Action Steps in Response to Nov. 21& 28 Advice from Nick Low

**Proposed Changes in Zoning Regulations**

Change point #4, Sec. 207 (top of page 20) and point #10, Sec. 209 (top of page 21) to read as follows:

Ridgelines are defined as all land above 2000 feet.  Ridgelines shall be left in their natural condition, free from all development, including roads, building structures, utilities, wireless broadcast telecommunications facilities, and industrial wind turbines, with the following exception:

Existing homes above 2000 feet may install solar arrays or wind energy systems for on-site electricity consumption if they abide by all relevant zoning regulations.

 Decide, if we want to rewrite section 505 (p.30) as suggested by Nick Low, as follows:

**Section 505 ~~INDIVIDUAL~~ WIND ENERGY SYSTEMS**

~~Small scale individual w~~Wind energy systems operated solely for onsite electricity consumption which are subject to municipal zoning regulations (i.e. systems not subject to 30 V.S.A. § 248) shall comply with the following provisions.

Regulations

* Turbines shall not be allowed or permitted unless they are setback a minimum of two (2) times the highest blade height measured in a straight line from the closest property line.  Highest blade height is measured from the base of the turbine to the tip of a blade in its upright, vertical position.
* Turbines shall not be allowed or permitted unless applicant clearly demonstrates noise will not exceed ~~the~~ 41 dBA Fast Lmax daytime at the closest property line and 39 dBA Fast Lmax nighttime.
* Turbines shall not be allowed with lights.
* Turbines and associated development shall not be allowed on slopes of 20% or greater.
* Noticeable shadowing, shadow flicker, and the risk of ice throw from wind turbines is prohibited.
* ~~Maximum turbine~~ The highest blade height allowed, as measured from the base of the turbine to the tip of a blade in its upright, vertical position is 120 feet; maximum blade length is 20 feet.
* The rated capacity of the systems shall not substantially exceed the on-site electric usage of the end-user ~~and shall not be interconnected to the electric utility system~~.
* Turbines are subject to restrictions set out in Sections 207 and 209 of these regulations.

Decide if we want to make wind turbines a conditional use or keep them as a permitted use in the various zoning districts. If we want to make them conditional uses, then change the language in the appropriate parts of Sec 201 (201.1 etc.) and alter Sec. 505 accordingly.

Decide if we want to require a revegetation plan as part of the application process for wind turbines in Sec. 505 decommissioning section. (p.30) If we do want to require this, we could add a bullet point under “Regulations” which says “Turbines will not be allowed or permitted unless a revegetation plan is submitted as part of the application process.” Or, we could change the last bullet under “Decommissioning” to read “Stabilization or re-vegetation of the site as outlined in the applicant’s re-vegetation plan.”

Create a Sec. 401 C (p.28) entitled “Screening Requirements” Rewrite this section so that the screening requirements for commercial activity correlate to (or are more restrictive than) the requirements set out Sec. 506B (p.31). My suggested language (not the lawyer’s) is as follows:

*401 C Screening Regulations*

*The purpose of screening regulations is the preservation of the rural and scenic character of Windham while protecting the privacy of abutting landowners. Screening for commercial property is not intended to hide the view of the parking area but to have a landscape edge along the public highway. In such instances:*

*a) Topography and Natural Barriers shall serve as screening where feasible.*

*b) Existing flora shall be preserved, where feasible, to block the view from public roads and residences. c) Should new screening need to be developed, the use of year round solid vegetative barrier of non-invasive, zone appropriate plant materials will be used.*

*d) Screening will be maintained – Any diseased or dead plant materials will be replaced no later than the spring of the following year.*

*Where solid screening may be required is along adjoining property lines to obscure the parking area from abutter view. This solid barrier should conform in such a manner that insures the abutter’s privacy. These may consist of an evergreen hedge or solid fence no less than 8 feet in height or any combination thereof.*

Decide what setbacks we want for on-site solar in each zoning district. Current setbacks in Sec. 506 are for systems that require a CPG.

Decide if we want to make on-site solar systems permitted or conditional uses in each zoning district. If so, add this in Sec. 201.1, 201.2 etc.

Decide if we want to rewrite Sec. 506 as N. Low suggests, as follows:

**Section 506 ~~SITING~~ SOLAR ENERGY SYSTEMS**

The following regulations apply to solar installations operated solely for on-site electricity consumption except as otherwise noted.  Solar installations are subject to restrictions set out in Sections 207 and 209 of these regulations.

A. ~~Setback Requirements for~~ A ground-mounted solar energy installation~~s~~ must comply with all setback requirements for the zoning district in which it is located. ~~under Act 56 standards 30 V.S.A. § 248(s)~~:

~~This subsection sets minimum setback requirements that shall apply to ground-mounted solar electric generation facilities approved under this section.~~

~~(1) The minimum setbacks shall be:~~

~~(A) From a State or municipal highway, measured from the edge of the traveled way:~~

~~(i) 100 feet for a facility with a plant capacity exceeding 150 kW; and~~

~~(ii) 40 feet for a facility with a plant capacity less than or equal to 150 kW but greater than 15 kW.~~

~~(B) From each property boundary that is not a State or municipal highway:~~

~~(i) 50 feet for a facility with a plant capacity exceeding 150 kW; and~~

~~(ii) 25 feet for a facility with a plant capacity less than or equal to 150 kW but greater than 15 kW.~~

~~(2) This subsection does not require a setback for a facility with a capacity equal to or less than 15kW.~~

B. Screening Regulations

The purpose of these screening regulations is the preservation of the rural and scenic character of Windham while promoting the use of renewable resources.  These requirements apply to ground-mounted solar installations operated for on-site electricity consumption (i.e. installations that are subject to zoning regulations) and to ground-mounted solar installations that are net-metered or operated for off-site electricity consumption (i.e. installations that are subject to 30 V.S.A. § 248) (see 30 V.S.A. § 248(b)(1)(B)).

a) Topography and ~~N~~natural ~~B~~barriers shall serve as screening where feasible.

b) Existing flora shall be preserved to block ~~the~~ ground mounted solar units from public roads and residences.

c) Should new screening need to be developed, the use of year round solid vegetative barrier of non-invasive, zone appropriate plant materials ~~will~~ shall be used.

d) Screening ~~will~~ shall be maintained – ~~A~~any diseased or dead plant materials ~~will~~ shall be replaced in a reasonable time frame.

e) Solid screening is not required to hide the units but should be landscaped to visually blend into its surroundings except when in conflict with abutting residences privacy.

C. Use Regulations in districts

i) Hamlet (H) and Historic Districts (HD) Ground mounted and roof mounted solar units are a conditional use.

ii) Forest District (F) Ground mounted and roof mounted solar units are a permitted use.

iii) Rural Residential District (RR) Ground mounted and roof mounted solar units are a permitted use.

iv) Recreation Commercial (RC) Ground mounted and roof mounted solar units are a permitted use.

D. Abandonment or Decommissioning

Any ground mounted solar unit installation which has reached the end of its useful life or has been abandoned shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Zoning Administrator by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

1.Physical removal of all ground mounted solar unit installations including the structures, equipment, security barriers, and ~~transmission~~ distribution lines from the site.

2.Disposal of all solid and hazardous waste in accordance with local, state and federal waste disposal regulations.

3.Stabilization or re-vegetation of the site as necessary to minimize erosion.

 **Proposed Changes in the Enhanced Energy Plan**

\*\*N.B. Correct the minutes from last meeting which incorrectly refers to zoning regs as the location of these criteria.

Adopt new language for Municipally Designated Preferred Sites (p.8)

All Municipally Designated Preferred Sites must meet the following criteria:

• Minimal impact upon agricultural use of high quality soils

• No disruption of wildlife travel corridors or living habitat

• Lack of impact upon the scenic resources of Windham as noted in the Town Plan

• No interference with riparian buffers

• Existing road structure suitable for installation and maintenance?

In addition, Municipally Designated Preferred Sites must meet one, or more, of the following criteria:

• Town owned land, especially if it is cleared and has good solar orientation

• Proximity to 3 phase power lines to reduce utility infrastructure expansion

• Location near the end of utility distribution lines for grid support

• South facing slopes having low quality agricultural soils which allow higher density solar arrays

• Existing areas of open land such that significant deforestation would not be required

Is the following criterion redundant?

• Location on agricultural soils only with facility design compatible with continued agricultural use

Decide whether to add the following paragraph, suggested by N. Low, at the beginning of the energy plan. This paragraph could then be removed once the Enhanced Energy Plan is merged into the new 2020 Town Plan.

“This Enhanced Energy Plan is designed to update the energy chapter of the existing Town Plan.  The provisions set out in this Enhanced Energy Plan therefore both complement and supersede the energy chapter of the existing Town Plan.  To the extent that this Enhanced Energy Plan conflicts with any provision of the existing Town Plan, the provision of this Enhanced Energy Plan shall apply.  To the extent that a provision of the energy chapter of the existing Town Plan addresses an issue not addressed in the Enhanced Energy Plan, that energy chapter provision shall apply.”

Change Policy 4.12 (p. 22) to read as follows:

Ridgelines are defined as all land above 2000 feet.  Ridgelines shall be left in their natural condition, free from all development, including roads, building structures, utilities, wireless broadcast telecommunications facilities, and industrial wind turbines, with the following exceptions:

 1)      Existing homes above 2000 feet may install solar arrays or wind energy systems for on-site electricity consumption if they abide by all relevant zoning regulations.

 2)      Existing homes above 2000 feet may install net-metered solar arrays or wind energy systems not to exceed 15 kW capacity.

 3)      Solar arrays not to exceed 150 kW capacity may be installed above 2,000 feet on former ski slopes which are already cleared.

Add the same exact language to Policy 3.1, Action Step #4 (p.20).

Decide if we want to change the second bullet point in Policy 4.7 to read:

“Fragile natural areas including ridgelines over 2,000 ft. elevation, subject to the exceptions set out under Policies 3.1 and 4.12. “

Add the following language as the fourth paragraph under *Areas Unsuitable for Renewable Energy Siting* on p.8:

"High-elevation sites above 2000 feet are especially fragile for a variety of reasons, particularly because they are the source of the headwaters for numerous streams and rivers.  Because development in these areas could enhance the possibility of increased runoff and flooding which would endanger the health and safety of residents in Windham and/or downstream communities, these areas are only appropriate for limited, low-impact development.  Because installation and maintenance of solar arrays has a lighter impact than wind turbines, some small-scale (i.e. solely for on-site electricity consumption or net metered not to exceed 15kW capacity) and medium-scale (i.e. not to exceed 150 kW capacity) solar development ~~is~~ may be appropriate, whereas anything more than small-scale (i.e. solely for on-site electricity consumption or net metered not to exceed 15kW capacity) wind development is not appropriate, and is therefore prohibited.  Furthermore, medium-scale solar development above 2,000 feet shall be limited to areas that are already cleared, such as former ski slopes, in order to minimize the impact on fragile natural resources.”

**Proposed Changes in the Town Plan**

Decide whether to leave Policy 3, Action 3(page 58) as is (which Nick Low says is not a problem in his 11/28 responses , or to adopt the following language, which is more precise:

 “Net-metered solar arrays or wind energy systems not to exceed 15 kW capacity shall not be considered commercial use for purposes of this plan.”