

From Jamie Ervin, Waterbury LEAP

5 vignettes:

- 1) Developing the town energy plan for Waterbury: We are trying to figure out a goal for what we should contribute to the state's goals. Waterbury produces 588 kilowatts of renewable energy, but uses 57,000 megawatt hours. We produce less than 1% of our energy needs. 300 acres of solar installation, at current solar panel efficiency, would provide about 10% of our energy needs, which seems like a reasonable goal in the near future. We need to have all options on the table for siting in order to meet these goals.
- 2) Municipal solar: The Town of Waterbury recently released a Request for Information (attached, for your information). The 500kw restriction for grid-tied systems means that we are having to consider how to find two different sites for the town's energy needs, yet there is really only one viable site. This artificial threshold causes all kinds of distortions, disruptions and bottlenecks in the potential pipeline.
- 3) School solar: we are working with Crossett Brook Middle School. They would like to install solar for all of their needs (500+kw for both CBMS and Thatcher Brook), but they are advised to stick to 150Kw by installers, who are adverse to the hurdles of Section 248. Because the school does not own much property, the siting must occur on private, municipal or state land – there is no other option.
- 4) Cold Hollow Cider Mill: Because of the 150KW limitation, Paul Brown could only install 148 kw, instead of the 250 or so he needed in Waterbury.
- 5) Neighbors: there are numerous landowners who have large, south-facing, hardscrabble land, and who would potentially be very interested in redirecting their current investment portfolio from international and national mutual funds to local, renewable energy. The return on investment is stable, virtually guaranteed, and very competitive. Yet small potential investors (25kw to 50 kw) do not have viable access to the standard offer. They should be able to sell electricity directly to the grid, instead of being capped at their current use.

7 recommendations:

- 1) Reconsider the 500 kilowatt limitation for grid-tied systems. 500 kw is not a lot for a single industrial user – Waterbury municipal use is well over this, and 500 kw will not be enough. This threshold leads to all kinds of bottlenecks in the system, as potential customers have to split up their installments or spread them out over time to avoid this threshold.
- 2) Streamline and simplify the thresholds triggered by Section 248 for systems of 150 kw or larger. Most installers routinely tell potential customers that they highly recommend staying under the 150kw threshold. This means that customers like Paul Brown, who owns Cold Hollow Cider Mill, end up putting in 148 kw, instead of building out 100% of his electricity needs (about 250kw), even though the site is absolutely perfect for solar.

- 3) Consider how to make the upgrading of utility lines more equitable. Potential customers, especially municipalities and schools who do not get tax breaks, end up having to pay the cost for upgrading outdated electric lines simply because of an accident of geography. We WANT more distributed energy across the grid, including in the far reaches, and customers at the end of the line should not have to bear the cost of upgrading lines to provide a public good.
- 4) Consider encouraging the use of state lands for community solar needs where appropriate. For example, a 20-acre field in Waterbury that is owned by the state is used to grow cattle corn, but could provide a very significant percentage of the town's residential electricity needs if it were used for a community solar farm. Certainly the generation of renewable electricity is a higher and better use than growing corn to feed cows that produce methane.
- 5) Strongly encourage all towns to identify areas where renewable energy siting is appropriate, and not appropriate, through their town planning and town energy plans. The state has a huge role in providing voluntary best practices, examples, case studies and guidance in how to develop energy plans that include specific siting guidelines.
- 6) Consider a 'state ombudsmen' or outreach person whose responsibility is to facilitate the establishment of community solar orchards; help companies and individuals understand the tax implications and incentives for solar investments (and reach out to potential small-scale and medium-scale investors); and help create participation and legal representation for small towns that do not have the resources or expertise to sufficiently participate in hearings regarding large energy projects in their towns; and
- 7) Allow customers to sell back energy to the grid, even if at wholesale prices, above and beyond their own usage, and raise the 10kw permitting process to 25 or 50kw. This last recommendation is the single most important – it would trigger a step change in solar investment for those pre-retirement investors, looking to move some of their assets out of the stock market and into local, renewable energy that carries a modest but reliable return on investment. This is THE reason why Germany has advanced so far with solar, and would make Vermont the leading state in the nation.

Final thoughts: Like every state, Vermont faces a crucible of local land use planning decisions. Agricultural land, housing, development, transportation infrastructure, recreation, biodiversity conservation and key habitats – all are competing for many of the same spaces. Renewable energy is a relative newcomer to this decades-long struggle. Therefore, we must make every rooftop, every square foot of residual, hardscrabble farm and every corner of every backyard and dooryard count for solar.

FYI, you can see more about our own solar installation at <http://www.vecan.net/index.php/one-vermonters-leap-to-energy-independence/>. If you ever have a spare moment on a summer day, you're always welcome to come up and visit (fresh veggie lunch always on offer at our house!).

Final thoughts: I'd love to strategize sometime about how to get towns to develop viable siting options. The issue is as much of removing barriers and easing pathways as it is creating positive and negative incentives.