Introduction and Problem Statement

REV thanks the Department for launching an effort to meaningfully reform Vermont's renewable energy policies and programs to achieve greenhouse gas (GHG) reductions through deployment of new renewable energy resources. These actions are foundational steps to reducing Vermont's greenhouse gas (GHG) footprint and addressing Vermont's contribution to global climate change.

Rethinking and modernizing Vermont's renewable energy policies and programs is essential if we are to meet Vermonters' expectations for deploying renewable energy assets and combating climate change. Vermonters' concerns about climate change have been well documented including in the August 1st poll by Data for Progress which found that for 28% of respondents "climate change and the environment" is the top issue a Vermont Congressional candidate should work on far outpacing the second highest concern, "voting rights," which was listed by 15% of respondents.

In its RFI, the Department frames the scope of the RFI's inquiry as an assessment of the means of advancing the state's energy goals and climate requirements, particularly as described in the 2022 Comprehensive Energy Plan (CEP) and 2021 Climate Action Plan (CAP). REV respectfully suggests that the dangers presented by the current state of the climate require a broader, more ambitious, and much more urgent assessment than that called for in the RFI.

Section 2(1) of the Vermont Global Warming Solutions Act of 2020 (GWSA) expressly acknowledges that "[a] climate emergency threatens our communities, State, and region and poses a significant threat to human health and safety, infrastructure, biodiversity, our common environment, and our economy." Moreover, Section 2(2) states that "Vermont is part of the U.S. Climate Alliance, a bipartisan coalition of 25 states that have committed to reducing greenhouse gas emissions consistent with the goals of the Paris Agreement." To achieve this, Vermont's climate and energy policy must include additionality as a foundational principal. Additionality, is defined in the Kyoto Protocol Article 12, paragraph 5(c) as "reductions in emissions that are additional to any that would occur in the absence of the certified project activity." In other words, Vermont's energy policy must move the needle by requiring *new* emissions reductions.

Regrettably, the RES was not designed to achieve emissions reductions. Instead, the RES was framed to benchmark "renewable" energy resources, which under Vermont's unique law includes large hydropower resources of any vintage. Vermont's inclusion of large and old hydropower as "renewable" is at odds with the RPSs in every other New England state[1]. Why would the legislatures of every other state in New England not allow large and old hydro to count under their renewable portfolio standards? Precisely because the utilization of pre-existing resources does nothing to reduce global emissions.

There are only two ways of immediately reducing GHG emissions, (i) increasing efficiency, and (ii) building new renewables that displace fossil-based generation. Vermont has an Energy Efficiency Charge of over 6% on electric bills. This investment has effectively reduced GHG emissions, but it has its limits. Efficiency alone will never reduce emissions to zero. New clean generation, preferably located in Vermont, is necessarily part of the solution.

[1]Massachusetts does allow large hydro to count towards meeting the renewable energy goals of its Clean Energy Standards which are not part of its RPS.

Vermont policy and programs must shift to a framework focused on the emissions reduction achieved by adding new renewable energy resources to the electric sectors power supply portfolio.

Article 6.2 of the Paris Agreement, with which the GWSA requires Vermont to comply, requires that parties ensure environmental integrity and transparency, and apply robust accounting of emissions reductions. Specifically, Article 6.2 says:

> Parties shall … promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties [UNFCCC] serving as the meeting of the Parties to this Agreement.

REV's overarching concern in this process is that revisions to the state's climate and energy policies accelerate emissions reduction and do so by including aggressive renewable targets that include rigorous requirements for additionality, and robust accounting on an annual basis.

Topic 1: Timeline and Stakeholders

REV supports the Department's proposed seven-month study timeline. We believe this timeline appropriately balances the urgent need for the Department to provide input into energy policy during the 2023 Legislative session against the need to provide adequate time for both public input and data analysis. Accordingly, REV supports an ongoing outreach approach, while at the same time ensuring that a real climate policy reform bill is the top 2023 legislative action item.

REV believes that since Vermont's youngest residents will face the greatest impact from climate change, student and youth groups should be specifically targeted in outreach efforts. Given the difficulty in getting young people to participate in traditional stakeholder processes such as public meetings and written comments, focus groups conducted with this population would be an appropriate outreach tool.

In addition, REV requests that individualized outreach plans should be developed targeting:

1. Individuals who are most affected by climate change, including low-income Vermonters. According to Act 154, "The cumulative impacts of environmental harms, including air and water pollution, low-quality housing stock, and greater exposure to extreme weather events disproportionately and adversely impact the health of BIPOC and low-income communities. These disproportionate adverse impacts are exacerbated by lack of access to affordable energy, adequate transportation, healthy food, and green spaces."

2. Individuals whose livelihoods depend on the industries that are and will be most adversely affected by climate change such as the service sector, winter and fall tourism businesses, maple syrup production, and the agriculture sector.

3. Front line communities dealing with the environmental impacts of our current energy generation. Currently, a substantial portion of Vermont's electricity comes from Hydro Quebec. The Cree and Inuit nations in Quebec are the front line communities who have dealt with the environmental impacts of the construction of these very large scale projects and currently deal with the impacts of their ongoing operations.

Topic 2: Decision Criteria

1. REV recommends that Vermont adopt the draft Core Carbon Principles below developed by the Integrity Council for the Voluntary Carbon Market, an international independent governance body. These Core Carbon Principles align with the foundational framework principles of the Paris Agreement and serve as the framework for decision criteria when developing new or modified energy climate reform:

2. REV believes that greenhouse gas reductions should be the top priority in evaluating opportunities to expand new renewable electricity resources. Equity, cost-effectiveness, and grid impacts must all be considered, but the primary criterion should be supporting rapid electrification with clean, new renewable electricity sources.

3. REV asks that the Department perform a comprehensive, fact based evaluation of existing procurement programs including documenting the:

- Cost shift, if any, that exists between net metering residential customers and non-net metering customers, in a manner that clearly distinguishes between (i) the rate impacts resulting from changes (positive or negative) in utility expenditures, and (ii) the rate impacts that result from reduced retail sales. To properly inform future deliberations, REV believes that rate impacts must be broken out by net-metering vintage
- Total economic impact of net metering on Vermont's gross domestic product including grid upgrade costs, utility power purchase savings, the market-verified value to utilities of REC's generated by net metering, and financial impact of the jobs created by the net metering program, including employment and income taxes generated
- State and local tax revenue generated by net metered and Standard Offer projects
- Impact of the end of the Standard Offer program on meeting Vermont's climate change goals including procurement of wind, hydro and biomass resources

4. In its June 6th, 2020 Order in Case No. 19-0397-PET, setting Energy Efficiency Utility screening values, the PUC approved an avoided externality cost estimate of 0.042- 0.044 $kW/h depending on the season and whether the energy is consumed on- or off-peak. REV recommends the Department incorporate this avoided cost in its analysis of renewable and clean energy programs and policies just as the Department incorporates this rate in determining the level of benefits of energy efficiency programs. This will ensure the Department's estimates to include all of the true social costs of carbon emitted from energy generation.

5. REV requests the Department consider the roles of storage, aggregation and load management in grid modernization.

6. REV requests that the Department study the ability of existing Vermont renewable policies and programs to draw down federal dollars through the various grants and tax credits included in the recently passed Inflation Reduction Act, and the benefits that would flow from that funding coming to Vermont. This should include an analysis of how Vermont policy could be changed to increase local economic and environmental benefits by maximizing that opportunity, and an estimate of the delta between the dollars that would be drawn down under a business as usual scenario and one in which local renewables deployment is maximized.

Topic 3: Key Issues for Consideration: What is Vermont doing well? And, What Are We Not Doing Well?

While the CEP claims that the RES "brought Vermont into line with the majority of other states in the U.S. and every other state in the Northeast," this claim is not accurate. In fact, the CEP acknowledges "Vermont Tier I RECs are generally equivalent to regional Class II — or existing-resource — RECs in neighboring states, ***with the exception*** that imports from Hydro-Québec and New York Power Supply Authority ***are only considered renewable in Vermont***." (Emphasis added)

As stated by the Department in its CEP, "Tier I was specifically designed to be low-cost, recognizing that Tier II resources would be more expensive given the requirement that they be small and in-state." The Department also points out that "[s]ince Tier I compliance can be achieved through the retirement of relatively low-priced RECs from older hydroelectric units or other imported hydroelectric resources, and RECs from SPEED projects are not eligible for higher-value Tier II, the RES incentivizes the sale of higher-value RECs from the projects … to utilities outside of Vermont." The Department coined this practice, i.e., selling high quality RECS and replacing them with cheap "RECs"[2] from old hydro projects as "REC arbitrage".

The utility practice of profiting by acquiring low quality inexpensive "RECs" from old hydro projects, and substituting them for RECS that actually qualify for compliance under the RPSs of other states, which Vermont utilities sell for a much higher, market driven price, is called REC arbitrage.

A number of years ago the practice of REC arbitrage was illustrated by the Department in the following slide presented to the Legislature:

[2] Calling hydro attributes "RECs" is not allowed under the RPS of any other state in New England.

REC Arbitrage

Arbitrage is the near-simultaneous buying and selling of commodities in different markets in order to take advantage of differing prices for the same or similar assets. REC arbitrage occurs when RECs from one project are sold and replaced by less expensive RECs from another project.

A VERMONT EXAMPLE

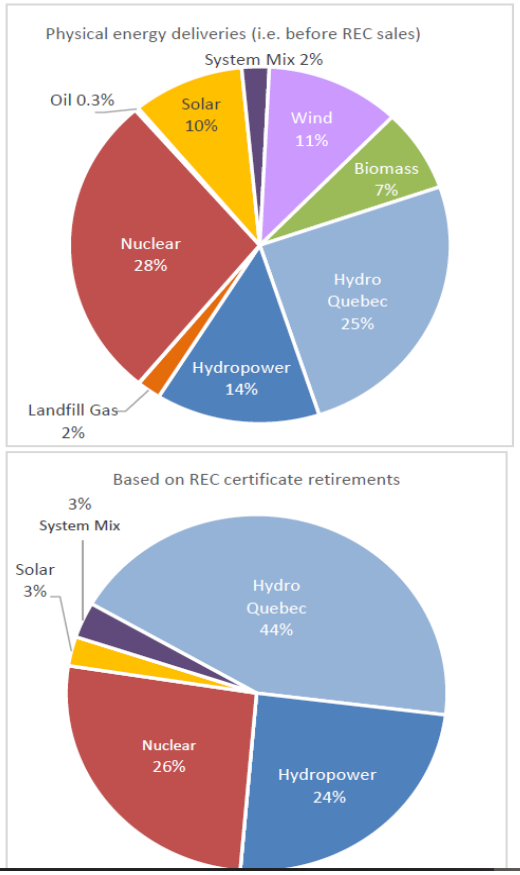
Project	Kingdom Community Wind
Owners	Vermont Utility Owned– GMP & VEC
Location	Lowell, VT
Commissioning Date	November 2012
Type	Wind
Size	63 MW
REC Qualifications	VT Tier I, CT-I, MA-I, MA CES, RI-new

In 2018, GMP could use a $27 REC from KCW or a $1 REC from HQ for Tier I compliance. Least cost principle suggests using $1 REC and selling KCW RECs into the MA, CT, or RI REC markets.

VERMONT

As a result of this carbon greenwashing loophole built into the RES, Vermont utilities sell the additional, carbon reducing electric resources that could contribute to climate mitigation, and replace them with non-additional, old resources that do nothing to reduce emissions or address climate change. The following two graphics from the CEP clearly illustrate this outcome:

Exhibit 7-17. Vermont Electric Energy Supply, 2020, Before and After REC Sales and Purchases



Due to REC arbitrage, in 2020 RES Tier I compliance consisted of 65% Hydro Quebec, 4% NYPA Hydro, 31% other large hydro, and less than 0.01% new renewable solar.

The practice of REC arbitrage, allowed by the RES completely fails the additionality test, lacks environmental integrity, and misleads Vermonters on the true GHG emissions from Vermont's electric sector.

REV acknowledges that the RES design, and the REC arbitrage it encourages, provides short term economic relief to Vermont ratepayers via reduced monthly electric bills. However, short term thinking is what got us into the climate crises that spawned a need for states to adopt RPSs. Having a RES that ignores additionality and the long-term societal costs that flow from the practice of REC arbitrage doesn't mesh with green image the state does so much to promote. REV believes that an informed decision on the tradeoff between short and long term benefits can only be made after an accurate estimate of the social cost of carbon is incorporated into the Department's the analyses.

The Standard Offer program and the net metering program have been successful in transitioning Vermont away from fossil fuels and towards renewable energy. However, starting with Net Metering 2.0, continuing with the successive reductions in the net metering credit value, and capped off with the state's elimination of the Standard Offer program, the effectiveness of these programs has significantly waned in recent years.

REV identifies several key challenges/gaps in existing programs and policies that need to be considered as electricity demand grows:

1. The impact of the PUC's wind sound rule, the nation's strictest, on deploying renewable energy in Vermont and Vermont meeting its GHG emissions goals.
2. The lack of additionality associated with Tier I of the RES, which does not include any age/size/technology criteria and is currently being met in large part by unbundled environmental attributes from out-of-state hydro facilities. This is inconsistent with the RES/RPS standards of other New England states.
3. The appropriateness of using marginal versus average grid emissions in measuring the benefits of distributed energy resources.
4. Potential benefits of adding a new tier to the RES with a goal for energy storage.
5. Specific examples of how instituting each of a 100% carbon free standard or a 100% renewable energy standard will assist Vermont in meeting the greenhouse gas emissions reduction goals set out by the GWSA.
6. The need for Section 248 and other permitting reform in facilitating the predictable and consistent siting decisions for renewable energy projects.

Additional Comments and Issues for Consideration

1. Least-cost planning, as defined in VSA 218c, requires a holistic evaluation of life-cycle costs with due consideration to combined expenditures on energy supply, transmission, distribution, and environmental impacts. REV encourages the Department to use this holistic approach, as opposed to narrowly focusing the incremental monthly bill impacts of new renewables, when formulating the transportation, thermal, and power sector policy recommendations that will be necessary to meet GWSA targets.

2. Consistent with the proper scope of least-cost integrated planning, REV believes our policy makers would be able to have a more informed debate over the future of Vermont's energy program if the

Department studied a wide range of grid modernization measures. REV suggests that a good example is a study called "The Role of Distributed Generation in Decarbonizing California by 2045", performed by Vibrant Clean Energy.

3. The first seven months of 2022 has demonstrated the considerable and unpredictable price volatility of fossil fuels. REV urges the Department to highlight this risk in their cost analysis going forward and juxtapose it against the stable rates of long-term in-state renewable energy projects.

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