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Via Electronic Mail (solar.transitions@bpu.nj.gov)

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
Post Office Box 350
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Re: New Jersey Solar Transition Staff Straw Proposal

Introduction

On behalf of Sierra Club and its approximately 20,000 New Jersey members, we submit the following in response to the Board of Public Utilities (BPU) solicitation dated 12/26/2018, entitled New Jersey Solar Transition Staff Straw Proposal (“Straw Proposal”). Sierra Club broadly endorses the principles outlined in the straw proposal, but notes that there are tradeoffs inherent in them. Our first priority is to ensure that New Jersey ramps up its percentage of carbon-free electricity as quickly as possible.

We also value a robust in-state solar sector, and want to see an incentive structure that can enable sustainable growth and is affordable to electricity customers. It is critical that this incentive structure is designed and implemented in a timely manner to avoid a disruption in the solar market once the 5.1% target for Legacy SRECs is reached. We propose some ideas for structuring such a solar incentive, recognizing that additional data and input are needed to assess their feasibility. We welcome further discussion with the Board and other stakeholders about how solar incentives can work effectively without crowding other energy sources due to the cost cap.

- I. Action from the Board to reduce the cost of Legacy SRECs is necessary to avoid exceeding the RPS cost cap and preventing New Jersey from fully realizing the Clean Energy Act targets in nearly every energy year.**

In Energy Year (EY) 2018, retired SRECs satisfied 3.2% of retail electricity sales, at a cost of over \$509 million. We estimate that this represented about 5.1% of the total paid for electricity

that year.¹ By the time the target for SRECs reaches its maximum of 5.1% of electricity sales in 2021, we project the cost to be over \$834 million, or 7.8% of the total cost (assuming that the price of SRECs remains comparable to the average from 2016-2018). In 2022, with the same SREC requirement, the cost cap for the RPS as a whole declining to 7% and all else being equal, the cost of Legacy SRECs alone is projected to exceed the cap. Even as SREC targets ramp down after 2022, they continue contribute to overall cost overruns if current SREC prices continue.

The Clean Energy Act gives broad powers to the Board to ensure the cap is not exceeded, stating: “The board shall take **any steps necessary** to prevent the exceedance of the cap on the cost to customers including, **but not limited to**, adjusting the Class I renewable energy requirement” (emphasis added). In order to fulfill the legislative mandates of 21% clean energy by 2020, 35% clean energy by 2025, and 50% clean energy by 2030, as well as “encourage the continued efficient and orderly development of solar renewable energy generating sources throughout the State” Sierra Club finds that the Board can and must take steps to reduce the cost of legacy SRECs.

One possible way to do this would be to cap the legacy SREC price. While this may fall under the Board’s broad powers, we ask the Board to consider whether doing so could conflict with existing contracts for legacy SRECs. Another option could be to allow a limited number of pipeline projects to enter into the legacy SREC program (as described in response to question 4 below), even after the 5.1% target is projected to be reached.

II. Sierra Club strongly opposes any reduction of the Class I REC target.

Any reduction to the non-solar Class I REC requirement in an attempt to avoid exceeding the cost cap would be inconsistent with multiple SREC transition principles as identified in the straw proposal:

- It would violate Principle #1, “Provide maximum benefit to ratepayers at the lowest cost.” Non-solar Class 1 RECs sold for an average of \$9.75/MWh in 2018.² That same year, SRECs sold for an average of \$216.05, more than twenty-two times higher than Class I RECs. We do believe it is appropriate for solar projects to receive a higher incentive than Class I RECs as solar is currently more expensive than some other clean energy sources, but is more available than others within New Jersey. It is good policy to grow an in-state clean energy industry in which all customers can directly participate. However, rather than displacing less expensive non-solar Class I energy sources, we should be finding ways to reduce the cost of building out solar in-state.
- It would violate Principle #3, “Ensure that prior investments retain value.” Stakeholders who have invested in non-solar Class I eligible RECs would be hurt by a steep drop in

¹ Based on retail sales and average rates reported in Energy Information Administration, New Jersey Electricity Profile 2017, <https://www.eia.gov/electricity/state/newjersey/index.php>

² New Jersey Clean Energy Program, RPS Compliance Report for Energy Year 2018, available at: <http://www.njcleanenergy.com/renewable-energy/program-updates/rps-compliance-reports>

the price of Class I RECs, lowering their return on investment, and reducing the amount of new capacity that gets installed.

- It would violate Principle #4, “Meet the Governor’s commitment of 50% Class I Renewable Energy Certificates (“RECs”) by 2030 and 100% clean energy by 2050.” Reducing the Class I REC requirement would result in New Jersey failing to meet its interim RPS targets of 21% Class I sources by 2021, and mostly likely the 35% Class I target by 2025. Each interim target that is missed further jeopardizes the state’s ability to meet the 2030 target of 50% and 2050 target of 100% Class I sources, which is critical for the state’s efforts to combat climate change.

Furthermore, given the large disparity between current SREC and non-solar Class I REC prices, it is entirely possible that the SREC costs alone could violate the cost cap (as in the scenario presented above). In that case, reducing the Class I requirement would gut the RPS target, achieve less than a quarter of the RPS clean energy target, and still fail to fully comply with the cost cap.

Although the Clean Energy Act does authorize the Board to reduce the Class I requirement to avoid a cost cap exceedance, it explicitly states that such an action is but one option the Board could take and leaves the rest to the Board’s discretion. It is much better policy to first try to contain the cost category that is primarily responsible for exceeding the cap, namely the total amount of solar incentive. Below we offer some suggestions for doing this while still providing adequate incentive to foster continued growth of the solar industry in New Jersey.

III. Overview of Proposal for RPS Implementation

We propose for consideration the following general outline for RPS implementation that we believe can achieve clean energy targets without violating the cost cap. We elaborate on certain features of the program in response to staff questions below.

- A. The Board needs to establish interim targets for Class I RECs for each energy year from 2021 to 2024 (we recommend a linear increase of 2.8 percentage points per year) and from 2026 to 2029 (we recommend a linear increase of 3 percentage points per year).
- B. At the beginning of each energy year, the Board should establish a REC budget which includes the following projections:
 1. “Total paid for electricity by all customers” per the statute, against which the 9% or 7% cost cap is estimated. This is a function of rates (including all adders, fixed charges, fees, and taxes), and the amount of electricity expected to be consumed.
 2. Estimate the total number of Class I RECs (of all types) necessary to meet the interim clean energy target for the energy year. This should include an adjustment for any shortfall or overshoot from the previous

energy year due to differences between projected and actual retail sales of electricity.

3. Estimate number of ORECs to be generated (if any). These count toward the Class I REC target but do not come out of the REC budget per statute.
 4. Estimate the required number of Legacy SRECs to meet the energy year target defined in statute, as well as a projection of the weighted average cost of Legacy SRECs.
 5. Estimate the combined total of Successor SRECs and non-solar Class I RECs required to fill the gap between the Class I REC target and the combined total of Legacy SRECs and ORECs.
 6. Project the weighted average cost of non-solar Class I RECs, and Successor SRECs that were approved in previous years.
 7. Calculate a range, in terms of installed MW, of new Successor SRECs that the budget will likely allow, while simultaneously meeting the cost cap and overall clean energy target for the energy year.
- C. On a quarterly basis, the Board should issue RFPs for Successor SRECs.
1. This would be similar to the process it uses to procure ORECs, but the application should be much simpler and review much faster.
 2. Proposals should include a fixed dollar amount requested over the life of the project.
 3. The Board should approve as many successor SRECs, beginning with lowest cost projects, as the budget will allow, while holding enough money in the budget to ensure the total of successor SRECs, legacy SRECs, non-solar Class I RECs, and ORECs is at least equal to the Total Class I target for the year. Once approved by the Board, the Successor SRECs are sold on a pro-rata basis to compliance entities, which in turn recover costs.

IV. Responses to staff questions

1. *In your direct experience, how has the current SREC program functioned over the past 5 years?*

The SREC program has been successful in making New Jersey the fifth highest state in the country in terms of cumulative installed capacity in 2018.³ However, we are concerned that volatility in SREC prices over the years has made that program more expensive to ratepayers than it needs to be. This becomes a bigger issue as solar represents a greater percentage of the total energy mix, and will threaten future growth of the industry.

³Solar Energy Industries Association: <https://www.seia.org/research-resources/top-10-solar-states-0>

The more predictable a revenue stream is resulting from a capital investment, the less risk that project involves and the easier it is to finance that investment with a lower interest rate. Since solar investments are highly capital intensive with very little operating and maintenance costs compared to other energy sources, the interest rate is one of the most important factors in the overall cost of the project. Whatever system the Board adopts to incentivize solar projects going forward, it should offer either a fixed or at least highly predictable revenue stream.

2. *How should any proposed SREC Successor Program be organized in conformance with the Clean Energy Act and Staff's SREC Transition Principles? Please provide detailed quantitative and qualitative responses as to the perceived pros and cons of each of the following options:*
 - a. *a fixed price SREC;*
 - b. *a market-determined SREC; and*
 - c. *any other option(s).*

Sierra Club supports a market-determined SREC that is pre-determined for the life of individual projects, and determined through an RFP process, as outlined above. In the solicitations, consideration should be given to requiring that SREC revenues for each project decline over time, so that future accelerations in the rate of solar investment driven by declining costs are not precluded by earlier, relatively higher cost Successor SRECs. The structure and timing of the payments should be determined with the goal of optimizing solar buildout over multiple energy years under the cost cap. The key to containing cost is to ensure a predictable revenue stream for the project over its duration.

3. *Based on your response to question 2 above, provide precise quantitative and qualitative recommendations as to how your preferred SREC Successor Program model would be implemented, keeping in mind the necessity of satisfying the "SREC Transition Principles" set forth above.*

Before providing any more detail, we wish to discuss the framework with the Board and other stakeholders, including the solar industry.

4. *How should Legacy SRECs be valued? Should these Legacy SRECs be valued under the SREC Successor Program or valued separately?*

Legacy SRECs should be valued separately from Successor SRECs. A simple and cost-effective way to do this would be to cap the price on Legacy SRECs at a level which allows enough "head space" under the cost cap to continue offering strong incentives to new solar projects.

Another option would be to allow projects that are not selected to receive successor SRECs to request access to the Legacy SREC market. The Board could approve these requests if the total REC budget indicates the cost of Legacy SRECs is likely to jeopardize the ability to meet

the overall annual target of the Clean Energy Act. Approvals could be capped to a limited number of MW, with eligibility limits to a subset of “Pipeline” projects (as the Board defines the term in this proposal), with the goal of reducing the price of Legacy SRECs from current levels without crashing the market. We do not have access to data that would allow us to predict the responsiveness of Legacy SREC prices to new market entrants, but encourage the Board to study this option.

5. *How should Pipeline SRECs be valued? Should these Pipeline SRECs be valued under the SREC Successor Program or valued separately?*
 - a. *Should the Board continue the current SREC program as a separate program? If so, how?*
 - b. *Should the Board include the current SREC program within the SREC Successor Program? If so, how?*

Sierra Club proposes that the Board should not create a separate category of SRECs for “Pipeline” and “Successor” projects. Both should be allowed to compete for Successor SRECs as described in elsewhere in these comments. Pipeline projects could be eligible to apply for other types of incentives, like those described in questions 4 and 13.

6. *For any solar transition, should the Board set a megawatt (“MW”) target for annual new solar construction? If so, should those targets be defined as percentage of retail sales or a set MW cap? Under what circumstances and/or assumptions is this target achievable?*

We suggest the Board set a non-binding goal for new solar development in terms of MW of installed capacity. The goal should drive the Successor SREC RFP process and provide guidance to the industry. However, achievement of the goal should be a secondary priority compared to achievement of the overall Class I REC target for each energy year.

7. *In any SREC Successor Program, should the Board seek to set annual MW capacity caps for new solar construction or percentages of retail sales? Why or why not? If yes, what should be the value through 2030 and why? If yes, should the Board seek to set differentiated capacity caps under the solar RPS based on project type?*

The statute directs the Board to “develop megawatt targets for grid connected and distribution systems, including residential and small commercial rooftop systems, community solar systems, and large scale behind the meter systems, as a share of the overall solar energy requirement, which targets the board may modify periodically based on the cost, feasibility, or social impacts of different types of projects.” Such targets should not be considered “caps.”

It seems clear that the legislature intended the Board to base targets on installed capacity rather than “percentages of retail sales” (which we interpret to mean generation), and that targets should be set for different types of systems. At this time, Sierra Club declines to endorse a specific 2030 target or interim target, because we do not have enough data to make a reliable

prediction of costs. We think the targets should serve as guidelines to industry. They should be based on cost projections of solar and informed by the REC budget. They should be flexible (perhaps a range) to allow procurement of more solar when costs are lower than expected, and less when overall REC budgets are constrained. Again, the primary goal should be to meet the overall Class I target within the cost cap.

8. *In the SREC Successor Program, should the Board provide differentiated SREC or solar value incentives to different types of projects? Should such differentiated SREC compensation be created through SREC multipliers, through an add-on valuation, or through some other method? Based on what factor(s) should any SREC compensation be differentiated?*

We support the concept of setting separate goals for different types of solar projects, and recognize that this is called for in the statute. This fosters diversity of expertise in the industry and increases access to solar for different customer classes. However, this does not necessarily require differentiated SREC incentives, add-ons, or multipliers. Instead, different types of solar projects could be eligible for alternative incentive programs that are outside of the RPS, as discussed in more detail in our answer to Question 13.

9. *How should the cost cap be measured? Should any "head space" under the cost cap in the first years be "banked"? Why or why not?*

With regard to the cost cap, the statute dictates the following: "...the board shall ensure that the cost to customers of the Class I renewable energy requirement imposed pursuant to this subsection shall not exceed nine percent of the total paid for electricity by all customers in the State for energy year 2019, energy year 2020, and energy year 2021, respectively, and shall not exceed seven percent of the total paid for electricity by all customers in the State in any energy year thereafter."

The phrase "total paid for electricity" must be defined in an all-inclusive manner. It must include fixed customer charges, distribution charges, generation charges, demand charges, the Societal Benefit Charge (SBC), future Offshore Wind Energy Credit (OREC) costs, costs for Class I and Class II RECs, SRECs, taxes, and any other adder, surcharge, or fee collected on electricity bills for any reason.

The statute does not prohibit banking of head space under the cap and carrying over budget surpluses to years when budgets are tighter. Sierra Club supports banking of budget surpluses, and believes that in practice, it may be necessary to comply with the law while ensuring a functioning and predictable REC market. In any given energy year, neither the actual costs of Class I RECs nor the total paid for electricity by all customers will be known until after the year is over, which makes it likely that a true-up will be necessary the following year.

An alternative to banking of head space that could achieve a similar outcome would be to structure the payment of Successor SRECs to provide less compensation in years that budgets are expected to be tight, and more in years where there is room in the budget to do so, all while maintaining predictability for overall compensation. This could help avoid boom and bust years for new solar construction.

10. Can and should the cost cap be determined based on net costs that include some type of valuation of associated benefits? If so, what should those qualitative and quantitative benefits be and how should they be assigned a value? If the Board can and should consider a net benefits test, should other cost impacts be included? Which ones? Why? If other cost impacts should not be included, why not?

Sierra Club opposed the cost cap language in the legislation because we are so concerned about the external costs of electricity production from fossil fuels, and the need to ramp up clean energy as quickly as possible. We support the BPU investigating its authority to define costs and benefits more broadly to the extent that it allows New Jersey to develop more solar without reducing demand for other Class I resources. However, we caution that time is of the essence if we are to avoid a solar market crash, and we wish to avoid implementation delays either due to program development or challenges after adoption.

11. What steps should the Board take to implement the cost cap? In particular, please discuss the pros and cons of decreasing the Class I REC Renewable Portfolio Standards. Should any measures implemented differentiate among the different type of Class I renewable energy technologies? Should these measures differentiate among the different market sectors (e.g. utility-scale grid supply versus small residential systems)? Should these measures be technology neutral? Why or why not?

As discussed in Section II, we strongly oppose any decreases to Class I REC targets to avoid exceeding the cost cap. If the Board needs to achieve cost reductions, it should do so by reducing the most expensive cost factor (legacy solar), not the least expensive (non-solar Class I RECs).

12. Should the solar industry transition into a true, incentive-free market as the costs of solar begin to approach “grid parity be a goal, or even a consideration, of the SREC Successor Program? If so, how can a SREC Successor Program assist that transition? Should a transition also encompass changes to the net metering program (cf. ongoing FERC/PJM review of DER aggregation)?

We must continue to provide incentives for development of new solar generating capacity as long as its pollution-free attributes are not adequately valued in the energy marketplace. One example of this is carbon pollution, which is currently unregulated at the state and federal level. New Jersey is about to re-enter the Regional Greenhouse Gas Initiative (RGGI), which will require most fossil-fuel generating units to purchase an allowance for each ton of CO₂ emitted.

However, the cost of these allowances in the last auction was only \$5.35,⁴ a small fraction of the total social cost of carbon of over \$40/ton as determined by the federal Interagency Working Group in 2016.⁵ As long as the cost of carbon emissions and other air and water pollution from fossil-fueled power plants is not fully internalized, we need incentives for pollution-free energy, including solar, that level the economic playing field.

That said, we believe the financing mechanism we propose herein for future solar projects will encourage healthy competition and achieve additional solar generation at a lower cost than the past SREC system with its volatility. It will reduce the cost of incentives over time as installed system costs continue to decrease.

13. Please provide comments on any significant issues not specifically addressed in the questions above, making specific reference to their applicability in the New Jersey context. Please do not reiterate previously made comments.

Sierra Club strongly supports the goal of growing a robust solar industry in New Jersey, and recognizes that the transition to a new, leaner solar incentive program will likely have some negative impacts on the industry over the next few years. Therefore, we urge the Board to consider measures that encourage solar development that are completely separate from the RPS, and therefore not subject to the cost cap in the Clean Energy Act.

One option is to allocate revenues from the Societal Benefit Charge (SBC) to offer one-time rebates on the purchase of solar systems. This should be limited to net-metered systems, and possibly just residential and community solar projects, so that the limited funding could be spread over as many projects as possible. Proceeds from RGGI auctions could also be used as a supplemental funding source, outside of the cost cap. Through the joint strategic planning process for the Global Warming Solutions Fund, the Board should encourage the Economic Development Authority (EDA), which receives and allocates 60% of RGGI revenues, to spend a significant amount of those revenues on commercial solar projects.

Recipients of this funding should be prevented from participating in the Legacy SREC program. If they apply to participate in the Successor SREC program, they should be required to disclose any grants or rebates that they receive that are outside the Clean Energy Act, and their Successor SREC payments should be reduced accordingly. Alternatively, they could be barred from participating in the Successor SREC program as well, and their generation will neither count toward the Class I RPS target nor their costs be part of the cap. The purpose in this alternative would be to keep the solar industry from crashing and shedding jobs, not to satisfy the clean energy requirement.

⁴ Auction 42: <https://www.rggi.org/auctions/auction-results>

⁵ Paul, I, et al. 2017. The Social Cost of Greenhouse Gases and State Policy: A Frequently Asked Questions Guide. Institute for Policy Integrity, New York University School of Law.

The Board should also fully evaluate its authority to reduce other costs or barriers to solar investment. This could reduce the level of SREC payment necessary for a project to be viable. Possible examples include more attractive terms for net-metering, creating new incentives using RGGI proceeds, and rate structures that recognize and reward the full value of distributed solar.

Conclusion

We look forward to further discussions of these proposals with the Board and other stakeholders. Thank you for allowing us the opportunity to comment.

Respectfully Submitted,



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