**Model Zoning and Subdivision Language**

**that supports energy efficient building and design**

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What kinds of buildings are built, where they are built, and how they are sited all affect overall energy efficiency. This model language is separated into text that could be used in zoning bylaws and text for subdivision bylaws. It does not contain a full model bylaw, as much of a bylaw is unrelated to energy. It also does not contain any language related to renewable energy generation, as that is a major subject in and of itself. Rather, this model language is meant to be used in addition or as a replacement for parts of existing bylaws solely around energy efficiency and conservation.

The text language is independent, so a municipality can adopt any or all of the suggestions a la carte. This model uses terminology that may not exactly match your bylaw. For example, many towns call their zoning bylaws “ordinances” or “regulations”. They may use the statutory language and call zoning administrators “administrative officers”. Just adjust the language to match your local bylaw.

Any changes to a municipality’s bylaws would need to adopted under the usual process outlined in 24 VSA §4441-4442, whereby the Planning Commission holds a hearing and then the Selectboard holds a hearing prior to adoption. Energy Committees must work closely with their Planning Commissions and Selectboards during any drafting process so that the proposed changes have support and are likely to be adopted. The community could also use the interim adoption procedures under 24 VSA §4415 if they felt a sense of urgency. Regular and interim measures should be supported by town plan language as the foundation for the change. Such language need not be detailed, so if the plan has policy statements such as, “The Town supports energy efficiency measures” or, “The bylaws should be updated to address energy” then there is at least a nexus between the changes and the plan.

**Zoning**

Zoning generally regulates the placement of buildings and other development on lots, and the uses that can take place on the lots. Most bylaws have districts where these rules vary, generally from more intense core areas to outlying rural districts.

**Districts**

Districts can themselves be used to create more energy efficient land use patterns. Spread out development that can be expected to generate daily traffic (usually residential) is less efficient than concentrated development as more energy needs to be expended in transportation. Spread out development also increases energy use in such things as road plowing. Therefore, the use of districts can create a more energy efficient land use pattern.

Conservation/Low Density Districts

1. Look at the road network in town and where existing buildings are.
2. Are there areas of town currently made up of areas that are undeveloped or only lightly developed?
3. Create districts that restrict or prohibit year-round homes and commercial structures (usually camps can be allowed). These districts can be blocks of large parcels. Look at what lands are conserved or in Current Use to help identify areas with less development pressure (see 24 VSA §4414(1)(B)). Such districts can also begin a certain distance from roads, such as 500’ back. This is easy to create on maps, and allows most anticipated development.

Core Districts

1. Conversely, increasing density in core areas of larger towns allows development to use existing roads, sidewalks and utilities with very little need for upgrades.
2. Look at actual lot sizes and setbacks compared to the zoning and decrease these to meet actual conditions.
3. For areas with sewer and water, take the most advantage of this by increasing the number of housing units allowed per acre, or simply remove such limits entirely and let developers use whatever they can get to work on the site.

**Buildings**

Zoning typically only looks at the lateral and vertical extent of buildings through setbacks from lot lines and height restrictions. However, bylaws can also regulate the buildings themselves, and this usually takes the form of some kind of design review that affects the outside appearance of the building. However, towns can also address energy conservation in buildings.

The first step should be to ensure that new buildings and renovations that are required to meet the residential or commercial energy building standards are actually doing so. 24 VSA §4449(a)(1) requires that zoning administrators shall provide permit applicants with a copy of such standards.

Most bylaws have a part that lays out the appointment and duties of zoning administrators based on 24 VSA §4448, but should add the above requirement in such duties as a reminder. This is easiest done by just restating the relevant part of 24 VSA §4449(a)(1) as an addition in the list of their duties:

*When an application for a municipal land use permit seeks approval of a structure, the Zoning Administrator shall provide the applicant with a copy of the applicable building energy standards under 30 V.S.A. §§ 51 (residential building energy standards) and 53 (commercial building energy standards). However, the administrative officer need not provide a copy of the standards if the structure is a sign or a fence or the application certifies that the structure will not be heated or cooled. In addition, the administrative officer may provide a copy of the Vermont Residential Building Energy Code Book published by the Department of Public Service in lieu of the full text of the residential building energy standards.*

For towns that require a certificate of occupancy (CO) prior to using a building, they must also require that the applicant submit the energy compliance certificate required by 30 VSA §51-52 before issuing the certificate of occupancy. It should be noted that the above parts of law requiring provision of the energy standards to applicants and to issuance of COs apply whether or not a town has gotten around to putting them in their bylaws. So, towns should amend their bylaws to make it obvious what they need to do, but are required to do these two actions now regardless.

For towns that don’t yet require a certificate of occupancy, that is a simple addition. Below is sample language. This can be added where it makes sense, usually in part of the bylaw containing administrative provisions.

*Sample Certificate of Occupancy Provision*

*In accordance with Chapter 117 §4449, for any development requiring a zoning permit, it shall be unlawful to use or occupy, or permit the use or occupancy of any land or structure, or part thereof, created, erected, changed, converted, or wholly or partly altered or enlarged in its use or structure*

*until a certificate of occupancy is issued therefore by the Zoning Administrator, stating*

*that the proposed use of the structure or land conforms to the requirements of these bylaws. A*

*certificate of occupancy is not required for structures that were built in compliance with the*

*bylaws at the time of construction and have not been improved since the adoption of this bylaw. For structures subject to the energy code requirements of 30 VSA §51-52, a certificate from the applicant demonstrating energy compliance is required prior to the issuance of the certificate of occupancy.*

Municipalities in Vermont can only create zoning bylaws as they are enabled by statute. Statute does not have a lot of enabling around regulation of structures for energy conservation outside of the code requirements reviewed above, but 24 VSA §4414(6) does appear to provide a broader ability to “encourage energy conservation”. One way that this could be done inside the building envelope would be to require more stringent construction than the state code does. That is a very technical field, and so outside experts would be needed to write such a standard. Another option would be to offer incentives under the waiver powers in 24 VSA §4418(A), and that would allow applicants to come up with ways to go beyond the required code in return for increased density or other changes in dimensional requirements.

If towns have a waiver provision in their bylaws already, they could merely add another component. The sample below assumes there is no waiver provision in place

*Sample Waiver*

*Waivers may be granted as a permitted use by the Zoning Administrator to reduce dimensional*

*requirements as needed to allow for disability access, fire safety and other requirements of law.*

*Waivers for other situations may granted by the ZA after approval by the Development Review Board (DRB) following the same review and notice process as for a conditional use. The DRB may grant waiver approvals to reduce any dimensional requirements (or increase any density requirements), up to 50 %, if the Board finds that the proposed development is in conformance with the town plan and will provide for increased energy conservation in structures, or through site layout, above what is otherwise required.*

**Sites**

Uses other than single houses or duplex can be required to get site plan approval prior to issuance of a zoning permit. There are no statutory requirements for site plan approval, and there is wide enabling under 24 VSA §4416. Site plan deals with the site, and is traditionally used to look at internal roads, sidewalks, landscaping, lighting, etc. on commercial development. Energy can be conserved through landscaping that creates a windbreak (on the westward side for us) or provides summer shading, through pedestrian interconnection requirements so that people can visit many establishments without getting back in their car and driving between them, and through use of LED area lights.

Going further, the building orientation and location on the site itself can help or hinder energy conservation. Buildings aligned for solar gain and sheltered from the wind will consume less energy to heat, and buildings closer to roads and able to interconnect with other development will reduce energy use (counting the energy used for transport).

There is the constant question of how much conservation is enough, and words like “possible”, feasible” or “practical” can provide vague guidance. “Reasonable” is a much better term to use to withstand legal scrutiny, and though still subjective can at least be consistent.

*Sample Site Plan Standards*

1. *The applicant will demonstrate that reasonable design steps have been taken in the design of parking, accesses, internal circulation, drives, sidewalks and bicycle lanes to maximize internal and external connections in order to increase efficient pedestrian access between lots and uses, and for more distant adjacent uses to avoid vehicles needing to reenter main roads. The appropriate municipal panel may require a formal connection between sidewalks or parking lots on neighboring properties.*
2. *The applicant will demonstrate that reasonable design steps have been taken to conserve energy through landscaping, or retention of existing trees, in order to provide shading and/or windbreaks.*
3. *The applicant will demonstrate that reasonable design steps have been taken to minimize energy usage in site lighting in terms of fixtures, light sources, and total amounts of illumination. Lighting fixtures, levels and distribution shall be designed to minimize glare and be shielded to direct light downward and only onto the site.*
4. *The applicant will demonstrate they have taken reasonable design steps to conserve energy in building design and orientation.*

**Subdivision**

Subdivision bylaws, by and large, regulate the division of a parcel in to smaller parcels. In doing so, they can also regulate internal placement of structures on the subsequent lots through using ‘development envelopes’. Subdivisions which spread the development impacts widely are generally less energy efficient than those that concentrate development. ‘Conservation subdivisions’ on larger lots can be used to limit the impact of a subdivision on fragile areas or important forest areas or agricultural lands by clustering development and locating lot lines in ways that don’t fragment these lands. In doing so, they can also minimize energy needed for actual construction through limiting roads, and minimize future energy use through reducing travel needs. Energy efficient subdivision can also take into account solar access. Such requirements could simply be applied to all subdivisions, or be used as a means to provide a bonus incentive. Since this only works on a practical scale you will want to find the right size for your town and the district (10 acres is used below). Clustering can also turn what are minimum lot sizes into a density that allows the same number of structures but on smaller lots.

*Sample Subdivision Provision*

*Subdivision designs on lots over 10 acres shall demonstrate they have taken reasonable steps to minimize energy usage by concentrating development envelopes near existing roads and to sites with solar access.*

*Notwithstanding other provisions, during subdivision review, required minimum lot size of acres/lot shall be converted to acres/structure so that the same number of resulting structures are allowed but may be placed on smaller lots. Lot size may be reduced to as low as 1 acre for lots with onsite sewer and water.*

****For more information on revising your regulations, or for other ways that municipalities can reduce energy use, promote renewable energy, and increase efficiency and conservation, please contact TRORC at 802-457-3188 or visit www.trorc.org/programs/energy.