

## **26. Criterion 9(F)(Energy conservation)**

### **I. Requirements for Issuance of a Permit**

Criterion 9(F) requires that the applicant demonstrate that, “in addition to all other applicable criteria, the planning and design of the subdivision or development reflect the principles of energy conservation, including reduction of greenhouse gas emissions from the use of energy, and incorporate the best available technology for efficient use or recovery of energy. An applicant seeking an affirmative finding under this criterion shall provide evidence that the subdivision or development complies with the applicable building energy standards under 30 V.S.A. § 51 or 53.” 10 V.S.A. § 6086(a)(9)(F).

### **II. Burden of Proof**

The burden of proof is on the applicant. 10 V.S.A. §§ 6086(a)(9)(F) and 6088(a).

### **III. Analysis**

#### **Residential Building Energy Standards**

Residential construction in Vermont (single-family dwellings, two-family dwellings, and multi-family housing three stories or less in height) is subject to Vermont’s Residential Building Energy Standards (RBES) (30 V.S.A. § 51). Substantial and reliable evidence of compliance with the RBES and any duly adopted “Stretch Code” creates a rebuttable presumption of compliance with Criterion 9(F), except no presumption is created regarding the use of electric resistance space heating (30 V.S.A. § 51(e)). The “Stretch Code” is a building energy code for residential buildings, adopted by the Commissioner of Public Service, that achieves greater energy savings than the RBES (30 V.S.A. § 51(d)).

The Commission may encourage applicants to contact Efficiency Vermont for information on improving the cost-savings and energy efficiency of their project. However, the applicant is under no obligation to do so.

#### **Commercial Building Energy Standards**

Commercial buildings (all buildings which are not residential buildings three stories or less as defined in 30 V.S.A. § 51, or farm structures as defined in 24 V.S.A. § 4413) are subject to Vermont’s Commercial Building Energy Standards (CBES) (30 V.S.A. § 53). The *2020 Vermont Commercial Building Energy Standards* serves as the codebook for compliance with the CBES.

The CBES do not create a rebuttable presumption with respect to Criterion 9(F) for commercial buildings. Therefore, the Commission can require energy efficiency measures greater than the CBES to ensure that the project reflects the principles of energy conservation, including the reduction of greenhouse gas emissions from the use of energy, and incorporates the best available technology for efficient use or recovery of energy. The Board has interpreted the phrase “best available technology” in Criterion 9(F) to include any proven building practice or design, and any equipment and materials that can be obtained through normal construction

supply channels. *Re: Twin State Development Association, #5W1021-EB, Findings of Fact, Conclusions of Law and Order at 8 (Jun. 12, 1990).* In that decision, the Board stated:

A project that reflects the principles of energy conservation will include all such energy efficiency siting and design features, building practices, and equipment that can be justified on a life-cycle cost basis. This is modified in practice by allowing for consideration of factors specific to a development, such as aesthetics, special functions, maintenance problems, safety or other unique concerns of the proposed design and use. *Id.*

Under Criterion 9(F), the Board has found that the burden is on the applicant to demonstrate that it has investigated other available technology and to establish why the selected equipment is the most energy efficient. *Killington 43 Assoc., Inc., #1R0522-4-EB (8/20/86).* [EB #290]

Although Title 30 provides for a “Stretch Code” for residential developments, Title 30 includes no such code for commercial projects. To guarantee that the *best available technology* standard is met, the Commission may encourage applicants to contact Efficiency Vermont or another energy efficiency consultant for information on improving the energy efficiency of their project. At times, the Public Service Department may review a project and recommend specific conservation measures. Such recommendations may be based on a life-cycle cost approach to determine the appropriate type of equipment by trading off greater capital costs for lower energy consumption and lower operating costs.

Applicants are encouraged to list details related to the energy features of the project, including: interior and exterior lighting, energy controls, space heating and cooling, water heating, ventilation systems, insulation levels, fenestration, and other proposed energy conservation measures. Commissions should encourage “renewable ready” building designs, including providing the electrical infrastructure to support the future installation of electric vehicle charging stations, photovoltaics, solar hot-water systems, or other infrastructure to reduce “greenhouse gas emissions from the use of energy” from the project. For all types of projects, electric resistance space heating should be avoided.

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