collection and/or evaluation of certificates signed by owners, contractors and architects.

The essential tasks assigned to the Act 47 Energy Committee are as follows:

- (1) 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;*
- (2) 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*
- (3) assess how the building energy codes interact with the fire and building safety codes.*

Preliminary thoughts on these assigned tasks:

Increasing awareness: In the spirit of thinking that “people who know better, do better” (paraphrasing Maya Angelou), here are some ideas to increase awareness of RBES/CBES:

- amend Act 47 to require the following: add a condition to each zoning permit issued in VT to stipulate that RBES/CBES (as appropriate) applies to the approved project and where to get info about the codes; of course, simple zoning permits not involving climate controlled new construction or additions (i.e., fences, terraces, decks, etc.) would not be required to have this condition. Also add the requirement to submit the appropriate signed certificate indicating compliance with the respective energy code prior to approved occupancy, i.e., prior to issuance of a COO, or other town approval process; include a procedure to be followed statewide for the recording and data collection of these certificates. Requiring municipalities to make these conditions may require additional legislation beyond amending Act 47.
- annually require each town to send a “flyer” in each year’s tax bill alerting all property owners that any climate controlled new construction or additions must comply with the appropriate energy code, including directions where to find guidance. This “flyer” should be a standardized one for all towns to use, and perhaps volunteers from “Town Energy Committees” could help to facilitate this.
- require each regulated utility to send out the above information, including RBES/CBES information and website links, in at least one invoice per year.
- include in the above mailings a link to the OPR list of registered builders, and require OPR to regularly update that list and organize it by geographic location, so homeowners and commercial building owners can easily find contractors who are registered with the State.
- contracts required between homeowners and builders per the builder registry could include the following statement of understanding between the parties: Vermont Residential Building Energy Standards (RBES) applies to most single family home and duplex construction/renovations in Vermont. The latest adopted version of RBES can be found at <https://codes.iccsafe.org/content/>

[VTRES2020P1](https://publicservice.vermont.gov/sites/dps/files/documents/2020-VT_Residential_Energy_Code_Handbook_v8.pdf) and an explanatory handbook is at https://publicservice.vermont.gov/sites/dps/files/documents/2020-VT_Residential_Energy_Code_Handbook_v8.pdf

Increasing compliance: Critical to increasing compliance is to establish the Authority Having Jurisdiction (AHJ), and to grant that AHJ full responsibilities for code promulgation, plan and construction review, and issuance of Certificates of Occupancy (COOs) for properly constructed buildings. The Division of Fire Safety (DFS) is the AHJ for all public buildings in the State, but for those municipalities with whom DFS has agreements allowing those municipalities to provide their own review in accordance with the State's adopted fire and building codes. We propose that the AHJ for energy codes fall under DFS jurisdiction, and flow to those municipalities with which the DFS has municipal agreements.

Code promulgation of RBES/CBES has historically resided with the Department of Public Service (DPS), whereas it would typically reside with the entity charged with administration and enforcement. Determining the best entity to promulgate the energy codes would have to be determined. While not without some complications (chiefly money and adequate staff training), it's a simple concept to think about DFS becoming the AHJ for CBES. RBES is another matter, because while it is a statewide code, there is no other adopted state code that applies to single family homes in Vermont. Due to the nuances of code development and adoption, construction of multi-family homes of 3 stories or less is within RBES. DFS or those municipalities with whom DFS has agreements do review all multi-family home construction, so by default, some buildings that fall under RBES could be reviewed by DFS if DFS becomes the AHJ. But it must be made very clear: DFS, nor to our knowledge, any of the municipalities with whom DFS has agreements, review any buildings for energy code compliance. So the lack of an AHJ is a problem statewide for both RBES and CBES. Please also refer to the 'Combined Position Statement: RBES Enforcement', dated 10/11/2019, as it also very clearly addresses these issues.

The lack of a statewide building code for single family homes, and therefore the lack of an AHJ for that portion of the State's construction, makes it complicated to designate an AHJ for single family homes under RBES. It must also be pointed out that some municipalities in the state do review construction of single family homes, though since there is no adopted state code(s) for single family construction, what is being used by those municipalities for code review varies. We understand that Montpelier relies on the International Residential Code, whereas Burlington uses a mix of its Code of Ordinances and the International Building Code, which is not intended for single family home construction.

We believe that if we have a statewide residential energy code, that it is imperative that we also have a statewide residential building code, and propose that code to be the International Residential Code, to also fall under the Division of Fire Safety, and perhaps be modified as required to address the particular needs of our state. This may seem like "government overreach" by some, and certainly could require additional staffing and resources; however, to reduce those resource costs, it is possible to consider adopting such a code by means similar to some other states, notably neighboring NH, which adopts this code as its statewide residential building code, but defers enforcement to those communities with resources and desire to do. The advantages to establishing a statewide residential building code include a level playing field statewide for builders, architects and other building professionals, a resource for building safer buildings, a code that includes specifics and how to build to meet code, and a document for homeowners to rely upon. An anecdote of note: a few years back, a Vermonter lost their life in a fast-moving house fire, exacerbated by the lack of firestopping between the home's kitchen soffits and the floor above. In response to this tragic event, legislation was proposed to require as a condition of all home sales, that the seller would have to prove that fireblocking existed in such concealed locations. The legislation ultimately failed - it would have represented significant costs for every seller to tear into, document, potentially repair, and then close the demo'd materials of such concealed spaces prior to selling their home - but the problem it was trying to solve still remains, and a statewide code could begin to address such construction flaws that can lead to loss of life.

While a recommendation to adopt a statewide residential building code may be beyond the charge of this committee, such a statewide building code system, coordinated with the energy code and concurrently updated, will help to provide a means to further compliance with RBES. Municipalities which currently review single family home construction will have an appropriate document for regulatory purposes, builders and architects will have consistent rules around the state, and homeowners should enjoy some peace of mind knowing there are rules to be followed.

How to increase compliance in the short-term: The ideas expressed above in the “increasing awareness” paragraph will lead to some higher compliance rates as homeowners and builders become more aware of the rules. Another anecdote: on a recent residential construction project, the specifications required compliance with 2020 RBES, and nearly all of the builders contacted by the owner had never heard of RBES and didn’t know VT has an energy code. Reaching this segment of builders, possibly through the contractor registry, will improve compliance, as not many builders want to scoff the law. More awareness will undoubtedly lead to more compliance.

- Standardize Collection of RBES Compliance Certificates: There needs to be a standard of practice that towns and municipalities are required to follow in issuing permits with RBES requirements as well as in collecting and filing certificates when each new home is completed. There may also be a standard fee allowed to cover the cost in processing time.
- RBES Circuit Rider (or Code Rider) positions: Having one or two statewide educator/assistants to help town clerks and zoning officials as well as builders throughout the state understand the RBES code and why building to meet its requirements makes sense. The Vermont Building Energy Code Administration Project has included one such position in their requested budget.
- Education: utilize the expertise and network of BuildSafe VT to provide trainings to builders. Use the network of career education centers, and make sure there aren’t limitations on ‘hands-on’ demonstrations. For at least the first two years, all costs associated with these trainings should be borne by the State, to entice and maximize small builder participation.
- Trades licensing: DFS currently regulates MEP trade licenses. The requirements for the first licensure exam should include energy codes as they apply to the specific trade, and subsequent renewals should include all updates as they have been developed in the intervening years. If continuing education credits are required, energy codes should be part of the CE requirements.
- Professionals’ licensing: architects and engineers are required to renew their professional license every two years, and CE credits are required as part of that process. Credits in energy code updates should be mandatory: every time the energy code is updated, CE credits should be mandatory in that renewal period.
- Efficiency VT trainings: EffVT has conducted many energy code trainings over the years. These should be expanded, and perhaps coordinated with BuildSafeVT trainings. Participating in one of these trainings would qualify for professional CE credits, and possibly also for trades licensing requirements.
- DFS permit conditions of approval: a typical construction permit from the DFS includes certain standard conditions (which codes apply, etc.), instructions for inspections, etc., as well as specific conditions relative to the project itself. Even without current responsibility for energy code enforcement, each permit released by the DFS could include a condition notifying the recipient something to the following effect: *The State of Vermont has adopted residential (RBES) and commercial (CBES) energy codes. The current editions of those codes may be found at www.xxx.xxx.com. Your project is subject to (pick the correct one, RBES or CBES), and it is your responsibility to comply.* Once DFS is granted AHJ status, and has the training and resources to enforce the energy codes, this condition can be changed to reflect its authority over the energy codes.
- Realtor, Banker and Attorney Education: Consider adding requirements so that all realtors, lenders, and lawyers doing title searches understand the need for RBES Compliance Certificates, and consider a date after which lack of a RBES certificate for a new home would create a title defect.

- Marketing campaign: initiate an 'energy codes awareness' marketing-type campaign (might EffVT be well-suited to run it?) - could include radio, TV, social media, print - with trainings backing it up (see above). Could some of the DOE funding be applied to this?

cost-effectiveness analyses for the RBES and the CBES: This includes several components, ranging from actual increased cost of construction of a new code vs its previous edition (should be easy to quantify by asking builders), to aspects that are more esoteric like the non-energy benefits of occupant health, comfort, building durability, including the larger view of reducing operational and the upfront cost of carbon. With the advent of Environmental Product Declarations (EPDs), it is becoming easier (albeit still time-consuming) to understand the embodied carbon in common building products, but without an understanding of what the true societal costs of carbon are, it's difficult to understand and quantify how the product selections in a given building affect building costs. Product A may cost less than Product B, but its carbon content may be far greater, and therefore a greater cost to society at large. There would be very little cost to projects to at least raise awareness of the carbon content in product selection, and as we develop a better understanding of this and know more, we'll do better. Site selection is also an important energy consideration, as sites with favorable public transport and in already developed areas close to amenities and services, will reduce fossil fuel use.

assess how the building energy codes interact with the fire and building safety codes: Under the current system, there isn't any interaction between building energy codes and the fire and building safety codes. Energy codes are essentially self-certified while fire and building safety codes fall under DFS for all but single family homes and other statutory exceptions. Tying these codes together under the umbrella of DFS as the AHJ will increase understanding of and compliance with the energy codes in particular. Please refer to thoughts expressed above as to how to better integrate these code systems under one authority.