

TRUE GREEN CAPITAL

November 15, 2019

Via email: solar.transitions@bpu.nj.gov

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
44 Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 086258-0350

**Re: I/M/O N.J.A.C. 14:8-2.4 Amendments to Renewable Portfolio Standard Rules on
Closure of the SREC Registration Program Pursuant to P.L. 2018, c17
BPU Docket Number QX19060720**

Dear Secretary Camacho-Welch:

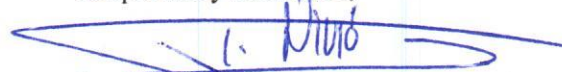
True Green Capital Management LLC (“TGC”) appreciates the opportunity to provide comments in the above referenced matter. By way of background, TGC is an investor in and owner of large scale distributed solar power generation plants in several states, including New Jersey. True Green has been a significant and early investor in New Jersey’s solar market with over 131 megawatts of solar power plants in its portfolio - representing an investment of approximately \$233 million in the State.

We have reviewed the comments filed by NJR Clean Energy Ventures (“NJRCEV”) in this matter and write to express our support of and general concurrence with the NJRCEV comments. We also want to expressly state that we share the concern presented by NJRCEV that the proposed Rule, as written, will result in an oversupply of the SREC market that will have a material adverse effect on existing public sector project sponsors and private sector investors; will erode confidence of future project sponsors and investors in the New Jersey clean energy markets; and will prove to be an obstacle to achieving New Jersey’s clean energy goals. Moreover, we believe that, as written, the proposed Rule does not meet the requirements of the Clean Energy Act, P.L. 2018, c.17 which requires an “orderly, transparent” transition of the SREC program and “ensure[s] prior investments retain value” and “support[s] long term solar growth.”

TGC supports the analysis provided in the NJRCEV comments and generally agrees with the conclusions presented therein. TGC strongly believes that if the Board adopts the Rule as proposed then it is imperative that the Board concurrently demonstrate its commitment to a market balancing mechanism by amending the Notice as suggested by NJRCEV and proceeding promptly with stakeholder consultation and other actions that will lead to the adoption of a market balancing mechanism no later than the date the SREC market is closed.

Thank you for the opportunity to provide comments about this critical Rule proposal. We look forward to the opportunity to actively participate in the ongoing Solar Transition proceedings.

Respectfully submitted,



Dr. Panagiotis Ninios
Managing Partner
True Green Capital Management LLC

Cc: John C. Valeri Jr., Member, Chiesa Shahinian & Giantomasi PC



Mark Schottinger
General Counsel
markfs@solarlandscape.com
908-433-5727

November 27, 2019

Aida Camacho-Welch
Secretary
New Jersey Board of Public Utilities
solar.transitions@bpu.nj.gov

Via Email

Re: *Solar Landscape Comments in Response to Revised 2019/2020 NJ Solar Transition Incentive Staff Straw Proposal*

Dear Ms. Camacho-Welch,

Solar Landscape LLC is pleased to provide the following comments in response to the Revised 2019/2020 NJ Solar Transition Incentive Staff Straw Proposal.

Thank you,

Mark F. Schottinger
General Counsel
Solar Landscape LLC
markfs@solarlandscape.com
908-433-5727

STAKEHOLDER INTRODUCTION

Solar Landscape is an Asbury Park, New Jersey-based company specializing in medium- and large-scale solar project development, design, installation, and long-term asset management. Over the past several years, Solar Landscape has **installed over 120 MW** across more than 85 projects, ranging in size from 50 kW to 7 MW and primarily located on warehouses, factories, shopping centers, schools and municipal properties. As a self-performing general contractor, we've proudly employed over 100 New Jersey residents to date, and we are honored to have been recognized as one of New Jersey's 50 fastest growing companies.

Our focus on commercial and industrial ("C&I") roof-mounted systems is in large part driven by our firm belief that these projects offer more societal benefit than any other type of PV system or, for that matter, any other form of power generation. These projects make use of surfaces with few alternative uses on pre-disturbed land, which is optimal for the environment. They are largely out of sight, which is optimal for local residents. They are the largest type of rooftop system, which is cost-effective and therefore optimal for ratepayers. And they benefit New Jersey businesses and schools on whose rooftops they operate.

Solar Landscape fully supports the Board's efforts to create a smooth transition to a successor incentive regime that will ensure New Jersey cost-effectively meets its ambitious clean energy targets. To that end, we submit the following comments in relation to the revised Straw Proposal shared on November 14, 2019.

RESPONSE TO PROPOSED PROJECT TYPE FACTORS

Staff's proposed project type factors, as shown in Table 2 of the revised Straw Proposal, continue to be vague and incomplete from our perspective. This raises concerns for some of the state's most important consumers and supporters of renewable energy – municipalities, universities, schools and hospitals ("MUSH") – and the industry players that support them.

In a recent OpEd, the Executive Director of the New Jersey School Boards Association, Dr. Lawrence Feinsod, expressed his concerns regarding the risks facing Staff in managing this incentive transition:

*Public schools and their students — and taxpayers — need New Jersey to get this solar transition right, or these wide-ranging benefits are at risk of being lost. Several key elements must be in place during and after the solar market transition: first, **keep strong incentives for on-site, behind-the-meter solar projects**. Schools have space for canopy, ground, and roof-mounted projects that can provide significant benefits to the school community and taxpayers.¹*

With the proposed project type factors, Staff is making what in our opinion is one of two potential missteps, either of which would pose exactly the risk that worries Dr. Feinsod:

¹ Nov 13, 2019. <https://www.nj.com/opinion/2019/11/the-state-shouldnt-obstruct-plans-to-power-schools-with-solar-energy-education-group-says.html>.

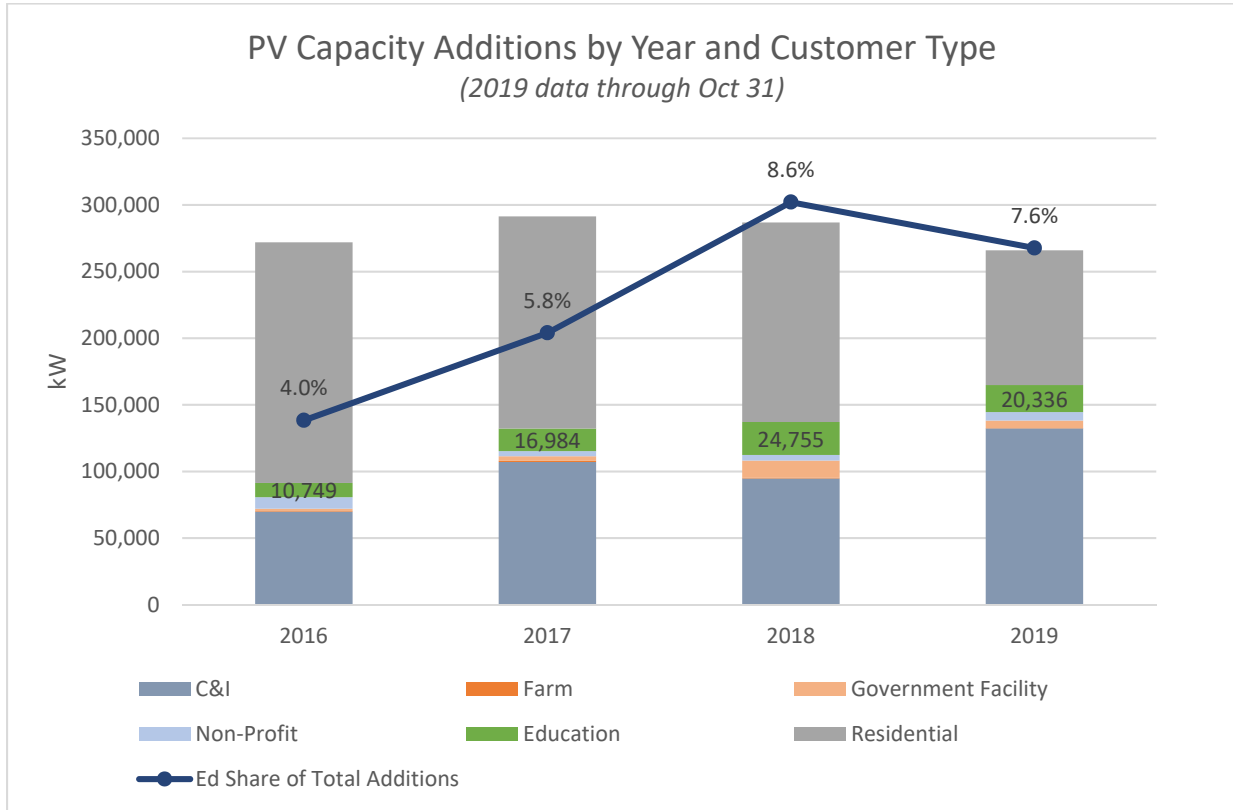
-
- **It is unclear what project type factor is assigned to roof-mounted projects qualifying for net metering** – this is one of the essential project types that educational facilities rely on (“on-site, behind-the-meter solar projects”).
 - Furthermore, if we read the factorization table correctly, these roof-mounted projects qualifying for net metering appear to be placed in the 0.6 project type together with ground-mounted projects qualifying for net metering, despite having higher cost structures. **This would put these roof-mounted systems at a disadvantage relative to ground-mounts, despite being a preferred site.**

If either of these issues remains unaddressed or unclarified, educational facilities’ ability to benefit from solar will diminish as investors will be severely limited moving forward. As shown in the below chart, educational facilities have grown as a share of total installations; to dampen their momentum now would be unfortunate and we trust that Staff do not intend to do so.

Furthermore, this issue affects not only educational facilities but also other building owners yet to benefit from solar, as well as the Community Solar program currently in its pilot phase – it remains equally unclear whether roof-mounted community solar systems would receive a 1.0 factor or a 0.85 factor, and if it is a 0.85 factor, then it is equal to ground-mounted community solar projects which is not the desired outcome.

If Staff do not clearly prioritize roof-mounted systems to similar ground-mount systems, roof-mounts will be at a clear disadvantage despite Staff’s expressed preference for roof-mounted systems.

SUPPORTING DATA: EDUCATION-SITED CAPACITY GROWTH IN NEW JERSEY



Source: NJCEP [Full Installation Project List](#).



Donald C. Shields
Vice President and Director of Engineering
New Jersey American Water Co. Inc.
One Water Street
Camden, NJ 08102
P: 856-549-8525
C: 908-239-3479
E: donald.shields@amwater.com

November 27th, 2019

Hon. Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities,
Post Office Box 350
Trenton, New Jersey 08625

Sent via Email to solar.transitions@bpu.nj.gov

RE: New Jersey Solar Transition Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modeling Addendum

Dear Secretary Camacho-Welch,

New Jersey American Water (NJAW) appreciates the opportunity to comment on the New Jersey Board of Public Utilities (BPU) Staff Straw Proposal on the transition incentive program. New Jersey American Water is dedicated to implementing alternative sources of energy having installed 2,953 kW of solar production at our facilities since 2005.

The Straw Proposal introduces factorization that if adopted, would target the size of the subsidy to the cost of constructing each type of facility, while also considering the regulatory framework in which each project operates. NJAW believes that Artificial Lakes and Reservoirs should be classified as Preferred Siting, especially off-stream raw reservoirs.

In 2017, the New Jersey Department of Environmental Protection's (NJDEP) Bureau of Energy and Sustainability provided an update to their 2012 Solar Siting Analysis (SSA). The report was developed with the purpose of providing the NJDEP, local communities and potential solar developers with state-level guidance on siting solar photo voltaic (PV) projects based on the land use/land cover. This report classified land area for suitability in three categories Preferred, Indeterminate, and Not Preferred.

The NJDEP recognized that placing PV installations on Natural Lake and Artificial Lakes may be a practical use for these land types. Because of the limited number of installations of PV systems on water bodies, the report classified Natural Lakes, Artificial Lakes and Reservoirs as Indeterminate in this report but stated that as the technology becomes more mature it may be practical to change the Solar Siting designation to "Preferred".

In New Jersey, there are only two PV installations on bodies of water. The 112 kWdc system constructed in 2012 on NJAW's Canoe Brook Reservoir #1 at the Canoe Brook Station in Millburn, New Jersey and the 4.4 MWdc system constructed in 2019 by the Borough of Sayreville on their reservoir. In both instances, these are raw water reservoirs that supply the onsite water treatment plant. Further, in both instances, these are part of temporary storage of water diverted

from streams via pumping during times of high stream flow (Passaic River and Canoe Brook for NJAW and South River for Sayreville). They are analogous to a Storm Water Basin (Anderson Code 1499) already recognized in the NJDEP's 2017 SSA Update as "Preferred."

Where land is limited, water bodies can provide considerable areas for large solar development supporting the BPU's objective to discourage large solar projects on farmland and other greenfield sites. Providing for conjunctive utilization of the water body (the reservoir) as both raw water storage and power generation provides a better utilization of the land area.

Positioning of the solar array in the middle of a body of water situates it further from shade-causing objects such as buildings and trees. This reduces the amount of time that the array is shaded and thus increases the array's exposure to sunlight for higher energy yields. The body of water will provide cooler operating temperature of the PV array, likely resulting in better efficiency than ground and roof mounted systems. In addition, the increased distance from land means that panel soiling will be reduced; dust and dirt are not easily trapped by the panel, reducing the need for surface cleaning.

There are also water quality benefits of having solar arrays located on reservoirs. The shade provided by these floating solar arrays can also help reduce the presence of algae blooms in bodies of freshwater. Algae blooms can be dangerous for human health if they occur in a source of drinking water and can also lead to the death of plants and animals living in and around the body of water. A general reduction in reservoir raw water temperature could result in a reduction in disinfection byproducts formation at a Surface Water Treatment Plant and in the potable water distribution system. The arrays may also reduce the evaporation rate from the water bodies providing a benefit during drought conditions.

In summary, for the reasons cited above, NJAW encourages the BPU and NJDEP to classify any off-stream reservoirs and water treatment detention basins whose purpose is a raw water reservoir for temporary or seasonal storage of source water as "Preferred" as there is no land disturbance and doing so would provide net environmental benefits to the source water.

Best regards,



Donald C. Shields
Vice President, Engineering
New Jersey American Water Co. Inc.

DCS/jd

cc. NJDEP, Division of Energy Security and Sustainability
NJDEP, Division of Water Supply and Geoscience
NJBPU, Division of Water and Wastewater

Dear BPU,

Thank you for allowing our further inputs.

LMI projects should receive the highest SREC / TREC values for the following reasons:

1. Greater risk profile per applicant is greater.
2. Greater transition of accounts as majority of LMI individuals are renters and not home owners.
3. Subscriber Organizations are within "supply chain" to end result thus adding a layer of cost to end user and developer.

Secondly:

SREC / TRECs need to be greater due to:

1. 85% or greater of projects sold are TPO. Using ITC to deploy / finance projects.
2. Reduction and soon elimination of ITC 3. Tariffs have increased overall project pricing by 15+ % immediately.

Thank you.

Dave Margolin
President
Apollo Solar Partners



1380 Monroe Street NW, #721
Washington, DC 20010
720-334-8045
info@communitysolaraccess.org
communitysolaraccess.org

October 18, 2019

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, NJ, 08625

Via Electronic Submittal: solar.transitions@bpu.nj.gov

Re: 2019/2020 Transition Incentive Staff Straw Proposal

Dear Ms. Camacho-Welch:

The Coalition for Community Solar Access (CCSA) respectfully submits these comments on the questions posed by the New Jersey Board of Public Utilities (BPU) regarding the SREC transition straw proposal and questions raised in BPU's Notice from August 22, 2019, which was updated on October 3, 2019. We greatly appreciate the multiple stakeholder forums held on this topic and the BPU's continued efforts to ensure a long-term sustainable solar market in the state.

CCSA is a national coalition of businesses and nonprofits working to expand customer choice and access to solar to all American households and businesses through community solar. Please see below for CCSA's responses to a number of the BPU's questions.

I. General Structure of the proposed Transition Incentive

Does the proposed Transition Incentive provide sufficient financial surety for projects currently in the SRP pipeline that may not reach commercial operations prior to the closure of the SREC market to new entrants?

Community Solar project financeability will depend on the perceived level of risk in how the TRECs are established. BPU Staff is clearly aware that fine-tuning a market can be tricky and that they may have to adjust the obligation every year based on loads and anticipated generation from TREC projects. As a result, the BPU should move as quickly as possible to define and implement the SREC Successor program.

That being said, the Transition incentive program, and particularly the Hedged approaches proposed by staff, provides the financial certainty needed for the community solar program to commence on solid ground. Financial surety depends on the perceived level of risk and the Hedge options explicitly provide surety while ensuring the program doesn't exceed budget limits.

CCSA is concerned that the market-based alternatives introduce an on-going administrative burden and uncertainty without providing proportionate benefits. Although New Jersey has embraced market mechanisms and used them very successfully to drive innovation and cost reduction in the existing SREC market, the Transition Incentive will be a 'closed system' in the sense that a limited and known number of projects will be producing RECs to meet demand set by BPU staff.

Regardless of the option chosen to set the Transition Incentive, it is imperative that the BPU move quickly to define and implement the SREC Successor program. The NJ market could become very complex and unwieldy if more and more projects become part of the TREC obligation.

II. Eligibility

How should the Board treat projects entering the SRP pipeline that have not 1) filed a complete SRP Registration or received conditional certification from the Board after October 29, 2018, and 2) have not commenced commercial operation upon the Board's determination that the 5.1% Milestone has been attained?

Projects participating in the New Jersey Community Solar Energy Pilot Program fall squarely into timeframe in which CCSA expects the first year of the Community Solar Pilot projects to be chosen. The BPU has stated explicitly that Community Solar projects are eligible to apply for, and receive, SRECs.¹ The application window for the first year of the Pilot program closed on September 9, 2019 and project selections are expected by the end of the year. However, it is unlikely that any of the selected community solar projects will achieve commercial operation prior to the 5.1% Milestone attainment. A simple solution for Year 1 community solar projects would be to automatically accept all Year 1 Community Solar projects into the Transition Program.

III. Terms for each TREC

Please discuss the proposed 15 year TREC term, with appropriate justification for any recommended changes.

CCSA supports the proposed 15 year term. Particularly in the case of the Hedged TREC alternatives, a 15 year term provides a known revenue stream that will fit within program budget

¹ N.J.A.C.14:8-9.7 (q)

limits. In the case of the market-based or floating TREC, the 15 year term has less positive impact on project development because the TRECs are likely to trade in 2 - 3 year contract strips. Project developers will receive the value of traded, short-term strips while traders and long-term asset owners will reap any benefits from the remaining years.

IV. Value of a TREC

Do you prefer the Market based (floating SREC with buyer of last resort) approach or the Fixed SREC approach? Please provide a rationale, if you can.

CCSA prefers the Fixed SREC, or Hedged, approach for its simplicity and superior financeability. All of the Pilot Year 1 community solar projects will be included in the limited number of solar projects that achieve commercial operation during the period between the closing of the current SREC program and the start of the SREC successor program.

BPU will need to create a new RPS requirement specifically for TRECs and where they set that target (i.e., the demand side of the supply/demand equation) will determine the value of TRECs. A fixed, or Hedged, TREC is a simple and effective solution which doesn't require on-going BPU market adjustments. In the Floating alternative, setting the RPS requirement high, relative to the supply of TRECs will create scarcity and drive prices very high. Conversely, setting the target low will create oversupply and drive the TREC market price very low. The floating alternative requires a floor price and buyer of last resort similar to the Massachusetts SREC market to ensure renewable projects get a minimal level of incentive. This is particularly important for a nascent project category such as Community Solar projects, because many costs are unknown at this time.

Are the TI-ACP schedules proposed to be associated with each compliance entity option appropriate? If modifications are required, how should the schedules be adjusted and why?

CCSA does not recommend any changes to the proposed ACPs. The ACP is meaningful as a cap on the market and to ensure the program does not exceed cost targets but the TI-ACP will have no meaning in terms of incentives for renewable projects. The current SREC market doesn't trade as a percentage of ACP but rather as a function of supply and demand. Currently, SREC traders deal primarily in 3 year strips and financiers do not attribute value beyond 10 years.

What are the implications of establishing a "Buyer of Last Resort" and floor price mechanism for the TREC market? What factors should Staff consider in recommending how a purchase price is established?

A Buyer of Last Resort (BLR) and floor price will be essential to the TREC market. Just as the ACP acts as a cap and circuit-breaker to protect ratepayers if the compliance obligation is set

too high, there needs to be a complementary fail-safe to ensure renewable generation viability if the compliance obligation is set too low. The BLR should purchase any TREC that is approaching the end of its viability.

When and how should a floor price be established to provide the maximum benefit to ratepayers, developers, investors?

The floor price in a floating TREC market should be set at or above the fixed price proposed by BPU's consultants.

Would the availability of a floor price above the NJ Class I ACP provide any reduction in finance costs for eligible projects?

The TREC market will likely trade similarly to the current SREC market. The ACP is a cap on the market but the market does not set prices as a percentage of ACP. Instead, prices are determined by supply and demand.

V. Factorization of TRECs

Do you agree with the proposed categories of factors? Why or why not?

CCSA agrees with the Project Type categories. While some verbal guidance was given during the stakeholder feedback session, CCSA recommends the BPU provide more written guidelines regarding which SREC factor certain types of projects would receive. For example, if a community solar project also qualifies as a preferred siting facility, we understand that the facility would qualify as a preferred siting facility at a higher SREC but it would be helpful to see this in written guidelines.

Pending initial results of the first year of the community solar pilot, CCSA would like to reserve judgement on whether Low and Moderate Income (LMI) projects will require a higher SREC factor. In its September 26th press release, the BPU noted that the overwhelming majority of applications - about 92% - have indicated that they will serve at least 51% LMI participants. Because all, or a vast majority, of the selected projects will be serving LMI subscribers, the additional SREC factor proposed in the updated Notice will be necessary to sign up and enroll this unprecedented percentage of LMI subscribers. Absent a sufficient SREC, the overwhelming majority of these projects would likely fail to deliver on this promise.

As CCSA has noted throughout the stakeholder process, LMI projects face higher customer acquisition costs--at least 25% higher as detailed in CCSA's previous comments--in addition to financing challenges, especially for high numbers of LMI residential customers. LMI customers generally pay a higher portion of their income on their energy bills, so the LMI customer

segment also generally requires higher savings² than other customers to motivate participation. With uncertainty around any additional mechanisms such as consolidated billing or other financial incentives for this customer segment, it is important that the Transition Incentive support LMI Projects.

Do you agree with the proposed assigned factors? Why or why not? Please provide documented explanations for your response.

A survey of CCSA member companies indicates that a TREC factor of 0.85 is adequate to support standard community solar projects.

There are many factors that affect community solar economic viability, including the cost of leasing land or rooftops, the cost of debt and equity capital, hardware costs, costs of utility interconnection, marketing customer acquisition costs, customer churn management costs, O&M costs, and the amount of bill credit discount offered to subscribers. No two CCSA member companies have identical cost stacks. However, all of them need to offer a competitive community solar product to New Jersey residents. Based on member-company responses and a review of the Cadmus Consulting materials posted to the Office of Clean Energy website, the 0.85 factor is sufficient to foster community solar development in each of the largest utility service territories.

In general, we think the consultants were fairly accurate in the end result of their factoring proposal. This proposal was based on assumptions laid out in the consultants' slide deck titled Attachment 1: Pipeline Supply Model Inputs and Assumptions.³ However, CCSA notes that there are some assumptions that could play out differently in the community solar market. For example, the Cadmus/SEA assumptions indicate a community solar project will receive bill credits corresponding to the large C&I rate class. That may be accurate for some projects, including those with master-metered LMI subscribers; however, all projects will have a different subscriber make-up. Every project will be receiving different bill credits, which could produce a higher project revenue over time. However, that difference would likely be offset by several other assumptions that would likely undervalue community solar project costs. For example, Cadmus/SEA included an interconnection cost assumption of \$133/kW, based on experience and input from Rhode Island and Massachusetts. CCSA estimates that could be an overly optimistic assumption for NJ potentially by as much as 50%. Cadmus/SEA also assumes an aggressive increase in retail rates that may over-inflate project economics, compared to using a more conservative assumption. In addition, the consultants assume an aggressive capital structure that not every company will be able to achieve. As with any modeling effort, assumptions are just that, and rarely play out exactly as predicted. We appreciate the consultant's time and effort in their attempt to model this market.

² See page 44 of the Vision for US Community Solar from GTM research. Available here: <https://votesolar.org/policy/policy-guides/shared-renewables-policy/csvisionstudy/>

³ Presentation available at http://njcleanenergy.com/files/file/Solar%20Transition/Attachment%201%20Cadmus%20Transition%20Incentive%20Methodology%20Inputs%20and%20Assumpti____.pdf

VI. Compliance Entities

Please discuss the advantages and disadvantages of the two proposed options, i.e. having the compliance entities be 1) Third Party Electric Suppliers and Basic Generation Service Providers, or 2) the Electric Distribution Companies.

Which of the two options is preferable for the Transition Incentive?

CCSA supports a Fixed, or Hedged, TREC alternative with the EDCs serving as the compliance entities. Given the fact that Community Solar is a new program in the state, it will be important to have a fixed value to ensure that all subscribers will be able to reliably benefit from the program.

Do parties agree that a fixed price TREC lends itself to the EDCs serving as the compliance entity, while a market-based price for TRECs lends itself to the TPS/BGS providers serving as the compliance entity?

The fixed price TRECs are only effective if 100% of them are purchased and retired. That obligation is probably met most effectively by the EDCs. We see this as the simplest and most elegant solution to the Transition period compliance issue.

CEP Renewables, LLC

20 A South Beers Street

Holmdel, NJ 07733

November 26, 2019

Aida Camacho-Welch
Secretary
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, New Jersey 08625
Via email: solar.transitions@bpu.nj.gov

**Re: Response to Revised 2019/2020 Transition Incentive Staff Straw Proposal
and Modeling Addendum -- UPDATE**

Dear Ms Camacho -Welch

CEP Renewables, LLC

CEP is a renewable energy company that acquires and develops grid supply solar farms in New Jersey. In recent years, we have developed utility scale solar farms in Greenwich, Warren County (10 MWs DC), Old Bridge, Middlesex County (11 MWs DC), South Brunswick, Middlesex County (13 MWs DC), Quakertown, Hunterdon County (10 MWs DC), Holland Township, Hunterdon County (9 MWs DC), Washington Township, Warren County (10 MWs DC), Pohatcong, Warren County (10 MWs DC), Franklin Township, Warren County (10 MWs DC), Monroe Township, Middlesex County (15 MW's DC).

Request for Comments.

We hereby request that the BPU select the TI-4 - Partial Long-Term Hedge base cost – 20 year scenario as the applicable transition incentive.

Respectfully Submitted

CEP Renewables, LLC



Justin Sallusto
COO

CEP Renewables, LLC

20 A South Beers Street

Holmdel, NJ 07733

November 27, 2019

Aida Camacho-Welch
Secretary
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, New Jersey 08625
Via email: solar.transitions@bpu.nj.gov

**Re: Response to Revised 2019/2020 Transition Incentive Staff Straw Proposal
and Modeling Addendum -- UPDATE**

Dear Ms Camacho –Welch:

CEP Renewables, LLC

CEP is a renewable energy company that acquires and develops grid supply solar farms in New Jersey. In recent years, we have developed utility scale solar farms in Greenwich, Warren County (10 MWs DC), Old Bridge, Middlesex County (11 MWs DC), South Brunswick, Middlesex County (13 MWs DC), Quakertown, Hunterdon County (10 MWs DC), Holland Township, Hunterdon County (9 MWs DC), Washington Township, Warren County (10 MWs DC), Pohatcong, Warren County (10 MWs DC), Franklin Township, Warren County (10 MWs DC), Monroe Township, Middlesex County (15 MW's DC).

Request for Comments

We hereby request that the BPU select the TI-4 - Partial Long-Term Hedge base cost – 20 year scenario as the applicable transition incentive and offer the following rationales:

A crucial aspect integral to bringing solar farms to fruition is the successful obtaining of project financing. Given that banks resolutely require stable revenue streams, the unpredictability of the revenue streams associated with a fluctuating renewable energy credit presents a major obstacle. On the other hand a fixed incentive provides substantial assurance, and visibility pertaining to future revenue streams which greatly incentivizes financial

Furthermore, because of the predictability inherent in fixed incentives, such reduces the required " hurdle rate " of the financial institution, ultimately lowering overall program costs, and contributing to the important goal of reducing the cost burden to New Jersey ratepayers.

Moreover, by broadening the potential pool of financing institutions participating in the New Jersey solar market, by virtue of competition, the costs of financing are potentially further reduced by a fixed incentive as well as are the ultimate costs to ratepayers.

Respectfully Submitted,

CEP Renewables, LLC

A handwritten signature in blue ink that reads "Gary Cicero". The signature is written in a cursive style and is positioned above a horizontal line.

Gary Cicero
CEO



**Comments of IGS Solar on the Solar Transition Staff Straw Proposal
as Revised on November 14th**

November 27, 2019

IGS Solar appreciates the opportunity to provide comment on Staff's Straw Proposal released on November 14, 2019.

We appreciate and support the movement from a 0.5 TREC factor to a 0.6 TREC factor for net metered systems under 25kW. This revised factor will allow many – but not all – residential projects to be built. It represents a workable path forward for this market segment.

With regards to ground-mounted C&I projects, the move from a 0.5 TREC factor to a 0.6 TREC factor is not sufficient. Many if not most projects of this type will not be able to move forward at this level. As discussed in previous comments, this segment requires about fixed \$120 TREC for fifteen years. This corresponds to a 0.75 TREC factor.

As detailed in our previous comments, we underscore the criticality of a fixed price mechanism for the Transition program. This could also be accomplished in a market-based paradigm if the TACP and the floor price are sufficiently close together. Furthermore, we highlight the importance of the Board allowing for the flexibility to extend the Transition program in the case that the Successor program is not ready by the time the BPU announces we have reached the 5.1% milestone.

Thank you again for the opportunity to provide comment. We look forward to continuing to be an active participant in the Stakeholder process.

Sincerely,

Katie Bolcar Rever
Director, Legislative and Regulatory Affairs
IGS Solar
krever@igs.com



November 27, 2019

Via Electronic Mail

Hon. Aida Camacho-Welch
Secretary of the Board
Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
PO Box 350
Trenton, New Jersey 08625-0350

**Re: New Jersey Solar Transition Revised 2019/2020 Transition Incentive
Staff Straw Proposal and Modeling Addendum - UPDATE
Comments of Constellation NewEnergy, Inc.**

Dear Secretary Camacho-Welch:

In response to the updated Revised 2019/2020 Transition Incentive Staff Straw Proposal (“Updated Revised Staff Straw Proposal”) published by the New Jersey Board of Public Utilities (“BPU”) Staff on November 14, 2019, Constellation NewEnergy, Inc. (“Constellation”) reaffirms its comments submitted in response to the October 3, 2019 Revised 2019/2020 Transition Incentive Staff Straw Proposal and associated questions on October 18, 2019 (“October 18 Comments”).

As described in the October 18 Comments, Constellation encourages the BPU to approach the Transition Incentive process in a manner that prioritizes certainty, which will allow suppliers to provide customers the predictability they desire, and efficiency, to ensure that customers do not pay more for solar during the transition period than is necessary. Consistent with that preferred approach, the October 18 Comments requested:

- Transparency in the cost cap calculation, with all components included in that calculation tied to publicly available data and made publicly available in advance to allow TPSs and BGS Providers to provide competitive pricing that adequately factors in the solar transition costs without including additional regulatory risk.
- A market-based approach to valuing TRECs with TPS/BGS Providers serving as compliance entities, similar to the approach currently taken with New Jersey Renewable Portfolio Standard compliance. Constellation also suggested a five-year TREC eligibility period, to eliminate the need to have a buyer of last resort and a price floor, thereby

allowing suppliers to capture the savings available under the market-based approach for the benefit of customers.

- Publication of the TI-ACP schedules as soon as possible once an approach is determined and putting all solar technologies on a level playing field in terms of ACPs, to allow suppliers to begin providing customers with greater price certainty sooner rather than later and to provide for a more robust TREC market that lowers costs for customers.

Constellation appreciates the BPU's continued consideration of these comments. Should you have any questions about the foregoing, please do not hesitate to contact me at jesse.rodriquez@exeloncorp.com or (610) 765-6610.

Sincerely,

/s/

Jesse A. Rodriguez
Director, Energy Policy Analysis



November 15, 2019

Via email: solar.transitions@bpu.nj.gov

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
44 Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 086258-0350

**Re: I/M/O N.J.A.C. 14:8-2.4 Amendments to Renewable Portfolio Standard
Rules on Closure of the SREC Registration Program Pursuant to P.L. 2018, c17
BPU Docket Number QX19060720**

Dear Secretary Camacho-Welch:

KDC Solar LLC (“KDC Solar”) appreciates the opportunity to provide comments in the above referenced matter.

KDC Solar has been engaged in the New Jersey solar marketplace since 2010. As a developer, builder and operator of more than 110MWs and invested capital exceeding \$350 million our focus is in large-scale C&I segment. Our portfolio consists of roof, ground mount, carports and single axis tracker projects. These projects have been net-metered and our PPA customers are governmental entities, educational facilities, corporate office complexes, manufacturing facilities and distribution centers.

We continue to develop projects in NJ, with recent focus on brownfield redevelopment (Subsection (t) and Community projects), as well as large (>2MW) net-metered carport developments.

We have participated in the various stakeholder events and shared our views during such. We have reviewed materials being submitted by other stakeholders during this process and would like to be on record as sharing the same concerns and conclusions as those submitted by NJR Clean Energy Ventures (NJRCEV). We also want to expressly state that we share the concern presented by NJRCEV that the proposed Rule, as written, will result in an oversupply of the SREC market that will have a material adverse effect on public sector project sponsors and private sector investors, will erode the confidence of future project sponsors/investors and that the Rule will be an obstacle to achieving New Jersey’s clean energy goals. Moreover, as written, the proposed Rule does not meet the requirements of the Clean Energy Act, P.L. 2018, c.17 which requires an “orderly, transparent” transition of the SREC program and to “ensure prior investments retain value” and “support long term solar growth.”



We support the analysis provided in the NJRCEV comments and the conclusion that if the Board adopts the Rule as proposed, it is imperative that the Board demonstrate its commitment to a market balancing mechanism by amending the Notice as suggested by NJRCEV and proceed promptly with stakeholder consultation and other actions that will lead to the adoption of a market balancing mechanism no later than the date the SREC market is closed.

KDC Solar appreciates the opportunity to provide these comments and welcome the opportunity to discuss these with staff and stakeholders about this critical Rule proposal. We look forward to the opportunity to actively participate in the ongoing Solar Transition proceedings.

Respectfully submitted,

A handwritten signature in blue ink that reads "Thomas P. Lynch". The signature is fluid and cursive, with a long horizontal stroke at the end.

Thomas P. Lynch
Executive Vice President & COO



November 27, 2019

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, New Jersey 08625

Re: Comments of the Mid-Atlantic Renewable Energy Coalition on New Jersey's Solar Market Transition and Staff's Amended Straw Proposal

Dear Secretary Camacho-Welch:

The Mid-Atlantic Renewable Energy Coalition (MAREC) appreciates the opportunity to provide comments in relation to the Revised 2019/2020 Transition Incentive Staff Straw Proposal Revised (Straw Proposal) that was released on November 14, 2019.

Introduction

MAREC is a nonprofit organization that was formed to help advance the opportunities for renewable energy development primarily in the region where the Regional Transmission Organization, PJM Interconnection, operates, including New Jersey. MAREC members have developed, owned, and operated thousands of megawatts of renewable energy serving the PJM territory.

MAREC members consist of utility scale wind and solar developers, wind turbine manufacturers and non-profit organizations dedicated to the growth of renewable energy technologies. It is due to this dedication that we have paid special attention to the New Jersey Solar Market Transition, as the health of one market will have rippling effects across our region.

MAREC applauds Governor Murphy and the legislature for setting ambitious goals of having New Jersey running on 100% clean energy by 2050 and 50% clean energy by 2030. To make the

goals of the EMP a reality, the Board must now act *deliberately and wisely* on energy policy reforms, including in the Transition Incentive Staff Straw Proposal. The decisions made at this point, at the beginning of the path to 50% and 100% clean energy, will “set the stage” for the future acceleration of the renewables market.

Careful consideration will be needed by the BPU in order to “get it right” relative to ratepayers and the State’s greenhouse gases and renewable goals. There are a host of critical issues that require further deliberation including, but not limited to, setting the right incentive levels; adopting a reasonable calculation of “space” under the rate caps; setting an appropriate glidepath to 100% renewables; and a host of other issues.

As discussed below, MAREC urges the Board to adopt the following two key principles in its transition solar decision as well in its other related deliberations.

Calculate the cost caps in a reasonable and non-discriminatory manner

The Clean Energy Act requires the BPU to keep New Jersey the cost of renewable energy electricity costs as a percentage of total electricity costs under the specified cost caps (9% for EY 2019, 2020 and 2021; and 7% thereafter). The cost caps as currently calculated by Cadmus are contrary to sound and accepted economic analysis. Commissions around the country (including the BPU) include such items as: a) the “merit order effect” whereby renewable energy and load reductions reduce the market price of capacity and energy rates to all customers; b) the savings directly provided to customers who install on-site renewable energy; and c) the value of volatility hedge benefits.

It would be unduly discriminatory and contrary to the Clean Energy Act to not recognize these benefits when calculating whether the cost caps will be exceeded. These ratepayer benefits described above are real and the BPU should adjust the Cadmus analysis to reflect them. This will, in turn, allow the BPU to meet its obligations under the Clean Energy Act to measure the true cost impacts of meeting the renewable energy requirements.

Meet New Jersey’s 50% renewable energy requirements

The BPU should **only** adopt approaches that allow New Jersey to meet the goal of the Governor and the statutory requirement to achieving 50% renewable energy by 2030 and 100% clean energy by 2050. We recognize that the Clean Energy Act gives the BPU the authority to reduce the RPS to meet the cost cap. However, we believe that such an approach would be completely contrary to Governor Murphy’s national leadership role in reducing greenhouse gas emissions. To do this, New Jersey must keep its “eye on the prize” and not deviate from its commitment to achieve 50% renewable energy by 2030. This principle – in combination with the first principle discussed above - will enable the BPU to simultaneously stay under the cost cap and meet its renewable energy goals.

MAREC appreciates the opportunity to comment on this matter.

Respectfully submitted,

A handwritten signature in blue ink that reads "Bruce H. Burcat". The signature is written in a cursive style with a clear, legible font.

Bruce H. Burcat, Esq.
Executive Director
Mid-Atlantic Renewable Energy Coalition
P.O. Box 385
Camden, DE 19934
302-331-4639
bburcat@marec.us

Please accept these comments made on behalf of my clients.

1. With regard to the proposed TREC, we highly recommend a 20 year TREC at a Fixed Base Cost. We feel this will have a material impact in a positive manner on project financing.

2. If the TREC is to be valued at a Market Rate, we highly recommend that there be a TREC floor value at the Fixed Base Cost or similar value. This recommendation is based on project finance ability.

Thank you.

Mark S. Bellin Esq

54 Broad Street

Suite 303

Red Bank, New Jersey 07701

Cell: 732 962 5515

Comments on the Revised 2019/2020 Solar Transition Staff Proposal on Behalf of the Morris County Improvement Authority, the Somerset County Improvement Authority, and the New Jersey School Boards Association

November 27, 2019

The Morris County Improvement Authority (MCIA), the Somerset County Improvement Authority (SCIA), and the New Jersey School Boards Association (NJSBA) appreciate the opportunity to provide these comments in relation to the Revised 2019/2020 Transition Incentive Staff Straw Proposal (Revised Straw Proposal) that was released on November 14, 2019.

Somerset and Morris Counties have collectively installed over 25 MW of solar projects on over 100 local units and County facilities, while the NJSBA represents New Jersey public school districts who have committed to over 600 solar energy projects.

Our goal is to work with the New Jersey Board of Public Utilities (BPU) to assure that the BPU recognizes the significant investment made by our Counties and school districts and protects those existing commitments, and to work toward a transition to a new incentive program that allows for continuing opportunities to develop solar projects that can reduce public costs ultimately borne by taxpayers, while protecting ratepayers.

These public sector units strive to reduce costs to benefit their residents and taxpayers, and the development of on-site solar projects are a significant part of that effort. As described below, the Revised Straw Proposal is counter to the Governor's efforts to help counties, school districts, and other public units to reduce and stabilize property taxes and promote sustainable markets.

Pursuant to the request of the BPU's Office of Clean Energy (OCE), we are not repeating our earlier comments submitted on September 13, 2019 and October 18, 2019. This document focuses on additional or key issues and provides suggestions in addition to, not in lieu of, our previous comments.

Our specific comments to the Revised Staff Straw Proposal are as follows:

- **The Revised Straw Incentives Do Not Reflect New Jersey Energy Policy for Net-Metered Projects**

The Revised Incentive structure, specifically the multipliers on page 6, do not reflect the standing of net-metered solar projects at the center of New Jersey energy policy. Not only do net-metered projects allow energy users to move to carbon free energy production, they represent one of the few ways energy users can reduce their electric costs.

Unlike other states that allow utilities to offer "flex" or "discount" electric rates to help customers reduce costs, stay competitive, or support other policy goals, such discounts are not permissible under New Jersey law. Instead of such discounted utility rates, the pathway for customers in New Jersey to reduce their electric costs is to install net-metered solar projects and realize cost reductions.

Other states have driven solar development through large-scale grid supply projects. Due to New

Jersey's high population density and concerns about land use, New Jersey's solar success story is based on thousands of customer-scaled net-metered projects that reduce individual customer costs. State law and policy has long placed net-metered solar projects as the "preferred" route for solar development.

The proposed multipliers in the Revised Straw Proposal conflict with and threaten New Jersey's clear, longstanding, and appropriate policy emphasis on net-metered projects to help individual customers by unreasonably proposing a factor of 6/10th (0.6) to ground-mounted net-metered projects. **This severe discount in the multiplier will significantly harm the efforts of schools, municipalities, and counties to reduce their operating costs to the benefit of local taxpayers – a primary element of the Governor's efforts to make New Jersey more affordable.**

Instead of this 0.6 multiplier, ground-mounted net-metered projects should have the same multiplier (1.0) as the other commercially sized net-metered projects. Net-metered solar projects are the standard bearer of New Jersey solar energy growth and should not be penalized.

- **There is No "Kink Year Problem" if the Cost Caps are Calculated Correctly**

In our previous comments we provided an in-depth description of the need for the BPU to adjust the Cadmus/SEA Analysis to more accurately capture "costs for ratepayers" and stay under the 7% and 9% cost caps as required by the Clean Energy Act (Comments and Attachments filed on October 18, 2019). As we described in those comments, it would be discriminatory and unreasonable to penalize solar energy relative to how other resources are valued. Surprisingly, and contrary to due process, this issue was unaddressed in the Revised Straw and the Cadmus Report that accompanied it.

The BPU should make the adjustments described in our October 18th filing. If properly calculated, the cost caps will allow the BPU to protect ratepayers and maintain renewable industry growth, as intended by the Clean Energy Act.

- **Cadmus/SEA Analysis Requires Material Disclosure and Adjustment**

The Cadmus/SEA analysis was not transparent as to how project inputs resulted in market design and multiplier outcomes. The multipliers contained in the revised incentive structure were partially developed by calculating the required financial returns for each project type to assure that each multiplier provided adequate revenues to support project development.

While Cadmus/SEA used the CREST model, the actual modeling and adjustments made by Cadmus/SEA were not provided. The CREST model has numerous inputs and contains options to adjust the level of detail required to be included in the model. These decision points made by Cadmus/SEA were not disclosed for stakeholder review. Further, it is unclear how the results from the CREST model were synthesized into the ultimate outputs provided by Cadmus/SEA, including how the model generated annual ACP schedules, assumed average revenue/SREC schedules, total cost per year schedules, or the multipliers recommended for the marketplace. This "black box" denies stakeholders the ability to understand how financial outcomes result in the market design recommendations of Cadmus/SEA and the Revised Straw Proposal.

In addition, many of the inputs used in the modeling are questionable, including but not limited to: (i) the use of a 30% ITC, which assumes projects must commence construction prior to the end of 2019; (ii) the use of only PVWatts to determine the absolute production of solar arrays for all types other than small commercial rooftops; (iii) the lack of clarity as to whether Cadmus accounted for the on-peak and off-peak accounting used by utilities to calculate net-metered volumes for customers, which has a direct impact on the solar price-to-compare from which a Power Purchase Agreement (PPA) discount is calculated; (iv) the use of a 15% PPA discount to retail prices, which represents a percentage that is less than the minimum amount acceptable to customers. This has the effect of overestimating the PPA revenues because this value is typically above 25% (and sometimes as high as 75% depending on the system size and customer type); and, (v) the wholesale energy forecast in the early years escalates at 9.8% in 2020 and 8.9% in 2021, a high escalation which results in an overestimation of wholesale revenues for projects.

We appreciate your attention to this matter of great importance to New Jersey's schools, counties, other public units, and taxpayers.

Respectfully,

The Morris County Improvement Authority
The Somerset County Improvement Authority
The New Jersey School Boards Association



Mid-Atlantic Solar & Storage Industries Association

Rutgers Eco-Complex, Suite 208-8

1200 Florence-Columbus Road, Bordentown, NJ 08505 | info@mseia.net

November 27, 2019

Ms. Aida Camacho-Welch
Secretary
P.O. Box 350
Trenton, NJ 08625
and
Solar Transition Team
New Jersey Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
CN 350
Trenton, New Jersey 08625

Via email

Re: Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modeling Addendum -- UPDATE

Dear Ms. Camacho-Welch:

The Mid-Atlantic Solar & Storage Industries Association (MSSIA) is pleased to present these comments in regard to the above-referenced matter.

MSSIA is a trade organization that has represented solar energy companies in New Jersey, Pennsylvania, and Delaware since 1997. During that 22-year period, the organization has spearheaded efforts in the Mid-Atlantic region to make solar energy a major contributor to the region's energy future. Its fundamental policy goals are to: (1) grow solar energy in our states as quickly as practicable; (2) do so at the lowest possible cost to ratepayers, while delivering the greatest possible benefit as a public good; and (3) preserve diversity in the market, including opportunity for Jersey companies to grow and create local jobs (<https://mseia.net/fundamental-principles/>).

MSSIA appreciates staff's efforts in producing and disseminating an updated straw proposal. The update essentially changes two of the market segment factors, compared to the factors in the previous, revised straw proposal. MSSIA's comments on that previous straw proposal are still relevant, and MSSIA wishes to include them by reference in these comments, and attaches them hereto as Appendix 1. **Of the greatest concern is that the factorization as proposed did, and still does, over-incentivize some market sectors, while under-incentivizing others.** In fact, certain factors are so far below the incentive levels needed to make the projects minimally financeable, that the **most severely under-incentivized market segments will suffer severe losses, to the point of a virtual halt in those segments.**

This fact runs counter to staff's statement in the Straw Proposal update that *"In each case, the goal of the factorization program is to ensure that ratepayers are providing the minimum*

necessary financial incentive to develop diverse types of projects, consistent with maintaining a healthy solar industry in New Jersey”.

MSSIA respectfully asserts that the updated staff straw proposal, and the underlying analysis by the consultant, errs in fulfilling the BPU’s stated goals. **MSSIA’s policy goals, as stated above, lead us to request in the strongest possible terms that no market segment be either over-incentivized or under-incentivized.** The over-incentivization that is detailed below and in the tables creates unneeded ratepayer costs. The under-incentivization will create severe economic loss for many worthy projects, and ultimately kill active market segments that have especially high societal value. Notable examples include the **residential sector**, which is the most powerful creator of in-state jobs, and which provides an opportunity for the ratepayer sector that leads in paying the cost of the incentives to reap some of the benefits; **net-metered ground mounts**, which commonly serve public entities such as schools, municipalities, and municipal authorities (and generally without significant impact on greenspaces); and **landfill/brownfield (subsection t)** projects, which have long been considered a policy priority.

MSSIA’s specific comments follow:

1. Updated Analysis on the Problems with the Proposed Factors

Table 1, below is updated for the current straw proposal update. It presents the unlevered, after-tax internal rate of return (IRR), of typical projects in the nine major market segments. The market segments, and the sizes chosen as typical examples of each, are noted in the table. Our collective, current experience in the project financing market is that **the minimum financeable unlevered IRR is 8.5%**. Please note that this basic project IRR does not the same as the ultimate investors’ IRR. The ultimate investor’s IRR is lower, since it will include investor’s soft costs such as their legal & accounting costs, capital management fees, fleet management & billing, etc.

Table 1 – MSSIA Modeled Rate of Return Using Straw Proposal Factors

Project Type/Size	IRR
Net Metered, <= 25 KW	4.9%
Net Metered, Roof, 250 KW	10.3%
Net Metered, Roof, 1 MW	10.6%
Net Metered, Ground, 2 MW	4.0%
Net Metered, Carport, 500 KW	7.2%
Landfills & Brownfield (subsection t), 3 MW	5.1%
Grid Supply (subsection r), 10 MW	2.3%
Community Solar, Roof, 2 MW	7.5%
Community Solar, Landfill, 5 MW	7.4%

It can be seen that even with the update, the market segments mentioned above – residential, net-metered ground mounts, and landfill/brownfields (subsection t) are so far below financeable levels that projects already in the SRP queue and under contract will suffer severe financial harm, and new projects will not be able to go forward. It can also be seen that grid supply projects (subsection r) are very severely under-incentivized. Other segments, including carports, community solar on roofs, and community solar on landfills/brownfields, are close to the mark but still below the minimum returns needed for financing.

A comprehensive table of all the assumptions used in MSSIA’s modeling is attached as Appendix 2.

Table 2, below, also updated, shows the modeling in a different way. It compares the factors in staff’s updated proposal to the factors that are required to achieve the minimum 8.5% IRR, from MSSIA’s modeling.

Table 2 – MSSIA Modeled Factor Needed to Achieve 8.5% Minimum Return

Project Type/Size	Factor per Straw	Factor Required
Net Metered, <= 25 KW, 7 KW	0.60	0.89
Net Metered, Roof, 250 KW	1.00	0.90
Net Metered, Roof, 1 MW	1.00	0.89
Net Metered, Ground, 2 MW	0.60	0.85
Net Metered, Carport, 500 KW	1.00	1.08
Landfills & Brownfield (subsection t), 3 MW	1.00	1.13
Grid Supply (subsection r), 10 MW	0.69	0.87
Community Solar, Roof, 2 MW	0.85	0.90
Community Solar, Landfill, 5 MW	0.85	0.91

Again, the large disparity in some market segments between the factors that are required to make projects financeable and the straw proposal’s factors are evident.

Common sense can also help shed light on this disparity. Why, for instance, would net-metered ground-mounted projects require such a drastically lower incentive rate than net-metered roof-mounted projects? Ground-mounted projects are considerably more costly and risky than equivalent rooftop projects, and take much longer to complete. Even though they also have better performance, the net result generally is economics that are similar. In Massachusetts, where the same consultants played a key role in setting incentive levels, the incentive levels for net-metered rooftops and net-metered ground mounts are identical. Similarly, in Massachusetts residential projects are compensated at a significantly *higher* rate than larger commercial projects, in contrast to staff’s straw proposal in which residential incentives are substantially lower.

MSSIA renews its recommendation for factors and sector categories, in groupings that share similar levels of minimum required incentive levels. The recommendation, reproduced below, simplifies the factorization so that only three categories are needed, and fairly compensates all project types.

Table 3 – MSSIA Recommended Categories and Factors

Category	Factor
Category 1: Net Metered < 25 KW, Net Metered Roof, Community Solar	0.90
Category 2: Net Metered Ground, Grid Supply (subsection r)	0.85
Category 3: Net Metered Carports, Landfills & Brownfields (subsection t)	1.10

Serious Errors in the Consultant’s Analysis, and Lack of Transparency

The assumptions that have been discovered so far in the consultant’s documentation contain a number of serious errors that partially explain the disparity between the solar industry’s

conclusions regarding the required factors, and the consultant's recommended factors. These have not been adequately addressed in the consultant's latest revisions.

It is important to note that many of the assumptions can be verified by looking at the data in BPU's possession from the SRP applications for projects in the pipeline (which are themselves, or are representative of, the projects that will be in the Transition Program). The SRP applications include the EPC contracts, PPA contracts, and technical details of every project. Cost, performance, energy prices, and much more could be discovered for each market segment. Developer costs and soft costs of financing a project would not be included, but could be estimated. Even a substantial random sampling of the data would reveal much, we believe.

The consultant's assumptions regarding project costs are too low, and not indicative of the costs of a large proportion of projects in the SRP pipeline.

Their assumption that *all* larger projects will be able to safe-harbor the 30% 2019 federal investment tax credit is unrealistic, and it ignores the fact that even the projects that *can* safe-harbor the tax credit will incur a substantial cost in doing so.

The consultant's assumptions regarding the technical specifications and solar system design features are erroneous, and their resulting performance estimates are too high. Calculated performance figures should not be used anyway, when actual data on system performance is available from PJM.

The consultant's estimates of the energy revenue for projects are out of step with the market reality. The competitive nature of the vast majority of projects necessitates a much larger discount off of the cost of utility-supplied power. As mentioned before, this can be verified by looking at the PPA contracts that are included in the pipeline projects' SRP applications. It can also be verified by looking at bidding results of public projects. MSSIA understands that there have been offers of help in that regard from the public consultant community during the stakeholder meetings.

Unfortunately, even though there are *known* errors in the consultant's assumptions, MSSIA and other industry experts still do not have a clear picture of all of the assumptions and methodologies that are in use by the consultants and that have resulted in such unrealistic results. We have not been able to find some important assumptions, and those that are evident are scattered among several different documents from different times, and are expressed in units that are unfamiliar and difficult or uncertain to translate to standard industry units.

Of particular concern is the way the consultants use a leveraged (equity) IRR as the fundamental target of their modeling. There are dozens of different ways of financing and leveraging a project, and they differ by market segment type, offtaker type, by developer, and even project by project. The types of measures that are relevant to these varieties of financing are different. The consultant's results therefore lose any meaning for solar industry professionals. The unlevered, after-tax IRR that is used by MSSIA and other industry financial professionals is a basic measure that allows fair comparison from one project to the next, and from one market segment to another. It should be very easy for the consultant to convert their results to unlevered IRR, by simply setting the leveraging percentage to zero.

It is frustrating that MSSIA and other industry experts have had to spend hundreds of hours on efforts to understand where the consultant's analysis went wrong, but have yet to get enough information to form a complete picture. At one point, it seemed as if the consultant would be able to produce a single, comprehensive table of assumptions, in industry standard units of

measure, such as the MSSIA table attached as Appendix 1. If such a table could be produced, at least we could identify all the assumptions we believe are incorrect, and also determine whether the consultant's model itself is a source of the discrepancies. In addition, there is a need for the consultant's actual modelers and industry modelers need to get together to focus on these issues and understand each other better. MSSIA believes that in such a meeting, in a couple of hours a great deal could be resolved. **MSSIA, therefore, strongly requests that a comprehensive table of assumptions in standard units be produced (along the lines of Appendix 1), and a live meeting of modelers be scheduled.**

TI-3 (market based TREC with a buyer of last resort) *Does Not Work* with the Same TREC prices as TI-4 (fixed TREC)

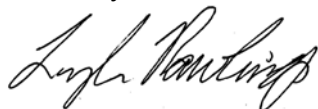
The consultant recommends the TI-4 scenario – a fixed TREC price - for the transition incentive, but also states that if BPU wants a market-based approach, then TI-3 – a market-based TREC with utilities as a buyer of last resort – is a viable alternative. We agree with the consultant that TI-4 is the best alternative, and that it best achieves the BPU staff's objectives of sustained solar growth, cost mitigation, and cost cap adherence. We disagree, though, with the statement that TI-3 is a viable alternative – at least without substantially raising the TI-ACP for scenario TI-3 as proposed in the staff straw proposal.

The proposed TI-ACP for scenario TI-3, in the straw proposal and in the consultant's recommendation, are the same as the fixed price in TI-4. In MSSIA's modeling of the required factors, as well as in the consultant's modeling and the modeling by other solar industry analysts, it is assumed that the TI-4 TREC price is the price the solar owner received. In the case of a fixed TREC, that is a reasonable assumption. But that cannot be said for the TI-ACP in scenario TI-3. First, TRECs, like SRECs, will always trade at a price below the ACP. Any degree of uncertainty will widen that gap.

More importantly, in TI-3 there is a buyer of last resort deploying an effective floor price, but only at the end of a TREC's 3-year trading life. Solar industry participants and market traders believe that this floor price will effectively drive the trading price for TRECs in scenario TI-3. However, the 3-year wait period to receive the floor price from the buyer of last resort results in a substantial reduction in the value of the last resort payment, because of the time value of money. In an investor's evaluation of a project's revenue, at the typical 8.5% rate of return, a 3-year wait reduces the value of the floor price to 78% of its face value. This large reduction in value, coupled with the usual trading discount from the ACP, results in a situation where a much higher TI-ACP would be needed to make projects viable in scenario TI-3. Therefore, MSSIA believes that scenario TI-3 is not a viable option.

MSSIA thanks staff for the opportunity to provide input on this matter.

Sincerely,



Lyle K. Rawlings, P.E.
President

Appendix 1

MSSIA INPUTS FOR MODELING TRANSITION PROGRAM INCENTIVES

Input Parameter		Unit		Value Assumed for Model							
				Net Metered, <=25 KW	Net Metered, Small Commercial, Roof	Net Metered, Large Commercial, Roof	Net Metered, Large Commercial, Ground	Net Metered, Carport	Landfills & Brownfields (subsection t)	Grid Supply (subsection r)	Community Solar - Roof
Objective:		Determine the incentives required for the Interim Program by modeling representative projects in different PV market sectors.									
Method:		Using a basic single-investor, 25-year model, vary the Fixed SREC payment until the target IRR is reached.									
Target:		Unlevered, after-tax IRR									
NOTE:		Most impactful assumptions shaded Pink									
Target IRR (unlevered, after tax)		%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	
System Size		KWdc	7	250	1,000	2,000	500	3,000	10,000	2,000	5,000
Specific Production (year 1)		KWH/yr/KWdc	1,200	1,260	1,260	1,325	1,180	1,325	1,345	1,260	1,345
Performance degradation		% per year	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
EY of project COD		EY	2021	2021	2021	2021	2021	2021	2021	2021	2021
Total cost (incl. developer & CS fees)		\$/watt dc	\$2.800	\$2.420	\$2.250	\$2.150	\$3.100	\$2.400	\$1.850	\$2.150	\$2.430
Federal Investment Tax Credit		%	26%	26%	26%	26%	26%	26%	26%	26%	26%
FITC-ineligible portion of cost		\$/watt dc	\$0.000	\$0.030	\$0.050	\$0.050	\$0.050	\$0.050	\$0.060	\$0.050	\$0.060
Combined federal+state tax rate		%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Interest during construction		% of total cost	3%	3%	3%	3%	3%	3%	3%	3%	3%
PPA Price		\$/KWH	\$0.105	\$0.065	\$0.065	\$0.063	\$0.075	\$0.045	\$0.045	\$0.105	\$0.105
PPA price escalator		%	1.5%	1.5%	1.5%	1.5%	1.5%	1.25%	1.25%	1.5%	1.5%
Class I REC price (after SREC life)		\$/REC	\$7	\$7	\$7	\$7	\$7	\$7	\$7	\$7	\$7
O&M Cost		\$/watt dc/yr.	\$0.020	\$0.010	\$0.006	\$0.006	\$0.006	\$0.006	\$0.006	\$0.060	\$0.060
General cost escalator		%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Inverter replacement cost		\$/watt dc	\$0.055	\$0.055	\$0.055	\$0.055	\$0.055	\$0.055	\$0.055	\$0.055	\$0.055
Inverter replacement year		EY	2040	2040	2040	2040	2040	2040	2040	2040	2040
Property lease		\$/year	\$1	\$1	\$12,500	\$35,000	\$1	\$175,000	\$300,000	\$125,000	\$300,000
PILOT or other local taxes		\$/year	\$0	\$0	\$0	\$0	\$0	\$0	\$70,000	\$0	\$0
Community Solar service initial cost		\$/watt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.110	\$0.110
Community Solar service ongoing costs		\$/KWH	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.014	\$0.014

Appendix 2
MSSIA COMMENTS OF OCTOBER 18, 2019



Mid-Atlantic Solar & Storage Industries Association

Rutgers Eco-Complex, Suite 208-8

1200 Florence-Columbus Road, Bordentown, NJ 08505 | info@mseia.net

October 18, 2019

Ms. Aida Camacho-Welch
Secretary
and
Solar Transition Team
New Jersey Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
CN 350
Trenton, New Jersey 08625

Via email

Re: Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modeling Addendum

Dear Ms. Camacho-Welch:

The Mid-Atlantic Solar & Storage Industries Association (MSSIA) is pleased to present these comments in regard to the above-referenced matter.

MSSIA is a trade organization that has represented solar energy companies in New Jersey, Pennsylvania, and Delaware since 1997. During that 22-year period, the organization has spearheaded efforts in the Mid-Atlantic region to make solar energy a major contributor to the region's energy future.

During these 20 years, MSSIA has adopted and followed three fundamental policy principles, which in short can be stated as: (1) Grow solar energy in our states as quickly as practicable; (2) do so at the lowest possible cost to ratepayers, while delivering the greatest possible benefit as a public good; and (3) preserve diversity in the market, including opportunity for Jersey companies to grow and create local jobs (see MSEIA's fundamental policy principles at <https://mseia.net/fundamental-principles/>).

Historically BPU has formally expressed these same three goals, and currently the Transition Principles stated by the BPU, and staff comments at the Transition Incentive stakeholder meetings, echo the same goals. The goals comprise a balancing act.

- Growing solar energy, at a pace that complies with the 50% by 2030 requirement, will only happen if enough solar projects are financeable.
- Financing of projects only happens if the risk-adjusted revenue is adequate to produce a likewise risk-adjusted rate of return.
- Building solar at the lowest possible cost to ratepayers requires incentive design that is based on knowledge and respect for the ways low-cost capital can be attracted to invest. That means lowering revenue risk as much as possible.
- Achieving the lowest possible cost also requires **avoiding over-incentivizing** any market segment. That means market segments should be incentivized differently, and grouped according to type and incentive need.

- Conversely, achieving the program goals requires **avoiding under-incentivizing** solar projects.
- Ensuring that the major solar market sectors remain healthy is necessary in order to meet the solar growth goals.
- Residents, Jersey businesses, institutions, and local government & school entities deserve to have the opportunity to reap the financial benefits of solar projects, because as ratepayers they all pay for the incentives, and because benefitting those sectors benefits society.

Overall, MSSIA believes that the consultant recommendations contained in the straw proposal have the potential to meet all of the goals described above, but only with some changes to some of the numerical values that were proposed, and the right choices among the alternatives that were described.

Specifics regarding the changes and choices MSSIA believes will be required in order to meet the goals are presented in MSSIA's answers to the questions staff asked in the straw proposal. MSSIA's answers are given below, in blue font:

General Structure of the proposed Transition Incentive

1. What are the potential advantages and challenges of Staff's proposed Transition Incentive design?

Three scenarios for transition incentive design are described in the revised staff straw proposal. MSSIA comments are given below for the first two, TI-2a and TI-3. The third, TI-4, is discussed in #2.

- TI-2a

This tradable market commodity design, as stated by the consultant in its report, has far too high a cost to ratepayers. The consultant recommended ACP values are shockingly high, and MSSIA agrees that very high ACP values would be necessary in order to overcome the risk premium inherent in the design. MSSIA agrees with the consultant recommendation that TI-2a should not be chosen for the Transition Incentive.

- TI-3

This design, featuring a tradable market commodity with a floor price, is expressed by the consultant as an alternate recommended incentive design, with TI-4 being the first recommendation. MSSIA believes that there are several challenges and flaws in the design itself, as well as an error in the estimated floor price level.

One challenge with the design is that it requires setting up a complex set of infrastructure features and regulatory mechanisms in order to enlist EDC's as the buyer of last resort, set up market mechanisms, floor price payment mechanisms, ratepayer charge mechanisms, reporting, etc., and how they all will interact. That will take a lot of time and resources, and the complexity could give rise to problems that are hard to predict now.. If a substantial benefit resulted for ratepayers one could say it would be worth the expenditure of the time and resources. However, MSSIA believes the opposite would be the case, as explained below.

Firstly, the proposed ACP price and the floor price recommended by the consultant are identical. That means that this incentive design is really just a fixed TREC price, and the afore-mentioned complexity is unnecessary.

Secondly, the floor price is identical to the price recommended by the consultant for the TI-4 scenario, so there is no benefit to ratepayers in the additional complexity.

Third, the scenario as described pays the floor price only at the end of the trading life of a project's TRECs. Even if the trading life is reduced from the current five years to three year, that means the floor price is paid three years later than it is minted, so there is a loss due to the time value of money. Assuming an 8.5% rate of return, that loss of value results in a requirement for a higher TREC, by a multiplier equal to $1.085^3 = 1.28$, or 28% higher, in order to maintain the same rate of return as TI-4. Even if the TREC can be traded in the market right away, MSSIA believes that the market will value TRECs according to their floor value, *including the time value of money discount* (and with trading costs and profits as well).

The change in the required TREC values due to the time value of money was not taken into account in the consultant's recommended TREC values. Correcting for the time value of money would result in higher ratepayer costs for scenario TI-3 as compared to TI-4.

2. What are the advantages and challenges to the two approaches; a fixed price TREC and a market based TREC?

A market-based TREC per TI-2a has the advantage of requiring little change from the current incentive system, the legacy SREC program. This makes it simple to set up, and makes it easier to implement in time for the closure of the SREC market, thus facilitating continuity of solar businesses.

However, the costs, as shown in Table 1, are sky-high. Correspondingly, the ratepayer impact, as noted by the consultant, are very high. MSSIA believes that that fact should eliminate TI-2a from consideration.

A fixed TREC, as represented in TI-4, is expected to take more work to set up and take longer. However, we are certain that it will achieve substantially lower ratepayer impact than the other two choices. MSSIA believes that it is still possible to implement such a program in time for the program to start when needed.

3. Does the proposed Revised Transition Incentive provide sufficient financial surety for projects currently in the SRP pipeline that may not reach commercial operations prior to the closure of the SREC market to new entrants?

MSSIA believes that the scenario TI-4 does provide adequate financial surety, provided that the needed adjustments to TREC factors, as discussed below, are implemented.

4. How can the Board most accurately predict the amount of capacity expected to be in the SRP pipeline at the time the 5.1% Milestone is hit? During what timeframe in the transition

process, would a final determination of the size of the pipeline of eligible projects be required? Should there be a true-up?

Prediction of the amount of capacity need for the Transition Program will be very tentative until the incentive type and amounts are finally defined. Assuming for the moment that the TI-4 scenario is chosen, the straw proposal's incentive rates as stated will cause a drastic reduction in several market sectors, especially the residential sector, ground-mounted net-metered projects, grid-supply projects (subsection r), and landfills/brownfields. Carports and community solar projects are under-incented to a lesser degree. Once the factors are finalized, the level of damage to pipeline projects in those market sectors can be assessed.

The accuracy of the predicted pipeline size for the TREC program will rise as the 5.1% milestone nears, but the size of the TREC program should be set several months before the 5.1% milestone is hit. A true-up will be needed if the amount of the pipeline that is actually built exceeds the size set for the program. If the amount built falls short of the pre-determined program size, there can either be a true-up in the program size or, in order to achieve the overall goals, additional projects could be accepted into the program.

Eligibility

5. How should the Board treat projects entering the SRP pipeline that have not 1) filed a complete SRP Registration or received conditional certification from the Board after October 29, 2018, *and* 2) have not commenced commercial operation upon the Board's determination that the 5.1% Milestone has been attained?

MSSIA is not confident that it understands the condition as stated, and so is hesitant to answer.

6. Should the Board cease accepting new registrations to the SREC Registration Program, and begin only accepting registrations to a new Transition Incentive cluster?

Yes, MSSIA believes that the Board should do so after giving adequate notice for projects that have already been awarded under the current program but have not yet had time to apply.

Terms for each TREC

7. Please discuss the proposed 15-year TREC term, with appropriate justification for any recommended changes.

MSSIA believes that the 15-year term is optimal. It strikes a good balance between low annual ratepayer impact (where longer term is better), low rate impact NPV (where shorter term is better), optimal investor confidence (where shorter term is better), and good project economic performance (where questions of term can vary from investor to investor).

After the Transition Program, in a successor program, if the security of the incentive revenue can be increased, a 20-year term (such as in the Massachusetts SMART Program) is worthy of consideration.

Value of a TREC

8. Are the TI-ACP schedules proposed in Revised Table 1 to be associated with each compliance entity option appropriate? If modifications are required, how should the schedules be adjusted and why?

Generally, the TI-ACP schedules as shown in Revised Table 1 are appropriate, except as noted below in #9, as long as factors are chosen appropriately, as discussed in #13 through #15.

9. Please critique the proposal of a “custom” TI-ACP which is relatively low in EY21, EY22 and EY23 and increases thereafter, keeping in mind the statutory cost cap the program must operate under.

MSSIA understands that the low TREC values for EY21 through EY23 are intended to lessen pressure on the cost caps. However, those low values in the first three years of a project are very costly, substantially raising the required incentive in the ensuing years, and significantly raising the overall ratepayer impact in NPV terms, even without considering the special difficulties it presents to investors.

The measure will cause many projects to have negative cash flow during the first three years, necessitating an up-front cash reserve. This will be costly, and eliminate some of the most efficient sources of capital from participation in the program.

The three years of low TREC values will have a very modest effect on the cost caps anyway, because the TREC program will be so small compared to either the legacy program or the successor program.

There are more effective and more efficient ways to achieve compliance with the cost caps. MSSIA hopes and recommends that those other measures be the subject of serious work and consideration as alternatives to the three years of low TREC values.

10. What are the implications of establishing a “Buyer of Last Resort” and floor price mechanism for the TREC market? What factors should Staff consider in recommending how a purchase price is established?

The overall implications of the Buyer of Last Resort are discussed in #1. To recap, if the floor price is paid at the end of the trading life of each TREC, the TREC prices will need to be increased substantially to account for the time value of money. In fact, the combination of the time delay with the three years of low ACP's may render most projects non-viable, even if the modeled rates of return indicate otherwise viable projects.

One possible fix would be to enable the floor price payment for TRECs in their first year, but to an even greater degree one would have to ask what purpose the greater complexity of the trading and the floor price mechanism will serve, when the program in effect is just like a fixed TREC.

11. When and how should a floor price be established to provide the maximum benefit to ratepayers, developers, investors?

If the floor price mechanism is adopted, MSSIA believes that the floor price would be determined administratively. This would need to be done as soon as possible, so that developers can continue to develop the projects in the pipeline.

As state before in #1 and #10, however, MSSIA asserts that the floor price mechanism will be costly to ratepayers and unnecessarily complex, and recommends against it.

12. Would the availability of a floor price above the NJ Class I ACP provide any reduction in finance costs for eligible projects?

The floor price would reduce finance costs when compared to TI-2a, but substantially greater than TI-4, as discussed previously.

Factorization of TRECs

13. Do you agree with the proposed categories of factors (Revised Table 2)? Why or why not?

MSSIA disagrees with some aspects of the proposed categories of factors. The categories should reflect groupings of market sectors and types of projects that have similar economic performance and need similar incentive levels. Otherwise, different market segments with divergent needs will be grouped together with the same factor, over-incentivizing some and under-incentivizing others. That is, in fact, the result of the recommended factors in the straw proposal, as will be discussed further below.

Based on industry experience and MSSIA’s modeling of the straw proposal, the following categories will appropriately group market sectors with similar needs. The similarities in the economic performance of the sectors grouped in these categories can be seen in Table 3.

Table 1 – MSSIA Recommended Categories of Factors

Category 1	Net Metered Roof, Community Solar
Category 2	Net Metered Ground, Grid Supply (subsection r)
Category 3	Net Metered Carports, Landfills & Brownfields (subsection t)

14. Please address the financial incentive levels for each of the four project types.

MSSIA’s fundamental policy objectives were discussed previously, and BPU communications have indicated that it shares them. In order to achieve those objectives MSSIA wants the solar industry to remain viable, including all the market segments that have each played important roles in building New Jersey’s solar success story, and have each served important customer segments, both public and private. However, achievement of those objectives also requires that no market sector should receive incentive levels that are higher than needed. We don’t want any market

sector to receive incentive levels that are too high, or so low that that sector is severely diminished.

First, accurate incentive levels for the prevailing project types would require some adjustments to the categorization, as discussed in #13. The groupings recommended by MSSIA above will allow reasonably accurate financial incentive levels for all of the active market sectors.

Then, the assigned factors would require adjustment, as discussed below.

15. Do you agree with the proposed assigned factors? Why or why not? Please provide documented explanations for your response.

MSSIA, for the most part, disagrees with the assigned factors.

Of nine project types analyzed and modeled by MSSIA according to the assigned factors in the straw proposal, two project types are over-incentivized, providing rates of return that are higher than the minimum IRR that has been found in practice to be financeable. As stated in #14, this runs counter to MSSIA's fundamental objective to build solar at the lowest possible cost to ratepayers. Three of the project types are under-incentivized, providing rates of return that are close to the minimum, but still lower than is usually financeable. The other four project types are severely under-incentivized, providing rates of return that are absolutely un-financeable, so much so that those market segments would be essentially destroyed.

MSSIA modeled projects using an investor model that is used in actual investor decision-making and in setting prices for competitive bids. This model has been used successfully in dozens of highly-contested bids, so MSSIA believes that it accurately identifies the minimum financeable rate of return.

Following common industry practice, MSSIA models projects to achieve a target unlevered, after-tax IRR. Projects are often leveraged with debt and include separate tax equity investors, so return on equity differs from the unlevered rate of return. However, there is seemingly infinite variety among the ways of structuring project finance - leveraging through debt, lease structures, lease-buyback, REITs, tax equity investors, and many other modalities. This makes choosing a particular leveraging structure for modeling highly arbitrary. The way to compare one project to another in a fairly standard way is the unlevered IRR, which is a basic measure of the economics of the project itself. To put it simply, if the project itself has revenue that covers costs with an adequate margin left over, it can be financed. If the project doesn't make an adequate margin or loses money, no amount of financial structuring is likely to work. The consultant's use of leveraged IRR as a modeling target therefore produces results that are meaningless to solar industry professionals.

The results of MSSIA's financial modeling are given below in Table 2. An unlevered, after-tax IRR of 8.5% is considered to be the approximate minimum that can be financed.

Table 2 – MSSIA Modeled Rate of Return Using Straw Proposal Factors

Project Type/Size	IRR
Net Metered, <= 25 KW	4.0%
Net Metered, Roof, 250 KW	10.3%
Net Metered, Roof, 1 MW	10.6%
Net Metered, Ground, 2 MW	2.5%
Net Metered, Carport, 500 KW	7.2%
Landfills & Brownfield (subsection t), 3 MW	5.1%
Grid Supply (subsection r), 10 MW	0.3%
Community Solar, Roof, 2 MW	7.5%
Community Solar, Landfill, 5 MW	7.4%

It can be seen clearly that the net metered roof projects are being over-incentivized as proposed, while residential, net metered ground-mount, grid-connected landfills & brownfields (subsection t) and grid-supply projects (subsection r) are far below financeable rates of return.

Although MSSIA is not recommending a 20-year term for the Transition Program, MSSIA nevertheless modeled the rate of return for the straw proposal’s 20-year TREC values and factors. Those results are available upon request.

To put it another way, Table 3, below, presents the factors that would be required to achieve the minimum financeable 8.5% rate of return, alongside the factor assigned in the Straw Proposal.

Table 3 – MSSIA Modeled Factor Needed to Achieve 8.5% Minimum Return

Project Type/Size	Factor per Straw	Factor Required
Net Metered, <= 25 KW	0.50	0.89
Net Metered, Roof, 250 KW	1.00	0.90
Net Metered, Roof, 1 MW	1.00	0.89
Net Metered, Ground, 2 MW	0.50	0.85
Net Metered, Carport, 500 KW	1.00	1.08
Landfills & Brownfield (subsection t), 3 MW	1.00	1.13
Grid Supply (subsection r), 10 MW	0.50	0.87
Community Solar, Roof, 2 MW	0.85	0.90
Community Solar, Landfill, 5 MW	0.85	0.91

The large disparity between the factors that are required to make projects financeable and the straw proposal’s factors is evident in Table 3. Some of the disparities can be explained by assumptions in the consultant’s report that are incorrect, or that reflect positions MSSIA believes are contrary to the goals. Key examples of assumptions in the consultant’s modeling that we believe are erroneous follow:

a. Project costs are too low

The consultant's modeling is based on the 50% percentile of costs. That would mean that of the pipeline of projects entering the Transition Incentive Program, only half of them would be financeable. That means substantial industry contraction and loss of jobs, a large number of contracts that would have to be broken, and failure to meet the program goals to advance solar energy. MSSIA suggests that such a posture is incongruent with good policy. We believe that at least 75% of projects should be financeable.

Additionally, it appears as if the consultant assumptions on cost do not include development costs or developer fees, which are usually a significant portion of project costs. They must be included in order for the model to reflect costs accurately.

b. Performance estimates are too high

At the last stakeholder meeting, several speakers made the point that the consultant's modeling should use actual performance data from PJM, rather than calculated values using PV:WATTS. Real performance data is more reliable than calculations. Moreover, the consultant's PV:WATTS calculations were based on assumptions, many of which were faulty. In particular, the assumptions on PV module tilt angle and azimuth were unrealistic. For example, the assumption for the tilt angle for commercial rooftop installations was 35 degrees. Nearly all commercial rooftop installations are ballasted, and tilt angles are kept to 5 to 10 degrees in order to keep the arrays' weight within the common load bearing capacity of roofs. Ballasted racking manufacturers, accordingly, make their products in 5 to 10 degree tilts. To the author's knowledge, only one racking manufacturer makes a product with a higher tilt, and that is 15 degrees. The tilt angle assumptions on other project types were similarly erroneous. These assumptions help explain why the performance assumptions that were used in the modeling were higher than the PJM data.

c. Energy revenue estimates were too high

The consultant's assumption regarding energy revenue was that the revenue would be 15% below the energy cost of utility power. In reality, prevailing PPA offers feature substantially greater discounts in order to make it worthwhile for customers to take the time, trouble, and risk. This can be seen clearly in the data that is available from PPAs that are publicly bid.

The cumulative effect of these and other errors in the most impactful assumptions is results that, as seen in Table 3, would leave several market segments unable to function. It appears, moreover, that the assumptions alone cannot explain the magnitude of the gap between the required factors and the straw proposal's recommendations. We believe it is likely that the workings of the model itself, which are not visible to us, are partly responsible for the gap as well. Certainly, the use of an arbitrarily defined leveraged IRR as the model's target is not appropriate in our view, but there may be other, hidden problems that we cannot see without more information.

MSSIA understands that industry estimates are taken with a degree of skepticism, since the parties doing the analysis, like MSSIA, are parties at interest. However, it is equally true that industry practitioners are the ultimate experts, since solar businesses compete with each other and survive, often by the slimmest of margins, based on their ability to place bids and price projects accurately, and do so at the lowest possible price in order to win work. They are the ones who work with these numbers every day. They are the ones who work with financiers to fund projects, and in the process and learn their bottom lines. That is why MSSIA’s analysis and that of other leading industry analysts should be taken seriously.

Some of MSSIA’s assertions can readily be checked independently. For example, tilt angles and azimuths for projects in the pipeline are provided on the SRP applications, so prevailing values can easily be obtained as a check on our assertions in (b.) above. As another example, Public competitive bids can be obtained from the entities running the bids. Since it is public data, the public entities’ consultants should be able to share data from multiple bids (and have offered to do so). This data will reveal the PPA rates that the bid awardees will receive as revenue, as a check on our assertions regarding energy revenue in (c.), above.

In addition, MSSIA is willing to share its models that were used to generate the results above, and provide them in functional form, upon request. MSSIA is further willing to explain the model’s working, answer detailed questions, and provide interactive instruction in its use, if desired.

In Table 3, the natural groupings can be seen that resulted in MSSIA’s recommendations for categorization. Based on those natural groupings, MSSIA’s recommendations for TREC factors for MSSIA’s categories are given in Table 4, below.

Table 4 – MSSIA Recommended Categories and Factors

Category	Factor
Category 1: Net Metered Roof, Community Solar	0.90
Category 2: Net Metered Ground, Grid Supply (subsection r)	0.85
Category 3: Net Metered Carports, Landfills & Brownfields (subsection t)	1.10

These factors correct both the over-incentivization and under-incentivization in the straw proposal’s recommended factors and, as stated previously, represent what we believe to be the minimum incentives for financeable projects.

Compliance Entities

16. Please discuss the advantages and disadvantages of the two proposed options, i.e. having the compliance entities be: 1) Third Party Suppliers and Basic Generation Service Providers, or 2) the Electric Distribution Companies.

Since MSSIA recommends the TI-4 fixed TREC scenario, we will answer the question in that context. MSSIA believes that either the TPS & BGS providers could be viable candidates for the role of compliance entities for the fixed TREC.

EDCs are perhaps the more obvious choice, since they are well-positioned to collect funds through a charge to ratepayers, and pay the TRECs to system owners. They have played similar roles before. They have the advantage of being few in number (four) and relatively transparent compared to TPS and BGS providers, making the program relatively easy to track, monitor, and control.

TPS & BGS providers, on the other hand, are the current compliance entities for SRECs, so they offer a degree of continuity and minimize change. It also would not be necessary to set up a special charge on ratepayer bills. The cost of TRECs would simply become embedded in the cost of energy. MSSIA has done some early investigation regarding whether the BPU could simply order the TPS and BGS providers to pay a specified, fixed price for TRECs. So far, indications are that BPU would have the authority to do that, and the mechanism appears to be viable.

One challenge in having TPS&BGS providers as the compliance entities would be grappling with the issues regarding ensuring market neutrality.

17. Which of the two options is preferable for the Transition Incentive?

MSSIA does not have a position yet on which is preferable for the Transition Incentive.

18. Do parties agree that a fixed price TREC lends itself to the EDCs serving as the compliance entity, while a market-based price for TRECs lends itself to the TPS/BGS Providers serving as the compliance entity?

As discussed in #16, MSSIA believes that either EDCs or TPS&BGS providers could be appropriate in the role of compliance entity.

MSSIA appreciates the opportunity to provide input on this vital matter, which will be a powerful determinant of the welfare, and even survival, of many of our member companies.

Sincerely,

A handwritten signature in black ink, appearing to read "Lyle K. Rawlings". The signature is fluid and cursive, written over a white background.

Lyle K. Rawlings, P.E.
President



**Comments of the New Jersey Solar Energy Coalition on the November 14, 2019 “Revised”
New Jersey Solar Transition Incentive Staff Straw Proposal**

For Submittal November 27, 2019

The New Jersey Solar Energy Coalition respectfully submits comments in the above referenced matter, and appreciates the opportunity to participate in in the final formulation of this important public policy. We again commend the Board staff for their hard work in developing the proposed “revised” straw proposal, and the opportunity that the industry has been provided to engage in meaningful dialogue at the many stakeholder events that were scheduled. Clearly, the financial, employment, and programmatic impacts associated with this specific policy development has been closely observed by a growing universe of stakeholders that now include 112,000 New Jersey residential and commercial solar installations, 7000 industry employees and investors who have committed over \$12 billion in helping to drive the success of New Jersey’s solar program over the past decade.

Overarching Comments: “Revised” Base Compensation Schedule and Factors

Upon our review of the revised straw proposal we are pleased to see that the Board staff has modified two of the project factors from 0.5 to 0.6, in accordance with the industry recommendations expressed at the public hearing on this matter held at the Department of Environmental Protection on October 11th. This proposed increase brings the incentive levels to \$113.40 for the years 4 through 15 when the fixed price schedule TI-3 and TI-4 of \$189.00 is multiplied by the proposed factor.

However, as we also posited in our testimony, the low “kink-year” metrics represent an additional issue that needs to be corrected in order to price the first three years evenly at the unfactored TI-ACP of \$189.00, as well. Without this additional three-year pricing modification, the threshold 15-year incentive of \$113.40 needed to continue to effectively finance these projects in New Jersey cannot be met. Inasmuch as our plain language reading of the Clean Energy Act of 2018 leads us to believe that the 9% and 7% “cap” statutory language needs to be revisited to permit leveling the incentive across all 15-years (as we have posited with Board staff at the October 11th public hearing), we have held a number of discussions with legislative

leadership, legislative committee chairs, and potential sponsors to both maintain the current caps while providing “banking” flexibility to help smooth the transition over the instant “cliff” that occurs in moving the “cap” from 9% to 7% literally overnight.

If this proposed legislative alteration can be achieved in the lame duck period, we believe that the Board’s straw proposal coupled with this smoothing of the “cap” can together place the industry back on track at a minimum cost to ratepayers. If either of these efforts fail, however, the dire predictions of job losses and significant project cancellations in the current pipeline will occur.

While there will be some industry market segments that will continue to oppose the newly proposed factors as continuing to be insufficient. NJSEC believes that the proposed factors and resulting incentive levels will be very challenging, but with creativity and belt tightening will provide us the financial platform necessary to continue to move forward.

To put these incentives into appropriate perspective, they would reduce the cost of the current program as measured by the current spot market by about 50%. It is also interesting to note that just a little more than ten years ago when the Board first launched New Jersey’s solar program the opening incentive level set at \$0.71/kWhr compared to the new transition incentive as we have proposed that will be \$0.11/kWhr, with the statutory changes.

It is also interesting to note that while nearly everyone in New Jersey would support renewable solar electric generation over any form of carbon based fuel to power our future, that we still “price” compare energy at the prevailing historically low cost of carbon based fuels, calling any cost for renewable energy in excess of that pricing a “subsidy.” Perhaps, we should frame the discussion a little differently and “price” energy at the cost of renewables, while asking the more appropriate question of why we are choosing to continue to provide “dysfunctional discounts” to carbon based fuels.

Transition Program Administration

Finally, we would like to again offer comments with respect to some very important elements involved with the administration of the proposed transition program.

- The proposed option #1 to close the market in an orderly fashion at the time the Board determines that New Jersey’s retail electricity market has attained the 5.1% milestone is clearly preferable to the imposition of a new “Transition Incentive registration program.” Installing a new registration program “on the fly” would substantially alter project economics for all projects caught in the middle of development compromising project financing. Far and away, most of the projects now under construction know well their status of commercialization at the expected time of the attainment of 5.1% and are already working toward completion on their own schedule. Any precipitous change to the currently anticipated program closure would be severely damaging to current pipeline projects creating further financial upheaval to an already stressed program.

- The mechanism for the creation of TRECs needs to be fundamentally formed around the ease of administration around the transaction. Each TREC should be earned at the full value of the TI-ACP (\$189.00) requiring the generation of (1/Factor). Therefore, a residential project having a 0.6 factor would require EIS GATS certification of the generation of 1.6667 MWhrs to earn one TI-ACP based TREC at \$189.00. This would then create a market where all TRECs would be traded and valued equally with factorization built into the product at the outset. This is the process the Massachusetts DOER and NEPOOL GIS implemented on the introduction of factors under their SREC-II program. Clearly, if the individuals administering this program are required to determine factor calculations after the issuance of the TREC, the likelihood of errors would increase exponentially. If the factor is applied at the PJM EIS GATS level the market segment and factor determinations would only need to be made once rather than each time a transaction between buyers and sellers was made.
- Perhaps most importantly, we would strongly recommend that the entire “compliance” process be administered through the “processing” infrastructure already in place and working under the current tradable SREC program. There is simply no reason to engage our state’s EDCs in the role of building from scratch a new duplicative administrative arm within the utilities and requiring the EDC’s balance sheets to borrow money at their current cost of capital to finance the program. As we have seen from past experience this cost (including EDC decoupling costs) can be as high as \$50/SREC. There is simply no way that the proposed substantially reduced TREC incentive levels could also absorb these kinds of charges and remain viable.
 - We would, therefore, recommend the following administrative scenario:
 - The Board would first set the “Transition Program Compliance Obligation at an overall level that would exceed the potential generation of TRECs for all projects eligible for admission into the transition program. This would then set for the full 15-year compliance period a market that would be perpetually short.
 - TRECs would then be traded at small discount to the ACP between generators and LSEs until all generated TRECs were sold in the market.
 - The residual compliance requirement (with no remaining TRECs generated to purchase) would then pay the ACP to the state satisfying the remaining balance of the “short market” compliance obligation.
 - The state could then use these residual funds to purchase Class I RECs in an auction or refund these unused funds to ratepayers.
 - It should be noted that this proposed process will likely create TREC discounts between generators and LSEs in the range of 2%-5% of the \$189 value further tightening project financial modeling.

We would again like to thank Board staff for the opportunity to provide comments on the “revised” straw proposal and for their hard work in fairly balancing the interests of all stakeholders in resolving very complicated public issues.

A handwritten signature in black ink that reads "Fred DeSanti". The signature is written in a cursive, slightly slanted style.

Fred DeSanti, P.E.
Executive Director
New Jersey Solar Energy Coalition

**New Jersey Solar Transition
Second Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modeling Addendum
dated November 14, 2019**

Rockland Electric Company Comments

Rockland Electric Company (RECO or the Company) submits these brief additional comments on the New Jersey Board of Public Utilities' (Board) Revised 2019/2020 Transition Incentive Staff Straw Proposal (Revised TI Straw Proposal) and Modeling Addendum dated November 14, 2019.¹ RECO appreciates the continuous efforts of Board Staff and the Board's consultants in developing, incorporating stakeholder feedback, and updating the TI Straw Proposal. This program is focused on providing an incentive for projects in the SRP pipeline at the time that the 5.1 percent milestone is achieved and will miss qualifying for the legacy solar renewable energy certificate (SREC) program.

RECO stands by its comments filed in this proceeding on September 13, 2019 and October 18, 2019 and highlights the following important points. Critical to a successful program is the cost impact to customers. This includes adhering to the Clean Energy Act's cost cap, put in place to limit the bill impacts to customers for funding the Class I Renewable Portfolio Standard program. In order to minimize the cost impact to customers for the Class I RPS program, the "total paid for electricity" used to calculate the cost cap should be valued as the cost of electricity supply plus delivery charges reflected on customers' bills. Additional surcharges, such as for Zero Emissions Certificates and Offshore wind Renewable Energy Certificates, should not be included.

The Company continues to support a competitive market for renewable energy incentives for the following reasons: (1) ease of implementation since the legacy SREC program is market based; (2) market based pricing is more transparent than a fixed price; (3) a market based program should drive competition and thereby optimize costs within the solar industry to continuously strive to provide products and services at a lower cost; and (4) a market-based TREC program will also ease the transition to the Successor SREC program, which should be market based for these same reasons. A competitive market may also support the State's Integrated Energy Plan analysis and the solar requirements contained therein by not requiring a fixed price that could increase spending that would cause an exceedance of the cost cap. Further, a market-based approach has led successfully to more than 117,000 solar installations statewide as of October 2019.² Continuing this structure in both the Transition and Successor programs may avoid the concerns about attrition from a Transition program voiced by the consultants in its latest report.

The Company also supports Compliance Entity Option 1 under which Third Party Suppliers and Basic Generation Service providers continue to be the entities obligated to procure and retire RECs, whether SRECs, TRECs, or Successor RECs. This program structure will align the supply side cost of compliance with the suppliers and, because it is in effect for the current Legacy SREC program, no additional implementation or administrative burdens will be created. Further, Staff's acknowledgement in the

¹ RECO also submitted comments to the Board's 2019/2020 Transition Incentive Staff Straw Proposal dated August 22, 2019 and Revised 2019/2020 Transition Incentive Staff Straw Proposal and Addendum dated October 3, 2019 for the Board's consideration.

² <https://www.njcleanenergy.com/renewable-energy/home/home>

Revised Straw Proposal that a market-based mechanism such as Compliance Entity Option 1 may be more suitable for the Successor program³ acknowledges the importance of this structure for a long-term program. Given that this structure is also used in the Legacy SREC program, imposing a change for a limited size program may cause unnecessary confusion and administrative inefficiencies.

Finally, the Board and its consultants should consider the impact of the recent increase in the offshore wind statewide goal to 7.5 GW, including the anticipated timing of the various projects' commercial operation dates and the customer bill impact. A market-based approach to valuing TRECs may lessen the overall costs customers pay for all of the Clean Energy Act's initiatives by allowing the flexibility to value clean energy assets' contributions to meeting the clean energy goals.

³ Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modeling Addendum – Updated (dated November 14, 2019) at p. 7.



**Comments of the Solar Energy Industries Association
Revised Transition Staff Straw Proposal and Modelling Addendum – Update
11/26/19**

The Solar Energy Industries Association (SEIA) submits the following comments on the Board of Public Utilities (Board's) Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modelling Addendum -- Update (November Straw) issued November 14, 2019. These comments supplement responses filed by SEIA on October 18, 2019. We summarize the key features of our October comments at the end of this document.

Once again, SEIA greatly appreciates the Board Staff's willingness to consider and respond to comments from stakeholders. The latest iteration of the Straw proposal is an improvement over previous drafts. With a few additional adjustments, SEIA believes a final Transition Plan will allow more projects in the pipeline to move forward and help New Jersey achieve its clean energy goals. We appreciate the iterative nature of the proceeding so far.

SEIA is the national trade association for the solar industry. We have approximately 45 member firms with an operating address in New Jersey, and many more national companies doing business in the state. SEIA member companies are engaged in all aspects of the solar market in New Jersey.

Incentive Levels Are Improved Over Previous Proposals

With the latest round of adjustments in the November Straw, SEIA believes the incentive levels are now viable for most distributed market segments and based on the values proposed, a considerable number of projects in the pipeline will move forward.

Residential Projects

The adjustment of the factor to 0.6 yielding a 15-year average of approximately \$100/MWh for residential projects should allow more projects to move ahead than under the previous proposal. As we raised in our previous comments, based on member company input, SEIA believes ensuring an approximately \$115/MWh 15-year average would be sufficient for all projects. The 0.6 factor however would support many residential projects and provide a reasonable return to companies and value to customers.

Larger than 25kW Projects

Similarly, the modeling adjustments and revised factor of 0.6 for grid supply and net metered projects larger than 25 kW would likely allow more projects to move forward

than under the previous proposal. A better classification of projects that fall into this category may help aid in developing more precise estimates of incentive values and factors needed for grid supply and commercial systems. Even assuming that many grid supply projects would land in the “preferred” category, SEIA recommends increasing this factor to an average of roughly \$122/MWh over 15-years, or roughly 0.75 under the current proposal.

Community Solar

The 0.85 factor for community solar is likely high enough to support new project development. Given that community solar projects remain new in New Jersey, SEIA believes the SREC values with the 0.85 factor provide reasonable compensation to overcome unknown costs. This factor should be maintained.

SEIA Remains Concerned About the Three Year “Kink” Period

In the November Straw, the BPU maintains transition incentive values that are lower in the first three years – during the kink year period – with higher values proposed in the later years. SEIA recommends the lower values provided in the first three years should be levelized to provide consistent value over the entire term of the 15-year incentive.

Although the kink year decrease is intended to keep the transition incentives under the cost cap, SEIA recommends that the Board makes an administrative determination to address the cap and give itself more flexibility for all its programs. Based on our reading of the Clean Energy Act, the concept of “banking” would be consistent with the statutory language because the total cost to customers over time would not exceed the total cost allowed by the statute’s cost caps.

A banked “reserve” could be calculated by the Board in percentage terms at the end of each energy year and carried over and added to cost cap calculations in later years. In other words, upon determining the difference between the cost cap and the yearly cost of funds in support of Class I, the difference could be quantified and then used to manage future compliance with the caps. After making such an administrative determination, the Board could levelize the incentive amounts in the first three-year period and improve the transition incentive design.

However, given currently introduced legislation to clarify the cost cap’s implementation, we strongly recommend the Board leaves itself flexibility in any subsequent Order creating a transition incentive to be able to respond to new legislative direction without new rulemakings and further delay.

The Importance of Reporting

Lastly, given that the BPU Staff estimates the 5.1 milestone will be reached on or about June 2020, once again we recommend that as part of its Order establishing the market closure mechanics, the Board requires *monthly* reporting of progress toward the milestone beginning in January 2020.

In other words, we encourage the Board to dispense with quarterly reporting and go straight to monthly reports. If the Board chooses to maintain quarterly reports, we recommend the Board still requires a report as soon as January 2020. These important reports will help firms make better decisions and understand whether their projects will likely be part of the Legacy SREC or TREC programs.

Brief Summary of Positions from Previous SEIA Comments

The following is brief summary of SEIA's positions on the Straw proposal:

- We support the fixed price incentive structure for projects in the pipeline with the compliance obligation placed on the electric distribution companies (EDCs);
- With respect to size of the transition incentive program, the Board should determine the size of the pipeline once the 5.1% statutory milestone is reached and set the obligation accordingly;
- Projects that have filed a complete SRP application but are not yet operational should be eligible for TRECS upon hitting the 5.1%;
- SEIA recommends the use of the 15-year term, but firms would not object to a 20-year term; and
- Lastly, SEIA agrees that the fixed price mechanism lends itself to the EDCs as the compliance entity.

Thank you for your consideration of these comments. Please contact me at 518.487.1744 or at dgahl@seia.org with any questions about these recommendations.

Sincerely yours,

/s/

David Gahl
Senior Director of State Affairs, Northeast
Solar Energy Industries Association



Comments of the Solar Energy Industries Association Revised Transition Staff Straw Proposal and Modelling Addendum – Update 11/26/19

The Solar Energy Industries Association (SEIA) submits the following comments on the Board of Public Utilities (Board's) Revised 2019/2020 Transition Incentive Staff Straw Proposal and Modelling Addendum -- Update (November Straw) issued November 14, 2019. These comments supplement responses filed by SEIA on October 18, 2019. We summarize the key features of our October comments at the end of this document.

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Although the kink year decrease is intended to keep the transition incentives under the cost cap, SEIA recommends that the Board makes an administrative determination to address the cap and give itself more flexibility for all its programs. Based on our reading of the Clean Energy Act, the concept of “banking” would be consistent with the statutory language because the total cost to customers over time would not exceed the total cost allowed by the statute’s cost caps.

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- Lastly, SEIA agrees that the fixed price mechanism lends itself to the EDCs as the compliance entity.

Thank you for your consideration of these comments. Please contact me at 518.487.1744 or at dgahl@seia.org with any questions about these recommendations.

Sincerely yours,

/s/

David Gahl
Senior Director of State Affairs, Northeast
Solar Energy Industries Association



October 16, 2019

Board of Public Utilities
44 South Clinton Avenue,
3rd Floor, Suite 314
Post Office Box 350
Trenton, New Jersey 08625-0350

Via Email: solar.transition@bpu.nj.gov

Re: Revised 2019/2020 Transition Incentive Staff Straw Proposal

Dear Board Members and Staff –

Solar Energy Systems, LLC (SES) is an Engineering, Procurement and Construction (EPC) firm specializing in commercial rooftop PV systems. Since 2009, SES has installed 53 systems totaling 27.4 MWdc of capacity in New Jersey.

SES is pleased to offer the following comment regarding the Revised 2019/2020 Transition Incentive Staff Straw Proposal (Proposal) that was recently issued by the Board:

The revised Table 2 contained on page 7 of the Proposal contains a range of proposed Compliance Factors for a range of Project Types. The table attempts to summarize Compliance Factors by groupings of various Project Types.

However, in our review, we have had some difficulty interpreting what Project Type a certain Compliance Factor may apply to. For example, does the proposed Compliance Factor of 1.0 apply to any rooftop project (including net metered) or does it only apply to rooftops that are grid-supply? If the latter, the question arises what compliance factor is proposed for > 25kw rooftop net metered. A reader may be drawn to > 25kw net metered in another column but that column is preceded by the words “Ground Mounted”.

Consequently, for the avoidance of doubt, we recommend that this table be expanded so that every possible permutation of project type regarding size (< 25kw; > 25 kw), location (ground mount, rooftop, landfill, carport etc) and kwh destination (net metered, grid supply, community solar) is clearly defined with a discrete Compliance Factor for that particular permutation.

Thank you in advance for considering our comment.

..End



Solar Renewable Energy LLC

November 22, 2019

Via email: solar.transitions@bpu.nj.gov

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
44 Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 086258-0350

Re: Solar Transition Proposal Comments

Dear Ms. Camacho-Welch:

Solar Renewable Energy, LLC ("SRE") is appreciative to provide comment and input on the BPU Staff Straw Proposal ("Proposal") on the transition incentive program.

Our position on transition plan incentives is influenced by our broad-based experience as an owner, developer and EPC over a ten-year period and by our participation in the New Jersey solar market. SRE has participated in the New Jersey solar market for years and recently completed the largest floating solar array in the United States in Sayreville, NJ. With planned projects, we expect our New Jersey activity to increase tenfold over a several year period, primarily in the floating solar arena where we execute at market leading levels. We obviously have strong active interest in these as well as our remaining and future pipeline of large ground mount and rooftop projects as well. Our and other developer projects are dependent upon a smooth orderly transition from the prior legacy program and the concurrent incentive structure for a transition program. While the BPU has repeatedly assured that this will be the case, we wish to further comment on the proposed transition program.

SRE appreciates the body of work inherently reflected in the current Proposal, and in improvements made to the stakeholder process. Regarding market structure, we believe that a fixed price, 15-year TREC relying on the EDCs as buyers is consistent with the functionality of the transition program — assuming implementation can be seamless to the closing of the legacy market. We also would support a fixed, 20-year incentive program.

However, based on the factors applied to the TREC levels, the incentive levels proposed are not enough to support ongoing investments in residential, ground-mounted commercial net metered or

www.SREnergyLLC.com

Corporate Office
4550 Lena Drive | Suite 201
Mechanicsburg, PA 17055



grid solar projects. These segments currently represent approximately 350 MW, or nearly 2/3, of the current New Jersey solar pipeline.

We anticipate the incentives proposed would force many of these NJCEP approved projects to cancel. This, in our opinion will lead to an industry contraction with loss of jobs and investor lost confidence in the State's solar market. This would be in direct contradiction to the desired and expressed statutory mandate of the Clean Energy Act for an orderly market transition.

Further comments that follow provide insight into our views on Market Structure, and the TREC incentive levels we believe are necessary follow.

Market Structure

Staff Transition Principles define the scope of the transition program to provide incentives for approved, but not completed projects at the time 5.1 percent is attained. With three to four times the capacity of projects in the current NJCEP pipeline capacity necessary to meet the 5.1 percent solar penetration goal, and the plan to launch the successor program close to the estimated time the legacy market will close, the transition program will serve a finite number of projects. Most of the projects in this program will have already been developed, contracted and approved by the NJCEP. We believe this overall context is material with important implications for the transition program design:

- 1) We agree with Staff's view that a fixed price TREC with EDCs as the buyer of TRECs is a viable structure for the transition program.

In a market supporting limited new project development, a market-based approach where fluctuating price signals guide development activity is not necessary. In the Proposal, Staff indicates there will be "administrative ease" in implementing this fixed price mechanism, which is further justification for this approach, given the limited scope of the transition program.

Our support for a fixed price mechanism in the transition program is further reinforced by Staff's statements that the transition program design will not set precedent for the successor or legacy program. We agree with Staff's comment that a market-based approach may be a viable alternative for the successor, provided that Staff and BPU adopt administrative procedures necessary to fulfill their commitment to a stable and balanced market.

We commend Staff's thinking on how to manage the RPS to support the transition program. As stated in the Proposal, a preliminary RPS would be established for the transition program to facilitate the BGS process, with a subsequent RPS adjustment based on what project capacity is installed.



Solar Renewable Energy LLC

Such active management and intervention by the BPU exemplify some of the actions associated with implementing market balancing mechanisms, which are critical for both the transition and legacy markets. Assuming that the transition program relies on a fixed price mechanism, we believe the RPS approach defined by Staff is still necessary to ensure that the EDCs procure the right quantities of TRECs, and that these amounts for the transition solar program are accurately accounted for in the overall RPS compliance process.

- 2) We disagree with the consultant's approach to modeling incentives based on the 50th percentile of survey and self-reported data on installed costs.

Modeling incentives based on the midpoint of installation costs provides insufficient incentives to adequately support projects in several major market segments. This will cause project cancellations, possible stranded assets and result in a solar industry contraction that will inhibit the aggressive clean energy goals of the state.

There are legitimate technical and economic reasons why costs will vary from project to project, and the transition program must be more flexible in accommodating these already contracted and approved projects recognizing that the economic drivers of these projects (lease rate, PPA rate, EPC cost, etc.) have already been finalized.

In the transition program, factors should be designed to provide the right incentive for each market segment, not as an instrument of policy to guide future project development and cost reductions. Policy driven factors are more appropriate for consideration in the successor program, not for projects which are already contracted and approved. Since February, the market has been operating with major uncertainties over incentive levels, and the level of retroactive changes proposed relative to current incentives levels will further destabilize confidence.

Incentive Levels

SRE believes the 15-year incentive term, lower "kink" year incentives, and TREC values for the preferred siting (1.0 factor) is workable. Provided incentive levels are sufficient, CEV would also support Staff's proposed 20-year fixed incentive. A 20-year incentive term better matches the depreciable life of solar assets. In past analysis the consulting team appropriately represented that an incentive structure with a longer tenor can be an effective strategy for compliance with the costs caps and benefiting ratepayers.

While the revised Staff Proposal offers some improvements to the original proposal, the incentives proposed for residential, large commercial and grid projects are well below levels necessary to attract and sustain investment. As previously stated, there are shortfalls in many key market segments discussed below, that could potentially strand an estimated 350 MWs of approved projects, an outcome not consistent with the state's clean energy goals.

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4550 Lena Drive | Suite 201
Mechanicsburg, PA 17055



Large Commercial (Ground-Mounted) Project Shortfall. Large commercial ground-mounted projects also need a TREC of \$125, compared to the \$70 in the proposal. Staff's proposal would restrict market participation for schools, municipalities and businesses who wish to put solar on their property but lack enough roof capacity to do so. Differentials in installation cost and expected solar output do not justify an incentive for rooftop C&I projects (\$152), which is more than double that for ground-mounted projects (\$75). Based on the current pipeline, there are 170 MWs of commercial net metered projects > 1 MW. A large percentage of these projects are likely ground mounted, and based on the current incentive proposal, would be deemed un-financeable.

Ground-Mounted Grid Project Shortfall. Ground-mounted grid projects, including Section R projects supported by the Clean Energy Act, need a TREC of \$145, as compared to the \$75 in the Proposal. To CEV's knowledge all 80 MW of these grid projects in the pipeline are ground-mounted and would be forced to cancel at the proposed incentives. These approved projects have been developed at significant cost, are likely to be under construction, most at-risk among projects in the pipeline of not being completed when the legacy market is closed, resulting dire financial consequences at the proposed transition incentives.

We believe a number of the assumptions used by the consultant need to be revisited in order to address the gaps in incentive levels:

- 1) Projects should be modeled at 26 percent ITC, not 30 percent. Residential and small commercial projects are not able to efficiently track and safe harbor costs due to their lack of economies of scale. Given the uncertainties around the transitional program and the quickly approaching December 31, 2019 deadline, larger projects have likely missed their window to safe harbor as well.
- 2) Actual historic solar production data, not PV Watts estimates, should be the basis for modeling expected solar output. As indicated in Appendix Table 3, the current assumptions modeled by the consultant overstates solar production by 10 to 15 percent on average across the market segments.
- 3) In the residential sector:

Incentives should not be reduced due to existing net metering laws. Net metering is not limited to residential projects, and community solar customers receive the same effective retail rate credits. The comprehensive discussion of net metering, value of solar and possible net metering successors, is well beyond the scope of the transition program and should not influence the proposed incentives.



The consultant's assumption that energy can be priced at a 15 percent discount to retail rate with a 2 percent escalator is not a compelling value proposition to customers. As indicated by EIA, residential rates in New Jersey have been flat for the past ten years¹, and unless the initial energy year discount is significant enough, escalators will result in the cost of solar exceeding that of conventional power. SRE believes that budget certainty with discounts in excess of 15 percent are required to sustain customer adoption and grow the solar market, and incentives should be modeled accordingly. Most importantly, these savings are going directly to customers who are ratepayers, not to investors.

In the commercial net-metered sector, the installation cost assumptions used by the consultants are about 20-30 percent below what we believe are realistic.

Concerning the grid projects:

- SRE does not agree that capacity payments should be included as a revenue source. As a result of the intermittent nature of renewables, and PJM's rules and penalties for non-performance, most solar assets no longer participate in this market. It should also be noted that PJM members are carefully monitoring new FERC regulations that could all but eliminate the participation of renewable projects.
- Any policy preferences to limit ground-mounted, greenfield grid projects should be deferred until the successor program. 100 MWs of Subsection-R grid projects were provided for in the Clean Energy Act, and the BPU ordered staff to proceed with approving these projects under conditions outlined in a March 2019 Board Order. There are 60 MWs of Subsection-R projects in the pipeline. The large projects involve long construction times and could be severely impaired if these are not completed when the legacy market closes, and the transition incentives are insufficient.
- Level of incentives in Community Solar are insufficient to support master-metered LMI customers. We also note that in community solar, the \$128 incentive supports projects with a mix of 50 percent commercial and residential LMI customers. According to estimates, these incentives would be insufficient to support master-metered projects in which solar pricing is benchmarked off lower commercial rates.

There are a number of other important, but less mission critical issues to be pointed out as well:

SRE has significant active interest in floating solar mounted installations, sited on bodies of water, which are emerging as technically and economically viable, and is being approved by New Jersey Department of Environmental Protection. As emerging projects, we recommend that these be included in the Preferred Siting category or further incentivized.



Solar Renewable Energy LLC

As a final comment, SRE continues to believe that the solar transition goals of protecting investor value, supporting long-term solar growth and complying with the cost caps are not incompatible. We appreciate the work done to date by the solar consultants, who have identified additional headroom in the caps beyond the simple 9 percent and 7 percent of retail revenue.

More work remains to be done to align the caps with the need to sustain long-term solar growth to meet the clean energy goals of the state. SRE believes there are numerous administrative procedures the BPU could employ to achieve compliance with the cost caps including prioritizing in-state resources consistent with the direction in the Energy Master Plan during the kink period, banking and borrowing cap surpluses and deficits from year to year, and crediting value from solar against costs consistent with benefits recognized in other state programs.

SRE appreciates the opportunity to provide these comments and welcomes the opportunity to discuss these comments further with Staff and stakeholders. Given the vital importance of this matter to the future of the New Jersey solar industry, we recommend that after Staff has reviewed and considered the comments that Staff responses be provided to constituents and a revised version be released for final review and comment.

Sincerely,

Douglas R. Berry
President and CEO
Solar Renewable Energy, LLC



November 27, 2019

Via email: solar.transitions@bpu.nj.gov

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, New Jersey 08625

Re: Revised 2019/2020 Transition Incentive Staff Straw Proposal

Dear Ms. Camacho-Welch:

NJR Clean Energy Ventures (“NJRCEV”) appreciates the opportunity to comment on the revised BPU Staff Straw Proposal (“Proposal”) on the transition incentive program. We recognize and appreciate the efforts by Staff and their Consultants in developing this Proposal, and for seeking further solar industry input. Our comments today are primarily focused on the specific revisions to incentives highlighted in the Proposal.

The transition program has the potential to provide important new features in New Jersey’s solar market incentives, including the fixed price option, longer term incentives and market segment fractions that better align incentives to project needs and policy objectives.

In the revised Proposal, from NJRCEV’s perspective, the TREC levels in the “preferred siting” --- i.e. those on rooftops, brownfields, and net metered carports category --- remains sufficient, as do large scale community solar sites on landfills with a 50/50 mix of commercial and residential tenants.

The proposed increase in the residential and commercial ground mount factors, from 0.5 to 0.6, improves our calculated TREC value from \$75/MWh in the prior proposal to \$92/MWh. Despite the improvement, the revised incentive is still well below the \$125/MWh that NJRCEV believes is necessary to invest in residential and commercial net metered ground mounted projects; and, it falls even shorter of the \$145/MWh needed for ground mounted grid projects.

We believe the \$92/MWh TREC level may be disruptive to the solar industry, adversely impacting market sectors that comprise about half of the current project pipeline, and would jeopardize industry growth, jobs and long-term clean energy goals. We are concerned that new project development in these sectors will slow over the coming months, and that disruptive project cancellations or renegotiations will follow for those projects that are not complete, when the legacy market closes and becomes subject to terms of the transition incentive.

The table below compares NJRCEV’s assessment of TREC needs by market segment to the levels calculated based on Staff’s proposal. We have also attached our modeling assumptions (Exhibit 1) provided in our response to the Staff straw proposal on October 18. These modeling assumptions reflect the depth and breadth of our experience investing in 275MW of New Jersey solar projects over the past 10 years, and our active consideration of new investments in the NJCEP pipeline, some of which are likely to be subject to incentives in the transition program.

Transition Incentive Needs vs. Staff Straw Proposal

Project Type	NJCEP Pipeline (MW) [a]	Levelized TREC Need (\$/MWh)	
		Market Need	Staff Proposal [b]
Residential/Small Commercial			
Residential & <100kW C&I	112	\$ 125	\$ 92
Commercial & Industrial			
100kW - 1MW [c]	173	\$ 150	\$ 154
> 1MW [d]	161	\$ 125	\$ 92
> 1MW (Carport)	n/a	\$ 170	\$ 154
Grid Connected			
Greenfield [d]	81	\$ 145	\$ 92
Brownfield (SST)	63	\$ 155	\$ 154
Rooftop	n/a	\$ 125	\$ 154

Key
Within 5%
Within 20%
Over 20%

- [a] Based on NJCEP Pipeline as of October 31, 2019
- [b] From Staff Transition Straw Proposal v3 as of November 14, 2019
- [c] NJRCEV modeled as a rooftop project
- [d] NJRCEV modeled as a ground-mounted project

We urge Staff to make the following revisions to the TREC values in the Proposal:

1. **Increase values for residential and commercial net metered ground mounts from \$92/MWh to \$125/MWh.** This increase can be accomplished by increasing the factors (from 0.6 to 0.8), through an adjustment in the base fixed rate schedule including additions to the “kink-years,” if additional cost cap headroom can be provided; or through a combination of increased factors and a fixed rate schedule.
2. **Increase value for ground mounted grid projects from \$92/MWh to \$145/MWh.** This increase could be accomplished by increasing the factors (from 0.6 to 1.0) for the non-preferred sited, ground mounted grid market segment, through an adjustment in the base fixed rate schedule including additions to the “kink-years,” if additional cost cap headroom can be provided; or through a combination of increased factors and fixed rate schedule.

All these sectors are major contributors to the State’s solar growth and jobs. They comprise about 350 MW, or half of the current project pipeline, and likely will be challenged to attract financing at the proposed TREC incentive of \$92/MWh.

Regarding the proposal to increase the incentive in the residential and commercial ground mounted net metered sectors, we believe the Consultants modeling assumptions on lease and energy rates for solar are too high, resulting in TREC values below levels necessary to support new project development.

- In the residential sector, the Consultants have assumed solar will be priced at \$0.15 per kwh rate, which does not result in a compelling energy savings proposition for customers given that the average retail electric rate in New Jersey is \$.157 per kwh according to the US Energy Information Administration (“EIA”). Based on NJRCEV’s experience as a leader in the residential market since 2010, we find that customers require discounts of at least 25 percent of retail rates to adopt solar. If the Consultant reran its model with solar leases priced at a 25 percent discount to the average EIA retail rate, the resulting TREC value should be equivalent to the \$125/MWH NJRCEV is proposing.
- In the commercial sector, the Consultants also assumed a 15 percent discount to retail energy prices. Discounts of 50-60+ percent are more the norm in this market, driven by competitive procurements held by budget constrained, cost conscious municipal, government, school district, and university customers. If the Consultant reran its model assuming solar PPA’s were priced at a 50 percent discount to average New Jersey commercial rates of about \$.11/kWh¹, the resulting TREC value should be equivalent to the \$125/MWH NJRCEV is proposing.

NJRCEV believes the incentives for ground-mounted greenfield grid projects need to be increased to \$145/MWh. Based on the pipeline, there are seven projects totaling 81MW, most of which are likely to be ground mounted projects. The Clean Energy Act provided for 100MW of these grid projects to be built, and the BPU subsequently approved five of these projects (61MW) through a solicitation process. While a number of projects may be completed before the legacy market closes, providing an adequate incentive in the transition program will continue to support these projects in the event they are completed after the legacy market closes.

We reiterate our October 18 comments requesting that the emerging floating-solar category be included among the preferred siting incentives, reflecting the benefits of these projects to support large scale development without utilizing open-land.

We also note that while proposed TREC’s were sufficient to incentivize large-scale landfill sited community solar projects with a 50/50 mix of commercial and residential accounts, the TREC values were not high enough to encourage other types of community solar configurations including smaller rooftop projects, carports or master-metered projects (commercial rate class). To encourage more diversity of project types and configurations, refinements to the TREC factors for community solar will be necessary.

While not included as a revision, the Proposal reflects options being considered on the structure of the TREC market. From its October 18 comments and testimony in the stakeholder workshops, NJRCEV reiterates its support for a fixed price structure with EDC’s as TREC buyers. Our support is based on the limited scope of the transition program, Staff’s indication that transition program will not set precedent for the successor program and on the assumption that the transition program can be implemented

¹ Cadmus Addendum, Table 17, page 40, simple average of G-1 rates by EDC, November 13, 2019

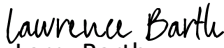
promptly when the legacy market closes. To these conditions, we also add that our analysis of TREC needs by market segment are assumed to be after any administrative fees that may be associated with this fixed price program.

We also appreciate Staff's proposed eligibility option to start accepting applications into the transition program immediately upon program approval of the Board rather than waiting until the legacy market closes. We have previously testified that we did not believe opening the program early would mitigate oversupply risks in the legacy market. However, we do believe this strategy could be made more effective if it is also coupled with a program to encourage conversions of existing approved and operating projects into the transition program. NJRCEV would welcome the opportunity to further discuss this concept with Staff and stakeholders.

NJRCEV appreciates the opportunity to provide these comments and looks forward to ongoing discussion with Staff and stakeholders.

Sincerely,

DocuSigned by:

Lawrence Barth

DocuSigned by: Larry Barth

Director, Corporate Strategy

CC: Mark Valori, Vice President, NJR Clean Energy Ventures
Chris Savastano, Managing Director – Development, NJR Clean Energy Ventures
Robert Pohlman, Chief of Staff, New Jersey Resources

Exhibit 1: Modeling Assumptions

Project Type	Project Size (kW)	Performance (kWh/kW)	Install Cost (\$/watt)	Energy Rate (\$/kWh)	Prop. Tax (\$/MW-year)	O&M (\$/kW)	Rental PMT (\$/MW-year)	CustMgmt (\$/kWh)	Insurance (%-EPC)	ITC-%	
Residential/Small Commercial											
Residential & < 100kW C&I	10	1,230	\$2.95	\$0.100	-	-	-	-	-	26%	
Commercial & Industrial											
100kW - 1MW [a]	400	1,260	\$2.85	\$0.065	\$7,000	\$14.25	-	-	0.15%		
> 1MW [b]	2,500	1,290	\$2.40	\$0.065	\$7,000	\$14.25	\$10,000				
> 1MW (Carport)	1,000	1,230	\$3.35	\$0.085	\$3,500	\$16.00	-				
Grid Connected											
Greenfield [b]	10,000	1,290	\$1.95	\$0.035	\$7,000	\$11.60	\$30,000	-	0.15%		
Brownfield (SST)	10,000		\$2.10		\$7,000	\$11.60	\$30,000				
Rooftop	5,000		\$2.05		-	\$9.60	\$15,000				
Community											
Ground-Mount (Landfill)	5,000	1,290	\$2.40	Full MM: \$0.054 50/50: \$0.098	\$7,000	\$9.60	\$6,250	\$0.025	0.15%		
Rooftop (Multi-Family)	400	1,260	\$3.15								
Carport	1,000	1,230	\$3.65								

[a] Modeled as a rooftop project

[b] Modeled as a ground-mounted project



To whom it may concern,

Thank you for taking the time to allow us to express our concerns about the transition program.

New Jersey has an extremely high goal of using 100% renewables by 2050. In order for this to be successful, the transition program NEEDS to keep the homeowners incentivized to go solar!

Also, the company I work for, along with most solar companies in the state, depend on residential solar sales to stay in business. If customers or financiers do not see the benefit of going solar this will cause myself along with hundreds of others to lose their jobs. We are seeking the TRECS to be at least \$130. New Jersey has been a great market for solar, and that is because the state incentives have been done right for all of these years.

I please urge you to think about the larger picture: help keep the smaller businesses open as we help homeowners save money and the environment for our future generations! Thank you for your time and consideration,

Theresa Hubert

Office Administrator



Kyle Wallace

Manager, Public Policy

Email: kyle.wallace@vivintsolar.com

Attn: Aida Camacho-Welch, Board Secretary
New Jersey Board of Public Utilities
PO Box 350, Trenton, NJ 08625

Vivint Solar's Comments on the 2019/2020 Transition Incentive Staff Straw Proposal – Nov. 14 Update

Vivint Solar appreciates the opportunity to submit additional comments on the New Jersey Solar Transition Incentive Staff Straw Proposal. We believe that the iterative process has been extremely helpful in identifying key issues with the original modeling and help bridge the gap on the key assumptions that underpin the proposed TREC values. The information and analysis that has been done during the work on the transition program will be relevant to the structure and value of a successor program incentive, making these additional opportunities for review even more valuable.

While we continue to have concerns about portions of the methodology used, the latest proposal is much closer to what we feel is the proper value for the <25 kW market segment to allow most projects to remain economically viable.

Retail Rate Assumptions

We continue to believe that the use of PSE&G's net metering credit value for the residential projects remains the biggest issue with the residential TREC value. While we stand behind our prior comments on the matter, we would like to put forward two alternative approaches other than just using the JCP&L residential rate.

Alternative #1: Use of Actual PSEG Volumetric Rate

Cadmus provided a table showing the residential rates for each of the four EDCs in New Jersey. For PSEG the RS rate that has been used in the analysis is 17.55 cents per kilowatt-hour. This figure is higher than what we have been able to calculate for PSE&G's volumetric rate by roughly \$.01/kWh.

We base this finding on an analysis of actual customer utility bills from over the last year and also through the use of [Genability's](#) utility rate calculation for PSE&G. Genability is a premium utility tariff database and calculator for virtually all utilities across the United States. Genability returns a **16.7 cents per kilowatt-hour average volumetric rate** for the time period between December 1, 2018 to December 1, 2019. When we add in the fixed charge value (\$4.95 per month) then the total volumetric rate would increase to 17.4 cents per kilowatt-hour, which is closer to the consultant's figure. The screenshot of the Genability calculation is included as Exhibit A with these comments.

It's a minor methodological choice but it would make a difference in assumed project revenues and be more accurate. It seems that obtaining the actual average volumetric rate for R-1 customers over the last year (or whatever time frame is deemed appropriate) from PSE&G would not be that difficult and should be used to ensure accuracy.

Alternative #2: Average of Cadmus PSE&G, JCP&L, and ACE Utility Rates

A second alternative approach would be to use the rates provided by Cadmus for each of the three main EDCs in New Jersey rather than using just PSE&G or JCP&L. The rationale for this approach is based on the EIA net



metering data showing that each of these utilities have pretty similar market shares for the residential segment. Under this approach, the value would be **16.97 cents per kilowatt-hour**. PSE&G represents a *higher than average* net metering value.

The initial reasoning for selecting PSE&G was specifically the size of the EDC and for having the lowest net metering credit value. For the residential market, JCP&L has the most MW installed in New Jersey and it has the lowest NEM value. *Neither* reason for originally choosing PSE&G is true with regards to the residential market segment.

PSE&G does indeed have the most MW of solar in New Jersey when including all market segments per the Energy Information Administration's ("EIA") "Net Metering" Report¹ as of August 2019 with 835 MW compared to JCP&L's 545 MW. However, this generalization obscures the fact that JCP&L actually has *more* residential solar installed than PSE&G. The chart below is from the Net Metering report showing the AC capacity of residential installations by utility.

Year	Month	State	Utility Number	Utility Name	Type	Residential (MW)
2019	8	NJ	963	Atlantic City Electric Co	AC	257.457
2019	8	NJ	9726	Jersey Central Power & Lt Co	AC	265.522
2019	8	NJ	15477	Public Service Elec & Gas Co	AC	256.390
2019	8	NJ	16213	Rockland Electric Co	AC	5.040

PSE&G is actually the third largest residential solar market in New Jersey, though the interconnection issues in Atlantic City will likely allow PSE&G to surpass them soon.

Cadmus stated in the most recent revised report:

PSEG has the lowest net metering rates of the four NJ EDCs for its most common small commercial and industrial ("C&I") rate class...PSEG also has relatively average modeled retail/net metering credit rates for its most common residential rate class ("R-1").

This statement shows why the modeled outcomes are significantly different for C&I net metered projects and residential projects – they are using the lowest NEM value for commercial and an "average" NEM value for residential. This will obviously lead to commercial systems having a much better TREC value while residential projects will have a lower TREC value. The point of a consistent methodology is to make sure that with both market segments the NEM proxy value used is either lowest or average for both – not one segment using the lowest and the other using an average. We continue to believe that this unequal treatment between market segments is inappropriate.

Reporting

The importance of regular reporting on the state of the legacy SREC market cannot be understated. We strongly encourage the Board to provide monthly reporting starting in January 2020 to ensure that there is visibility into when the 5.1% is likely to be reached and what incentive value a project can likely expect. Residential developers will need as much accurate information as possible to inform marketing, project economics, pricing, and to make any associated operational changes necessary for projects qualifying for TRECs instead of the legacy SREC. We would also strongly encourage the board to make as few changes to the registration process for TREC projects as possible to make the transition as smooth as possible.

¹ Based on the totals for the August 2019 update found at: <https://www.eia.gov/electricity/data/eia861m/>



Conclusion

We appreciate the additional opportunity to comment on a staff proposal and we do appreciate the report Cadmus has provided with additional information and discussion of methodological choices. While we may not agree on all of the inputs and assumptions, having the opportunity to understand the analysis and choices behind the staff's proposal has been extremely helpful. We look forward to the final transition program proposal from staff, and we look forward to working on successor program over the coming months.

Sincerely,

A handwritten signature in black ink that reads "Kyle Wallace". The signature is written in a cursive, flowing style.

Kyle Wallace
Manager, Public Policy
kyle.wallace@vivintsolar.com

Effective Date 10/01/2019

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Calculator

CALCULATION RANGE
12/01/2018 - 12/01/2019 (365 Days)

DETAIL LEVEL
Rate

GROUP BY
Effective Dates

Reset

Calculate

This is a Billing Period
[Set a Tariff Effective Date](#)

- Usage
- Rate Criteria 0/0
- Taxes
- Contracted Rates

- Use Typical Baseline
- Enter Bill Data
- Enter Meter Data

BUILDING TYPE
Residential

FACTOR
%

Fixed			\$59.40
Consumption	7270.29 kWh	\$0.167 / kWh	\$1211.52
Total			\$1270.92
Contracted		\$0.125 / kWh	\$906.62

All rate amounts in USD