Suggested Changes in Vermont's Renewable Energy Policy

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Fairness and Distributed Energy

Each municipality should be <u>compelled by law</u> to provide an amount of the state's renewable energy targets in proportion with a town's population.

- Energy generation is placed closer to the areas with greater energy consumption and is in alignment with the state's goals for a distributed grid.
- Municipalities which are perceived as having inexpensive siting opportunities would no longer be forced to host an inordinate concentration of solar projects.
- A vibrant market is envisioned in which towns with high property values and/or high population density would essentially pay other communities for hosting their renewable generation in exchange for moneys that would flow to the hosting town. The same effect would occur in towns that value their scenery more than their money.
- The state would need to oversee the marketplace, and some subsidies may be required for very low income communities that do not have the topography to support solar projects.

Once municipalities are responsible for providing their share of the state's renewable energy, the onus for siting and screening belongs to the municipal governments rather than the state and its agencies.

- Municipalities become sources of the solution to current siting/screening problems rather than being adversaries to the renewable energy roll-out.
- Municipalities are better suited than developers to find sites for renewables that will be acceptable to their citizens.
- The burden on the PSB will be reduced as will the perception that it is an insensitive arm of state government.
- Municipalities can be informed with siting and screening guidelines such as provided by ACRPC.
- A municipality unwilling or unable to meet its renewables quota would suffer a financial penalty and have "its energy" provided by another municipality via the market noted above.
- If a municipality wishes to produce more renewable energy than its required share, it should be remunerated so that additional funds accrue to the town.

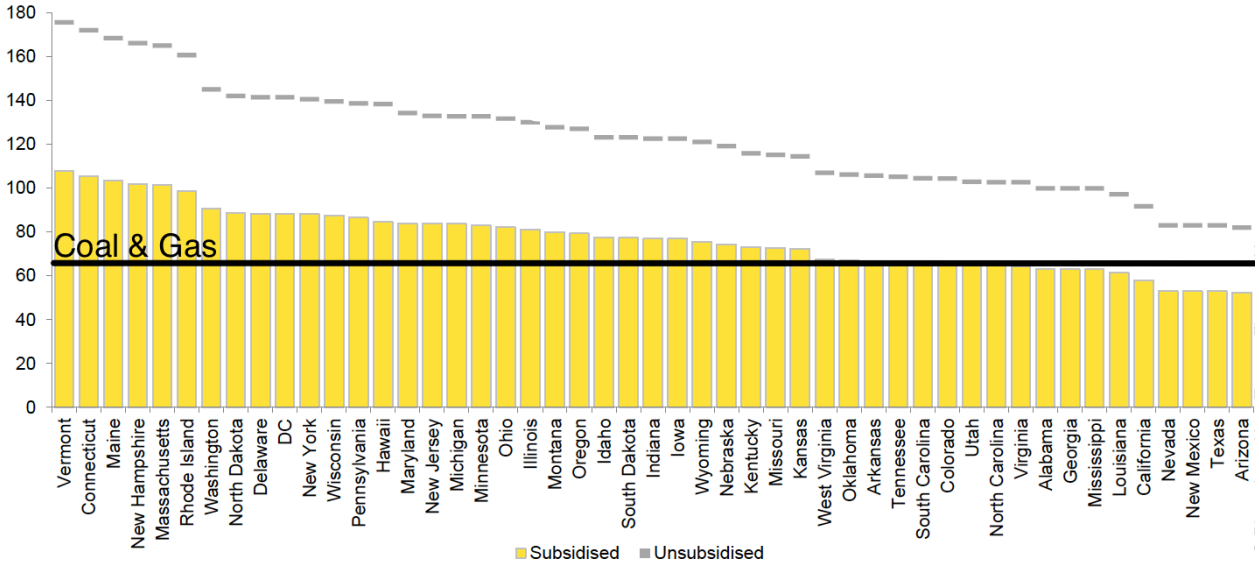
Require the same application approval process for all renewable energy projects over 50 kW.

- The current process allows a fast-track approval of 150 kW projects that encourages a rush to completion that burdens towns, citizens, and the PSB.
    - Poorly sited 150 kW projects generate a disproportionate amount of community ire relative to the amount of energy they generate/
- Reduces the number of poorly sited and executed projects.
- Ameliorates the decommissioning deficiencies currently allowed for 150 kW projects.

The legislature and state agencies should perform an annual cost-benefit analysis of all available technologies.

- Using HVDC as an example, High Voltage Direct Current cabling could bring into Vermont 400 MW of power generated by wind and hydro in upstate New York and Canada at a cost about half of what we pay for the most efficient solar energy while sparing 4,000 acres of the Vermont landscape.

- In the long run, statewide cost of energy will have an effect on the state's economy, and given that Vermont has the highest cost of solar energy, consideration should be given to achieving a renewables portfolio that does not put the state at a comparative disadvantage.



Source: http://www.bloomberg.com/news/articles/2015-10-06/solar-wind-reach-a-big-renewables-turning-point-bnef

Project Siting Standards

Because of the varying impacts of differently sized projects, it is suggested that projects be regulated based on their infrastructure footprint. For purposes of the following standard, the infrastructure footprint is determined by drawing a perimeter line around an energy plant.

Siting Requirements for Ground-Mounted Solar Energy Generation Plants

The standard setback from the centerline of a public highway = 150 feet; in a significant viewshed area =350 feet
The standard setback from side and rear lot lines = 75 feet; in a significant viewshed area = 150 feet.

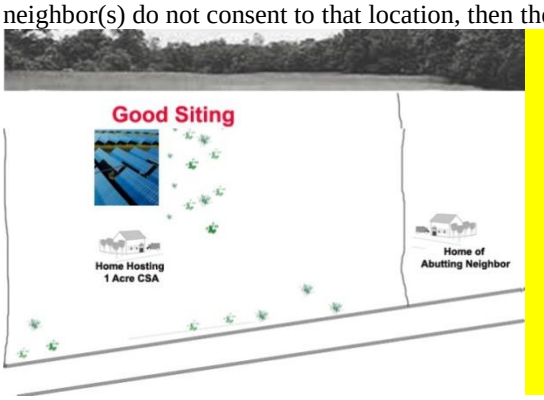
Unless a ground-mounted solar plant is completely invisible throughout the year from a neighbor's adjacent domicile, the **Minimum Distance (in feet) between the leading edge of a solar plant and the closest point to a neighbor's adjacent domicile** is the distance calculated by the following formula:

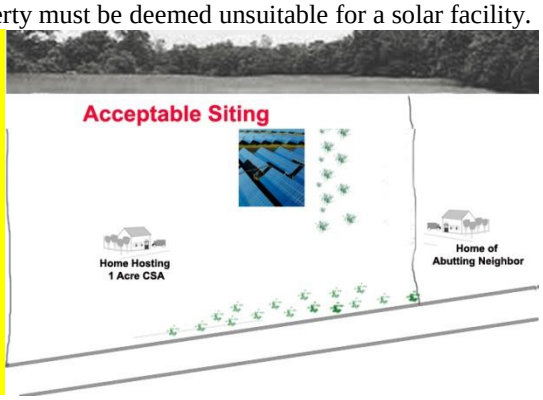
Minimum Distance = 150 feet + (Square Footage Area of the footprint of Plant * 0.0012)

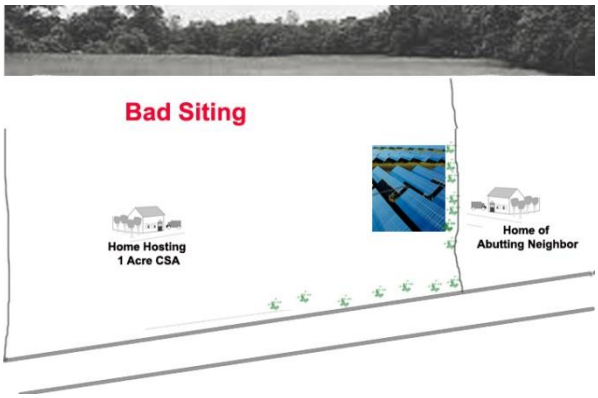
Examples:
Distance from a ½ Acre Footprint: 150 feet + (21,780 * .0012) = 176 feet
Distance from a 1 Acre Footprint: 150 feet + (43,560 * .0012) = 202 feet
Distance from a 3.5 Acre Footprint: 150 feet + (152,460 * .0012) = 333 feet
Distance from an 18 Acre Footprint: 150 feet + (784,080 * .0012) = 1,091 feet
Distance from a 40 Acre Footprint: 150 feet + (1,742,400*.0012) = 2,241 feet

Good Neighbor Policy

Any free-standing solar project over 15 kW must be sited and designed so that it will create no greater burden, including adverse visual impacts, on surrounding property owners or public infrastructure than it does on the property on which it is sited, unless the affected neighbor(s) consent in writing. For example, a resident must not site one or more free-standing solar panels in a location selected to minimize the visibility of the panel(s) from his/her residence, while placing the panel(s) where it will be more visible from a neighboring residence or a public vantage point. If the only feasible location for a solar facility on a property would violate this principle and the affected neighbor(s) do not consent to that location, then the property must be deemed unsuitable for a solar facility.







Solar Park

A Solar Park concept allows multiple net metering plants owned by one or more owners to be sited in close proximity that will have significantly less local impacts than multiple separately sited projects. Such provisions allow for the co-location of a number of net metered projects in an area whose footprint shall not exceed 20 acres of land. A single project residing in the Solar Park shall not exceed 500 kW and the total output of projects with related or common ownership shall not exceed 900 kW.

Forest Conservation.

Clear cutting of forest lands to accommodate a project should be prohibited.

Sensitive Natural Resource and Special Hazard Areas.

With the exception of transmission and distribution lines, energy plants-that are not attached to existing or permitted structures must not be located within special flood hazard areas, river corridors or within 50 feet of any surface waters, wetlands and any required buffers, or on steep slopes with a natural (pre-development) grade in excess of 15%.

Conservation/Open Space Areas.

Energy projects must be sited to avoid significant wildlife habitat and travel corridors including, but not limited to, deer wintering areas and core habitat areas, to the maximum extent feasible.

Agricultural Soils.

Energy projects should not be placed on agricultural soils classified as Prime" by the USDA Natural Resources Conservation Service (NRCS), nor on soils classified as being of "Statewide Importance" by the NRCS that have been under active cultivation at any time since January 1, 2010. Soils of Statewide Importance that have been mowed or brush-hogged for non-agricultural purposes will not be considered as having been under active cultivation.

Abandonment and Decommissioning.

Renewable energy generation plant permits or certificates must include provisions for system abandonment, decommissioning and site restoration. For plants with a rated output of more than 100 kW, the developer must provide adequate sureties for plant removal and site restoration.

Access.

All new electrical service lines should be installed underground to the maximum extent feasible. Project access should be provided from existing access roads where physically feasible, and access roads and utility corridors should be shared to minimize site disturbance, resource fragmentation, the creation of additional edge habitat, and the introduction and spread of invasive exotic species.

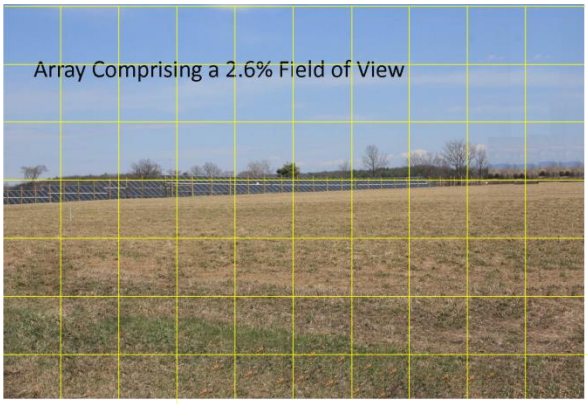
Public access to generation and transmission plants, including substations, must be restricted as necessary to protect public health and safety.

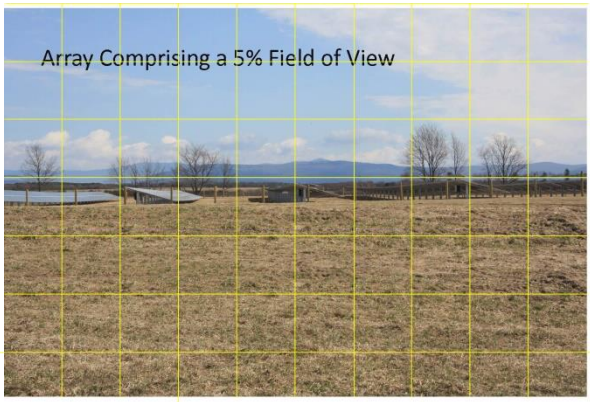
General Screening Requirements

Basic realities:

- The greater distance a viewer is from a project, the less amount of adverse visual impact there will be.
- A poorly sited site is very difficult to screen to a level that is acceptable to the community while maintaining economic viability of the project.

An undue negative impact likely exists if a solar installation represents more than 5% of the field of view** from any nearby residences or public highway.





** A field of view is calculated by analyzing a photograph taken by either of these camera and lens combinations: a Digital Camera with a Full Frame Sensor using a 50mm focal length lens or a Digital Camera with an APS-C Sensor using a 35mm focal length lens