

Testimony to Vermont House Environment & Energy Committee January 17, 2024

My name is Annette Smith. I am executive director of Vermonters for a Clean Environment.

My work for the last 25 years has been at the tail end of the policies enacted by this legislature, in which we work with Vermonters to enable them to have a say in what goes on in our communities, and have a voice in regulatory processes.

I participated in the Department of Public Service's Stakeholder Advisory Group this summer, and watched most of the legislative RES meetings.

What is the purpose of the Renewable Energy Standard?

As we heard in the legislative RES committee as expressed by Louis Porter of Washington Electric Coop, the purpose of the RES is to reduce emissions in the electric sector.

It is therefore appropriate to provide some context.

SLIDE: Globally, here is a depiction of CO2 emissions in the six largest economies.

SLIDE: During the same time period, the United States has reduced emissions, while China and India have greatly increased emissions.

SLIDE: Why? Coal generation. Coal consumption in Asia has skyrocketed while it has declined in North America.

SLIDE: In December, India announced it plans to double its coal production.

SLIDE: Nationally, Vermont has the lowest CO2 emissions of any state in the country.

SLIDE: And Vermont is among the lowest per capita emissions states.

I hope you will keep the global and national emissions context in mind as you consider the costs and benefits of revising Vermont's Renewable

Energy Standard to require utility portfolios to contract for more renewable energy and require more in-state renewable energy to be built. In the global context, Vermont's emissions are miniscule. In the national context, they are very, very small.

How much should ratepayers pay to reduce the Vermont's already-low emissions? Is the RES the right priority at this moment in time?

SLIDE: On the state level, the electric grid for distributed generation consists of municipal, cooperative and investor-owned utilities. Green Mountain Power serves the largest territory and customers. Its Distributed Generation map provides a view of the challenges the state faces in providing equitable access to locally distributed electricity. Some areas have plenty of capacity, while others have less than zero.

SLIDE: Access to Three-Phase Power is limited. In my local area it is available only along Route 7.

No doubt most of the other utilities in the state have similar challenges building out distributed generation throughout their service territories, with the possible exception of BED. Think of this as equivalent to the challenge of building out fiber optic cable, where some areas got it a decade ago while some are just now being served.

What is the cost of deploying locally distributed generation equitably throughout Vermont. This means upgrading power lines, transformers and substations, plus updated service to the home. Is this additional cost incorporated into the RES model?

As someone who thinks I have a lot of capacity for energy policy, I will share with you that I find this topic to be enormously complicated. If you are not well versed in the discount rate and the social cost of carbon, it is easy to get lost. Modeling results are only as good as the model.¹ I was glad to be part of the DPS Stakeholder Advisory Group so that I got a front row seat into the details of the modeling which was then used by the legislative committee's consultants. Overall my experience was that the modeling results were not presented in a way that the average person could understand and therefore obscured important details that became better understood because we were able to ask questions.

¹ <https://www.newyorker.com/culture/annals-of-inquiry/how-much-of-the-world-is-it-possible-to-model>

In an effort to simplify what I learned, I will focus on three topics:

1. Benefits and Cost Modeling. 2. Land Use. 3. Ratepayer Costs

1. How were the Benefits and Costs determined? I think that the model overestimates the benefits and underestimates the costs.

SLIDE: This slide is from the first draft made available from SEA to the Stakeholder Advisory Group.

In reviewing the potential benefits, it is important to understand that some of these are regional benefits, and as such, only 4% accrue to Vermont.

Land Use Costs are not monetized and therefore un-valued.

Because I am aware of environmental issues that have arisen from constructing wind and solar projects in Vermont, such as problems building solar on wetlands, clearing forests for solar and wind, high elevation stormwater problems, I delved further into the identification of Environmental impacts as a Benefit. I learned that benefit is based on a potential reduction in groundwater use for a fossil fuel plant. This presumed benefit would not occur in Vermont and therefore Vermont would receive only 4% of that benefit. I supplied further information to the consultant in an effort to bring a real world Vermont assessment into the model, and my understanding is that ANR did, also. However, the model is based on “data” and as such it could quantify gallons of water consumption reduced by not using a fossil fuel plant, but could not incorporate damage to Vermont’s wetlands or streams as a result of renewable energy development.

Also not quantified are societal costs, some of which we have seen in Vermont are serious when it comes to wind and solar energy development such as property devaluation. Health effects from sleep disruption due to wind turbine noise are not considered. I did bring it up and asked that it be considered. As such, the model is very general, regional, and contains biases that exclude the specific issues we have experienced in Vermont regarding the impacts to the environment and people who live here.

SLIDE: 2. The proposal to increase Tier II of the RES from 10% to 30% by 2030 or 2035 raises questions about land use impacts and the process by which we site locally distributed generation. According to DPS, the current Tier II at 10% requires 25 - 30 acres of land developed for solar

annually. The model estimates about 2200 acres through 2035 depending on the scenario chosen. A 30% increase in Tier 2 could require 200 acres per year to be devoted to solar over the next 11 years, through 2035. For context, Vermont's Standard Offer program required 127.5 MW over 14 years (2009 - 2023). Assuming 5 acres per MW, that means 25 acres per year. Tier II at 30% requirement could require nearly 10 times more land for solar development.

What we have not seen is the baseline. How much land has been converted to solar in Vermont to date? In the 8 years from 2016 - 2023 since the RES was first adopted, how much acreage has been used for solar, and that includes ancillary areas and not just the footprint of the array itself? I have asked DPS and ANR and they do not have answers. I do not know that anyone has kept track of total acreage devoted to solar development in Vermont.

This is a foundational question that should be known before choosing to devote more than 2000 acres to solar development in Vermont over the next decade.

Because of our terrain and topography and competing land use needs, Vermont has limitations on development. Lots of rock, water and wetlands, steep slopes, an agricultural economy, forests especially valuable to address climate change, housing development, tourism, commercial and industrial uses compete for limited available buildable land. This is a fact we all need to recognize.

SLIDE: As you heard from Jonathan Thompson of Harvard Forests in his presentation of the report "Growing Solar, Protecting Nature", it is possible to do a strategic evaluation of what has happened to date, and prioritize future development. We have not done that work in Vermont. Why not?

Perhaps in part it is due to the shift in focus to emissions reductions of Vermont's environmental groups, who participated in the legislative RES committee but did not bring up environmental or land use issues. Those groups do not participate in the process of siting new renewable energy in Vermont, with one exception. This has left a big vacuum in the state regarding the environmental impacts of locally distributed energy.

If Vermont continues along the current path, we will see more haphazard development driven by developers choosing the cheapest sites close to transmission lines but not necessary where they would be most beneficial

from a utility or community perspective. We will see inequity as areas of the state with grid capacity are favored over those in need up expensive upgrades. We will see conflicts and efforts to reduce or eliminate public participation in the PUC process in order to build as much solar and wind energy as fast as possible.

As I asked in public comment to the legislative RES committee, is updating the RES the right conversation to be having at this time? When are we going to talk about siting renewable energy projects and create incentives for siting on the built landscape and disincentives for building on natural and working lands, as recommended by the Mass Audubon/Harvard Forests report? I suggest now is the right time.

SLIDE: 3. To my third point, what is the cost of the RES as it exists now? What is the cost of the RES under the different models? This slide from RES Technical Analysis Report RIM focuses exclusively on items impacting Vermont bills. All scenarios modeled yield net cost increases to Vermont ratepayers under every scenario modeled.

SLIDE: The cost of the current RES is about \$15.5 million.

SLIDE: Rate impacts will increase over time. (Note that some utilities have recently requested rate increases of 5 - 8%.)

Given the rising cost of so many aspects of Vermonters' lives right now, is this the right time to add more financial burden to Vermonters by increasing electric rates? Since the passage of the Global Warming Solutions Act, Vermont has invested many millions of dollars focused on emissions reductions. Is there a cap on how much can be extracted from taxpayers and ratepayers?

SLIDE: I leave you with this final image, taken from a proposed scenic viewing tower location on Mt. Anthony in Bennington. At the tip of the Bennington Battle Monument is a forested area that has been the subject of extensive litigation over the siting of two contiguous 2 MW Standard Offer solar projects that began in 2013. One of the projects was denied twice by the PUC and is back for a third time. The other project's denial was just upheld by the Vermont Supreme Court. The developer currently has five lawsuits in federal court, 4 against the PUC and one against the Town of Bennington. The Town has been sued twice, and the Governor, ANR and VTRANS have also been sued. This is the picture of solar

development in Vermont. When we talk about how to change our system to avoid this type of conflict?

VCE recommends that now is the time to do the work to protect nature and engage our communities to encourage solar development in locations that make sense from multiple perspectives. Now is not the time to enact more requirements to build more renewable energy in Vermont and let developers choose the technologies and locations without consideration for how it affects the cost of living for people, and the costs to our natural and working lands and the scenic natural beauty of Vermont.

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