

Comments on the Vermont Commercial Building Energy Standards (CBES) Amendments -- Signed by
June E. Tierney DPS Commissioner, 4/25/23

Comments from Andrew M. Shapiro, Energy Balance, Inc., Montpelier VT 05602

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I have been a building energy consultant in Vermont since 1988, working on residential, commercial and institutional buildings, new and retrofit, from single family homes to multi-family, ranging in size up to 50,000 square feet. I hold an engineering degree. Please consider my following comments.

1. The 2024 Commercial Building Energy Standards were developed with an extensive two-year rule making process that resulted in the 2024 standard, which included a year of delay of implementation. A thoughtful process was led by the Public Service Department (PSD) with a working group and stakeholders from various sectors. This rulemaking should not be over-ridden without a similar process of engagement of the working group and stakeholders, including public meetings, testimony and analysis of cost-effectiveness.
2. The study undertaken in support of the 2024 standard development showed that the 2024 standard is cost effective from a consumer perspective. That is, when a commercial building is built to the 2024 standard the annual energy cost savings are greater than the incremental cost of the financing to support the higher level of efficiency. This is cash flow positive for the owner. In other words, it costs less to own the building built to the 2024 standard than it does to own the same building built to the 2020 standard. This is a far more relevant metric than construction cost when considering affordability, since almost all construction is financed over time.
3. The PSD has a residential study planned for Spring to re-assess the baseline efficiency and compliance to 2020 and 2024 Standards, including determining levels of compliance to standards and cost of non-compliance. A similar compliance and cost/benefit analysis should be done for commercial buildings before declaring the 2024 standard not cost-effective.
4. The 2024 standard is not only cost-effective, it improves building durability and occupant comfort and health. In my consulting and enclosure commissioning practices, decreasing air leakage rates is the most cost effective option to reduce building energy as well as reducing problems of frozen pipes and discomfort. By decreasing cold surfaces in the building , excellent insulation and air sealing greatly reduces interior condensation moisture and mold problems found in many commercial buildings. These problems are costly to repair and mold can have significant health impacts.
5. Disregarding the 2024 Standard creates market confusion. There have been two years of training on 2024 standard. Consistency is important for design and construction businesses -- they need to have clear rules that do not change unnecessarily. The Governor has introduced significant

confusion by attempting to promulgate this rule during the time when builders are planning and costing out projects for the Spring. To blame this confusion on the Energy Standards is misguided. This rule should be rescinded immediately to create certainty for builders for this building season, with a considered process for any revision to take place instead.

6. If the Governor wants to be helpful in making commercial buildings efficient and affordable, he should name the Division of Fire Safety as the authority having jurisdiction over the Energy Standards. At present there is no enforcement of the Standards, disadvantaging builders who abide by the rules compared to those that do not. Surveys have indicated significant lack of adherence to building to the Standards that are now in place.
7. Vermont has adopted a Climate Action Plan to reduce greenhouse gas emissions. Adopting a rule that increases costs to building owners while increasing greenhouse gas emissions is in direct opposition to that Plan.
8. The high cost of construction, and the rapid rise of those costs, is NOT caused by the 2024 CBES. The incremental cost for going from 2020 to 2024 code is a very small fraction of the general rise in materials and labor costs.
9. Presently under construction is the East Montpelier Town Highway Garage, being built to an efficiency level beyond the 2024 energy standard, and whose design supports the Vermont Climate Action Plan goals. The architect, engineer and I completed extensive analysis that indicated a 30-year life cycle cost that is no higher than the worst performing option. If the Federal and Efficiency Vermont incentives are included, the project lifecycle cost would be approximately \$300,000 lower than other options. As a result, the Town decided to build the better building, which is very efficient, all electric with photovoltaics on the roof to offset annual usage and has a high degree of durability. The Town will benefit from low operating cost for at least 50 years from this building. And we will all benefit from the very low greenhouse gas emissions.
10. The proposition that designers/builders can choose between the 2020 or 2024 standard is a smoke screen for deleting the 2024 standards: why would a builder --- who must be competitive to get a job -- bid a project that is a bit more expensive by following the 2024 standard? This is despite the fact that the cost of ownership – financing + energy costs – is lower with the 2024 code.