

To: Legislative Working Group on Renewable Energy Standard
From: Stephen Crowley, Director, Vermont Community Solar Association
Re: Recommendations for Final Report
Date: December 12, 2023

First, thank you for the opportunity to offer these comments to the study committee, and thanks to you all for your work on this very important matter.

These comments are on behalf of the Vermont Community Solar Association. This is a new entity, emerging from the widespread desire of Vermonters to participate directly in the clean energy transition, yet experiencing increasing difficulties in making this a reality. Our mission is to support those opportunities by fostering a positive regulatory climate and deploying programs that help make those opportunities more readily available to all Vermonters. New directions for the Renewable Energy Standard and related procurement programs will have a great impact on the future of Vermonters' ability to access community solar.

I would like to start by framing the current climate challenge.

1. Climate change is expensive. The July floods have made it clear that climate change comes with a very high cost, both financial cost and human cost, and that Vermont's 'free pass' on impacts has run its course. We are a little late to this table; communities and even nations around the world have been experiencing these costs for decades, often with far fewer resources for resilience than we possess.
2. It's getting worse. Changes in our planet's climate, or various climate zones around the planet, are happening at a faster pace. The planet continues to warm. All indications are that the pace of increasing harms will continue to quicken. That means the costs of climate change will certainly increase, and at a faster rate. Witness the incidence of insurers cranking up rates or pulling out of markets entirely. Anything we do now to mitigate greenhouse gas emissions should be seen as lessening the impact of a future scenario we probably can't properly imagine.
3. It will continue to get worse until we get to zero emissions. Even if we were to cut global emissions in half tomorrow, we would still be adding more greenhouse gasses to an already saturated atmosphere. At some point it becomes super-saturated, and tipping points bring us to runaway feedbacks that only going fully negative on GHG emissions will address. There is a rapidly growing body of climate scientists who are pointing to evidence that we are in fact already at this point. Our state's emission reduction scenarios, as hard as they will be to achieve, are probably insufficient according to current science, given delays here and everywhere else getting started.
4. It is imperative that we act as though we are acting in concert with the rest of the world. We cannot succumb to the defeatist perspective that believes that since nobody else is doing this, so why should we. We must act as responsible citizens in caring for the global commons.
5. If we care about the world our children and grandchildren inherit, we should be happy to invest now in the systems that will make their lives better. It's our 529 plan for the planet.

With a challenge at this scale, we should be proud that many Vermonters are eager to jump in and do their part. Many have taken the step to install solar at their homes and businesses, many have joined in community solar ownership, and many more are eager to do so.

The comments below address the work of the RES Reform Working Group by way of the charges outlined in Act 33.

(1) “Whether any changes to Vermont’s existing renewable energy requirements, or other energy policies, are needed to increase grid stability, resiliency, modernization, and reliability.”

While not specifically part of the RES, adapting the grid to the future conditions of widely distributed generation should be planned and implemented in advance. All Vermont utilities should have a proactive, “build it and they will come,” attitude, rather than taking a reactive approach. Some are already taking a more proactive approach, and this may be related to resource availability both in terms of person power to take on the planning and in terms of absorbing the financial cost. Just as the legislature has been addressing upgrading our communications infrastructure to achieve equity statewide, we should support the evolution of a grid that is ready for the resilient and equitable deployment of renewably generated power everywhere. This will bring the co-benefits of enhanced storm resilience, reducing grid constraints, enabling smart grid technology, wide deployment of storage at individual, neighborhood, and community scale, to all Vermonters.

(2) “Identifying any barriers to moving to a 100 percent renewable standard for all electrical utilities by 2030.”

We see a number of barriers to truly reaching a 100% goal:

- Our reliance on others to get there. The more we can build our energy infrastructure here in Vermont, the better. The more we can add to that with new renewable power generated within nearby states, the better.
- Our reliance on regional grid power or nuclear power that are not and never will be renewable.
- Our use of renewable energy credits that allow us to pretend we’re using renewables while the greenhouse gasses and a host of other unwelcome impacts continue.

We also want to address here the science that demands a real pathway for reduction of greenhouse gasses, particularly identifying the importance of additionality. That is, we need to recognize, along with the rest of the world, that the ‘carbon budget,’ based on how much greenhouse gas the atmosphere can handle before we cross the threshold of runaway climate change, calls for new measures to reduce our emissions. That science is based on a snapshot of the global climate system from around the 2010 timeframe, so this is a reasonable reference point for additionality. It is not an arbitrary date or concept, as some have suggested.

We urge RES reform that gets us to 30% new renewables in-state by 2035, along with 30% from the nearby region, as long as those sources are real, verifiable, and enforceable. We recognize that the remaining 40% may be under contract or otherwise difficult to address, but we hope that in future evolution of the RES, we will truly get to 100% actual renewable power.

Until we get to that point, as long as we are using nuclear or any fossil power in Vermont, regardless of whether we cover that with virtual credits, we are not in fact

getting to 100% renewable power, and we should be honest about that. We don't see any scenario in which we will be truly at 100% renewable power by 2035. A commitment to honesty and integrity would mean we would drop this misleading label.

(3) "Recommending cost effective procurement policies to increase new renewable energy, storage, and flexible load management to offset increasing in-State load, improve grid stability and resiliency, and that consider integrated resource planning electric load growth projections,"

The state should continue to support procurement policies that support diverse ownership and distributed generation. This applies to both individual home or business projects and also to various forms of community solar. Net metering has been a critical avenue for access by the greatest variety of Vermonters, and there continues a great demand even as the regulatory environment for this has diminished. With a commitment to 30% in-state renewables by 2035, the legislature should task the PUC with ensuring that procurement policies like net-metering are sufficiently crafted to get us there.

Net metering should be enhanced, but really, it is just one finance tool. The legislature should also give consideration to other finance tools that make investment in solar accessible to all. This could include such measures as a Green Bank, like the one in Connecticut and strongly supported by recent federal legislation; it could include measures to leverage private financing and banks to offer low/zero interest or longer term financing. The dwindling support for individual or community ownership of distributed generation is no accident, it is created by regulatory choices and it can be easily corrected.

We also strongly support the creation of a system of ratepayer protection for low and moderate income Vermonters.

(4) "Whether increasing the requirement for out-of-state renewable procurements within or delivered into the ISO-New England territory can ensure affordable electric rates."

Some of the proposals for regionally based renewables face great uncertainty in both deployability and cost. Off-shore wind will come in at a significantly higher cost than onshore wind, for example. Recent cancellations reflect that reality, even while it seems that some projects are clearing the permitting hurdles. The permitting challenges may be made easier as we see how the impacts play out; but the opposite may happen as well. We hope that less uncertain on-shore projects become available. As demand for these grows, the economics would suggest that higher prices would spur more deployment. This points us to two conclusions: (1) this emphasizes the importance of developing in-state resources, and (2) we should be prepared to shoulder the slightly higher cost (a few percent over ten years, as we at the same time get away from the more expensive fossil fuels we now use), keeping in mind that failure to address emissions now will mean great costs to future generations.

It is also important to consider that electric rates are not the only way to finance the cost of the clean energy transition. Again, we strongly urge the legislature to develop other finance mechanisms or supports so the cost does not land in the already highly regressive rate structure.

(5) "Evaluating the impact legislative recommendations may have on Tier 3 implementation."

With Tier 3 explicitly supported by the Clean Heat Standard, the situation exists where utility ratepayers and thermal fuel consumers, who are the same people, will be paying twice for the same projects, while the implementers will take the credits, and the quantity of additional greenhouse gas reduction will be diluted. It's not clear whether this is beyond the authority or mandate or will of the PUC to correct.

From our point of view, Tier 3, as it has worked out up to this point, is the part of the Renewable Energy Standard that works best.

(6) "Evaluating the impact recommended legislative changes to procurement programs will have on Vermont jobs and the Vermont economy."

Until 2017, the number of clean energy jobs in Vermont had been increasing steadily. Then it fell off a cliff. What changed? 2017 was the year the current RES took effect. VT utilities started meeting their requirements with Credits from afar that didn't actually help anything and took the edge off the clean energy market in Vermont. The PUC and utilities found they could rely on those cheap credits to meet the weak RES requirements, and the bottom essentially fell out. The VT solar industry started looking elsewhere for work, and that trend continues today.

We know that many Vermonters are eager to invest in solar technology, both on site and as part of community solar opportunities. As we all electrify transportation and thermal energy in our lives, we expect there will be even more demand for the opportunities of energy security that come from direct ownership. By enhancing the Tier 2 requirement of the RES, by removing harmful regulatory barriers to net-metering, and by providing other financial opportunities that empower this sector, we are confident that the in-state renewables market will rebound. This in turn will have tremendous positive multiplier effects on the Vermont economy. More energy dollars will stay in Vermont. More small business opportunities. More people with solid, well-paying jobs, jobs with career tracks and long term security. With the right program supports, these opportunities will be available to all Vermonters, including those often left out by economic boom times. With the parallel evolution of important society-wide social supports, as we are developing in health care, child care, education, and so on, we have the opportunity to rebuild the lost working class that has been the foundation of prosperity and well-being. This can be generational and transformational, truly regenerative, to use a term of the times. Sometimes we come across, in the terms of Vermont's own system dynamics visionary, the late Donella Meadows, crucial leverage points that create change in a complex system. We should not fail to take this opportunity.

(7) "How current programs impact environmental justice focus populations, households with low income, and households with moderate income and how a revised Renewable Energy Standard can ensure that benefits and burdens are distributed equitably."

Our comment above under (6) begins to address this challenge. This is also part of our own organization's core mission.

The VT Community Solar Association intends to engage directly in this aspect of the clean energy equity challenge. Community solar is a solution that can have great applicability

to populations that generally rent or live in multi-family homes, without access to onsite solar. Properly supported, it can offer the ownership models that are often limited to the solidly middle income or wealthy. If the legislature and PUC can create a favorable regulatory environment, we believe community solar can be a big part of the equity solution.

Still, we recognize that reaching out to these typically underserved populations presents great challenges. Part of our organization's vision is to bring together a team of educators, navigators if you will, who are drawn from those communities, trained, with support materials, who will reach out and connect the people with the opportunities. Where unique funding opportunities call for the involvement of a non-profit arm, we envision serving in that capacity or standing up other entities to make that happen. We see this as serving any and all of those in the field developing projects.

(8) "How any changes to the Renewable Energy Standard will address the inequity of distribution of benefits of renewables between different residential properties."

The benefits of renewable power go beyond just greenhouse gas reductions. A great benefit that has been secured already by those who have had the ability to put solar on their own rooftop, or to take advantage of the early opportunities, now diminished, for community solar, is ownership of the power generation technology. The beauty of solar and other distributed renewables is that it does not require a large central power station, which in turn called for society to support the monopoly utility model. Solar technology can be owned by anyone, and can provide a long term security in energy supply and in cost. It is possible to share this benefit equitably, and we think our comments above address this extensively. It should be clear in this context that "community scale" solar is not the same as community solar. Utility owned but 'community scale' simply perpetuates a power dynamic (both meanings intended) that is not necessary in today's world. The legislature should make sure that reforms to the RES itself or procurement programs broaden the wide scale distributed generation/distributed ownership model that has been available to early adopters.

Again, thank you all for your work in this working group, and for the opportunity to offer these thoughts. I look forward to helping shape the future of renewable energy in Vermont.