State of New Jersey

DEPARTMENT OF AGRICULTURE
HEALTH / AGRICULTURE BUILDING
PO BOX 330
TRENTON NJ 08625-0330

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DOUGLAS H. FISHER
Secretary

December 15, 2017

Richard Mroz, President
New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, New Jersey 08625

Dear President Mroz:

Re: 2017 Solar Proceeding

Thank you for the opportunity to comment on the land use implications of the Board of Public Utilities' review of the current state and future of the solar market in New Jersey.

New Jersey's Energy Master Plan states that "the policy of encouraging the development of renewable resources should not impact the preservation of open space and farmland." The Solar Act (P.L. 2012, c. 24) and the BPU's implementing regulations – after providing limited windows for certain utility-scale solar projects using SRECs on farmland – ultimately closed those opportunities for such projects to ensure that the State's laudable efforts to promote solar energy do not also promote continued loss of our productive farmland.

Additionally, P.L.2009, c.213 approved the implementation of solar, wind and biomass energy systems on preserved farms and non-preserved farms, provided that they were within certain limits and attained certain approvals, in order to encourage the use of alternative energy sources, as opposed to fossil fuels, to power farms.

As the Board of Public Utilities contemplates any changes to New Jersey's solar policy and incentives, the New Jersey Department of Agriculture encourages you to consider the current established policy of discouraging the siting of large-scale solar energy systems on productive farmland where size, soil quality, location and other characteristics make the land a highly important agricultural resource. Supporting renewable energy generation and retaining and preserving farmland needed for our agricultural industry are both worthy State policy goals.

Proceeding Question V.(iii) asks whether "compliance with industry best practices such as those specified in rules promulgated by the State Agriculture Development Committee" should be a condition of SREC eligibility for ground-mounted solar facilities of a certain size.

The State Agriculture Development Committee has adopted an agricultural management practice (AMP) for farmers seeking Right to Farm protection for solar energy generation on commercial farms and separate rules for solar energy generation on preserved farms. Those rules, however, are limited to solar facilities that provide power to the farm and generate no more than 2MW.

Thank you again for your consideration.

Sincerely,

Douglas H. Fisher

State of New Jersey
DIVISION OF RATE COUNSEL
140 EAST FRONT STREET, 4TH FL
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CHRIS CHRISTIE
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KIM GUADAGNO
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STEFANIE A. BRAND
Director

December 15, 2017

By Hand Delivery and Electronic Mail
Honorable Irene Kim Asbury, Secretary
NJ Board of Public Utilities
44 South Clinton Avenue, 9th Floor
P.O. Box 350
Trenton, New Jersey 08625-0350

Re: I/M/O the Board's Establishing a Generic Proceeding to Review the State of the Solar Market and I/M/O the Implementation of L. 2012, c. 24, the Solar Act of 2012, BPU Docket No. QX17090949

I/M/O I/M/O the Implementation of L. 2012, c. 24, the Solar Act of 2012, N.J.S.A. 48:3-87(q) (r) and (s) – Proceedings to Establish the Processes for Designating Certain Grid-Supply Projects as Connected to the Distribution System, BPU Docket No. EO12090832V

I/M/O the Implementation of N.J.S.A. 48:3-87(r), Designating Grid-Supply Projects and Connected to the Distribution System – Order Implementing Certain Provisions of N.J.A.C. 14:8-2.4(g) for Energy Year 2018, BPU Docket No. QO16020130

Dear Secretary Asbury:

Please accept this original and ten copies of Comments submitted on behalf of the New Jersey Division of Rate Counsel ("Rate Counsel") in connection with the above-captioned matter. We are enclosing one additional copy of the comments. Please stamp and date the extra copy as "filed" and return it in our self-addressed stamped envelope.

Thank you for your consideration and assistance.

Respectfully submitted,

STEFANIE A. BRAND
Director, Division of Rate Counsel

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STATE OF NEW JERSEY

BEFORE THE BOARD OF PUBLIC UTILITIES

In the Matter of the Board's Establishing a Generic Proceeding to Review the State of the Solar Market In the Matter of the Implementation of L. 2012, C. 24, The Solar Act of 2012	BPU Docket No. QX17090949
In the Matter of the Implementation of L. 2012, C. 24, the Solar Act of 2012, N.J.S.A. 48:3-87(Q)(R) and (S) – Proceedings to Establish the Processes for Designating Certain Grid-Supply Projects as Connected to the Distribution System; and	BPU Docket Number EO12090832V
In the Matter of the Implementation of N.J.S.A. 48:3-87(R), Designating Grid-Supply Projects as Connected to the Distribution System – Order Implementing Certain Provisions of N.J.A.C. 14:8-2.4(G) For Energy Year 2018	BPU Docket Number QO16020130

RESPONSES OF THE NEW JERSEY DIVISON OF RATE COUNSEL TO STAFF'S QUESTIONS FOR STAKEHOLDERS IN THE GENERIC SOLAR PROCEEDING

December 15, 2017

Introduction

On September 22, 2017 the Board of Public Utilities ("BPU" or "Board") issued an order directing BPU Staff ("Staff") to convene a generic proceeding (the "Solar Generic Proceeding") to review the state of the solar market. The Board also directed Staff to develop a list of topic areas and questions upon which stakeholders are to provide oral and written comments. On October 25, 2017, Staff circulated a draft of the questions to be to be considered in the Solar Generic Proceeding. Stakeholders provided input on the draft questions with the purpose of developing and refining a final set of questions. Staff released these final questions on November 30, 2017 with a request for responses by December 15, 2017.

Rate Counsel appreciates the opportunity to provide comments and feedback in the form of responses to Staff's final questions. Rate Counsel also requests that the Board consider the following general response in addition to the following individual responses provided to the specific questions prepared by Staff.

Rate Counsel has been supportive of the State's Renewable Portfolio Standard ("RPS") since its 1999 adoption. While Rate Counsel did raise questions about the cost-effectiveness and rate impacts of the solar set aside that was established in 2004, we have worked hard with the Board, the Office of Clean Energy ("OCE") and other stakeholders in creating solar programs and developing an overall solar market design that will help meet the goals of the solar set-aside while having minimal negative impact on ratepayers. Over the past 17 years, the solar industry in New Jersey has grown from a handful of highly-subsidized installations to a thriving, robust and diverse industry that far exceeds what any market participants anticipated back in 2004.

New Jersey's solar RPS has been modified several times since its 2004 inception. In 2006, the Board amended the RPS to set steadily increasing requirements for renewable energy through Reporting Year 2021. In 2007, an eight-year rolling SACP schedule was implemented to ensure regulatory certainty and a degree of "securitization" for solar financing. And again, in 2012, the solar RPS goals were increased and the schedule extended to 2028. With each and every one of these changes, the financial and regulatory burdens of program changes and expansions have fallen exclusively on ratepayers.

Rate Counsel is also supportive of policy efforts to move the solar industry to a market-driven environment with limited ratepayer financial support. The increasing emphasis on ratepayer impacts was reinforced by the Board in the 2006-2007 "Solar Transition" proceeding,

where it noted that "minimizing ratepayer impact" and "minimizing transaction costs" would be two of its primary criteria for evaluating new solar market model modifications and program designs. The 2011 Energy Master Plan ("EMP") noted the need for a "sensible balance" with "economic and political realities" of solar market development when it called for more accountability and more market-oriented approaches to financing New Jersey solar developments. One year later, the Solar Act of 2012 codified this policy direction by directing the Board to place greater reliance on competitive markets, with the explicit goal of "encouraging and ensuring the emergence of new entrants that can foster innovations and price competition." The Board's order implementing various aspects of this new legislation underscores the increasing importance of moving New Jersey's solar market to one that is more "competitive."

Much of the success of New Jersey's solar energy development can be attributed to the significant financial support provided by New Jersey ratepayers. Time and again, ratepayers have been called upon to provide a financial backstop, or "insurance" for solar programs. From the early years of an over-subscribed rebate program and $600 SREC prices to programmatic financial support (like utility solar loan programs, utility-owned installations on utility poles, warehouses, brownfields, landfills, as well as longer term solar "contracting" programs) ratepayer contributions have added up. All told, Rate Counsel estimates that through 2017 ratepayers have provided at least as much as $3.2 billion in solar financial support that includes:

- Over $2.3 billion (in 2017 dollars) in SRECs that have been included in ratepayers' basic electricity service rates;
- Over $370 million (in 2017 dollars) in estimated societal benefit charges ("SBC") that supported the Office of Clean Energy's ("OCE") solar installation rebate program;
- An estimated $126 million (in 2017 dollars) in PSE&G's solar loan programs;
- An estimated $220 million (in 2017 dollars) in "PSE&G's Solar 4 All" and "Solar 4 All Extension" programs; and
- An estimated $200 million (in 2017 dollars) in the long-term solar energy contracting programs for ACE, JCP&L and RECO.

The above amounts do not include the distribution charges and surcharges that are avoided by net metering customers as a result of "full retail" net metering credits.

The time has come to phase-out these significant levels of ratepayer financial support. The State's solar policy needs to move in a direction where the financial training wheels for solar are removed and the industry can progress on its own, independent of subsidies. The large number of solar installations, variety of solar installers, the falling cost of solar installations, and the continual over-supply of SRECs should be evidence enough that this market has matured and is robust enough to continue to succeed without significant ratepayer subsidization.

Even with these changes, amendments and assurances, New Jersey solar market participants have put forth the need to alter the solar RPS time and time again, for reasons ranging from "solar price volatility" and "market uncertainty," and ironically "regulatory uncertainty" which was ultimately the product of the industry's own proposals to change rules, programs and market designs year-in and year-out both at the legislature and before the Board. In each instance, ratepayers have backed up these regulatory changes and reforms and absorbed the brunt of the costs and burdens resulting from these industry-requested changes. It is time for ratepayers to start receiving the benefits of their 17-year support for solar energy in the form of lower solar energy costs, and, more importantly, reduced solar energy subsidies.

Current policy allows for SREC prices of over $200 which represent a windfall for solar developers, and a price cap (or SACP) of $308 which only ensures excessive, above-market returns for the solar industry at ratepayers' expense. Rate Counsel recommends that the Board continue with its currently established commitments and policies for solar energy, but refrain from adopting any new policies, initiatives or levels of financial support, and work towards developing a roadmap whereby current ratepayer subsidies for solar energy are rolled back and ultimately eliminated.

I. **Policy Goals and Objectives:**

i. **The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):**

- **Sustained Orderly Market Development**
- **Minimize Ratepayer Impact**
- **Minimize Transaction Costs**
- **Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security.**

Are these goals still relevant? Please explain why or why not.

Response:

Yes, but the Board has historically focused more heavily on market development and environmental goals associated with solar development. The time has come to start weighting policy priorities in the direction of reducing ratepayer impacts. As Rate Counsel outlined in its introductory comments, ratepayers have already spent $3.2 billion in solar financial support and are committed to support New Jersey's solar installations for the foreseeable future. Thus, minimizing ratepayer impact should be the Board's primary focus. The best method by which the Board could improve ratepayer rate impacts is through the development of a clear and well-defined glide path that reduces solar financial support in an expedited fashion over the next several years.

ii. **The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding to Review The State Of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?**

Response:

The focus of the State's solar policy should be one that reduces ratepayer subsidies for solar energy primarily through the aggressive reduction of the SACP. Rate Counsel recommends that the Board phase out the SACP. Current SREC prices of over $200 are a windfall for solar developers and a SACP of $308 only ensures an even greater excessive return. Rate Counsel estimates that a typical residential solar system with an installed cost of $3.25 per watt, should only need an SREC of $115 in order to receive a 12 percent internal rate of return ("IRR").[1] Likewise a commercial solar installation, with an installed cost of $2.25, should only need an SREC of $70 in order to receive a 12 percent IRR. Rate Counsel estimates that current SREC prices are almost double what is needed for a residential solar installation and triple that needed for a commercial solar installation. Current SACP prices are even further above the IRRs needed to stimulate residential and commercial installations, yielding a 24 percent return for residential projects and a 33 percent return for commercial projects.[2]

Table 1 below provides an outline of the remaining solar liability ratepayers bear under the current solar RPS and SACP schedule. The first set of columns show that with the currently established SACP prices, ratepayers' solar liability totals $4.8 billion between EY 2018 and EY2028. The second set of columns presents a phase-out of the SACP in a linear fashion, reducing the SACP value to zero by EY2028. This phase-out would reduce ratepayer exposure by almost $1.8 billion over the next decade, a difference of almost 40 percent. The SACP would still be above the estimated price currently needed for residential installations through EY2024, meaning solar installers would continue to receive prices above what is necessary to stimulate investment.[3] Ratepayers should not continue to fund technologies that are cost-effective and markets that are self-sustaining.

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[1] The assumed residential and commercial IRR used in this example is the same target IRR utilized by the OCE and Summit Blue for market design purposes in the 2006-2007 Generic Solar Proceeding.
[2] This does not include potential net metering credits.
[3] This assumes installation costs remain constant, thus any likely further reduction in installation prices would reduce only serve to raise a project's IRR.

Table 1. Ratepayer Exposure for New Jersey's Solar RPS

Energy Year	Solar RPS (Current)				Solar RPS (with phased-out SACP)			
	RPS (MWh)	SACP ($/MWh)	Ratepayer Exposure (million $)	Cumulative Ratepayer Exposure (NPV $)	RPS (MWh)	SACP ($/MWh)	Ratepayer Exposure (million $)	Cumulative Ratepayer Exposure (NPV $)
2018	2,401,023	308	739.5	672.3	2,401,023	308	739.5	672.3
2019	2,468,551	300	740.6	1,284.3	2,468,551	277	684.3	1,237.8
2020	2,536,080	293	743.1	1,842.6	2,536,080	246	624.9	1,707.3
2021	2,603,609	286	744.6	2,351.2	2,603,609	216	561.3	2,090.7
2022	2,671,138	279	745.2	2,813.9	2,671,138	185	493.6	2,397.2
2023	2,738,666	272	744.9	3,234.4	2,738,666	154	421.8	2,635.3
2024	2,806,195	266	746.4	3,617.5	2,806,195	123	345.7	2,812.7
2025	2,873,724	260	747.2	3,966.0	2,873,724	92	265.5	2,936.6
2026	2,941,253	253	744.1	4,281.6	2,941,253	62	181.2	3,013.4
2027	3,008,781	250	752.2	4,571.6	3,008,781	31	92.7	3,049.1
2028	3,076,310	239	735.2	4,829.3	3,076,310	-	-	3,049.1
			2018-2028:	$ 4,829.3			2018-2028:	$ 3,049.1
							Difference from Current Solar RPS (2018-2028):	$ (1,780.2)

iii. What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?

Response:

Since its inception in 1999, the New Jersey RPS, and its corresponding solar-set aside, has been one of the most aggressive in the U.S. The RPS was established to drive the market deployment of new clean energy technologies with the intent that expansion of renewable energy generation would provide significant economic development and environmental benefits, thereby advancing New Jersey's clean energy objectives and greenhouse reduction goals.

The solar RPS has been instrumental in achieving the State's renewable energy and solar development goals. In general, the RPS creates market demand that allows renewable energy technologies to achieve economies of scale in manufacturing and installation so that these technologies can compete better with conventional electric generation sources. As the solar market has matured, the volume of solar modules sold has increased exponentially and costs have fallen dramatically. At the end of October 2017, there were over 96,000 solar projects installed in New Jersey with a total capacity of 2,720 MW, or 2.7 GW. This is an avoidance of almost 10 million metric tons of carbon emissions, on a cumulative basis since the solar set-asides inception. In addition, the U.S. Department of Energy reports that the average price of utility-scale solar has fallen below $1 per watt, and below $0.06 per kWh – a goal that was intended to be reached by 2020.[4] Researchers with the National Renewable Energy Laboratory ("NREL") have stated that "[t]he rapid system capital cost decline of solar PV systems, driven by lower module prices and higher market competition this year, demonstrates the continuing economic competitiveness of solar PV in today's energy investment portfolio,"[5]

Lastly, Rate Counsel agrees that, at least in the past, having a solar set-aside as part of the overall New Jersey RPS, has been important in defining and creating a regulatory framework for New Jersey's solar energy goals. The solar set-aside shielded solar energy from other lower-cost renewable energy resources and led to the creation of a solar market design that has more than adequately supported solar energy development for a number of years. However, Rate Counsel

[4] Greentech Media. Available at: https://www.greentechmedia.com/articles/read/doe-officially-hits-sunshot-1-per-watt-goal-for-utility-scale-solar#gs.XI=iZTk

[5] NREL, Availale at: https://www.nrel.gov/news/press/2017/nrel-report-utility-scale-solar-pv-system-cost-fell-last-year.html.

encourages the Board to begin the transition away from these types of set-asides as solar, and renewable energy in general, becomes competitive with grid-supplied electricity. Over time, both solar and all renewables need to stand on their own and bear both risks and opportunities afforded in competitive energy commodity markets.

iv. **Are other goals more appropriate? Have low and moderate income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?**

Response:

Rate Counsel supports ratepayer protections, particularly those that shield vulnerable portions of our society (lower income, fixed income households) from predatory practices of what is likely a limited number of participants in the solar market. However, lower income and fixed income households would likely be best served not through new solar energy programs, but rather a direct reduction in their electricity bills. Solar energy costs are passed on to ratepayers through their electricity bills and those bills, adjusting for fuel cost changes, have been increasing every year. Figure 1 estimates the historic trends in New Jersey's non-fuel related costs (in average revenue terms)[6] including solar energy costs which are also passed along to New Jersey ratepayers in two ways: first, SREC costs are passed through to customers in their generation service costs; and second, EDC program-related costs (such as PSE&G's Solar Loan Programs, or Solar 4 All and its various extensions) are recovered through a series of cost recovery mechanisms often referred to as "clauses" or "trackers." The estimated series provided in Figure 1 includes both of these costs (but excludes any other commodity or fuel-related expenses) and the trends clearly show that New Jersey non-fuel utility costs and solar energy costs have been steadily increasing since 2008, at an average annual rate of six percent, far faster

[6] The data in Figure 1 represents the rates associated with the entire distribution level cost of service used for retail ratemaking. The state-level data reported by the Energy Information Administration includes the "all-in" costs of providing electric service, including clause and tracker-related costs, as well as generation and transmission related costs. The data used in this figure backs out all generation and transmission-related costs to arrive at a "non-fuel" distribution level cost of providing electricity. These distribution level "non-fuel" related costs are then divided by retail sales volumes (kWhs) to put them on an "average" or "per kWh" basis.

than the average annual rate of price inflation in the U.S. economy, over a comparable period of time, as measured by the consumer price index (or CPI).

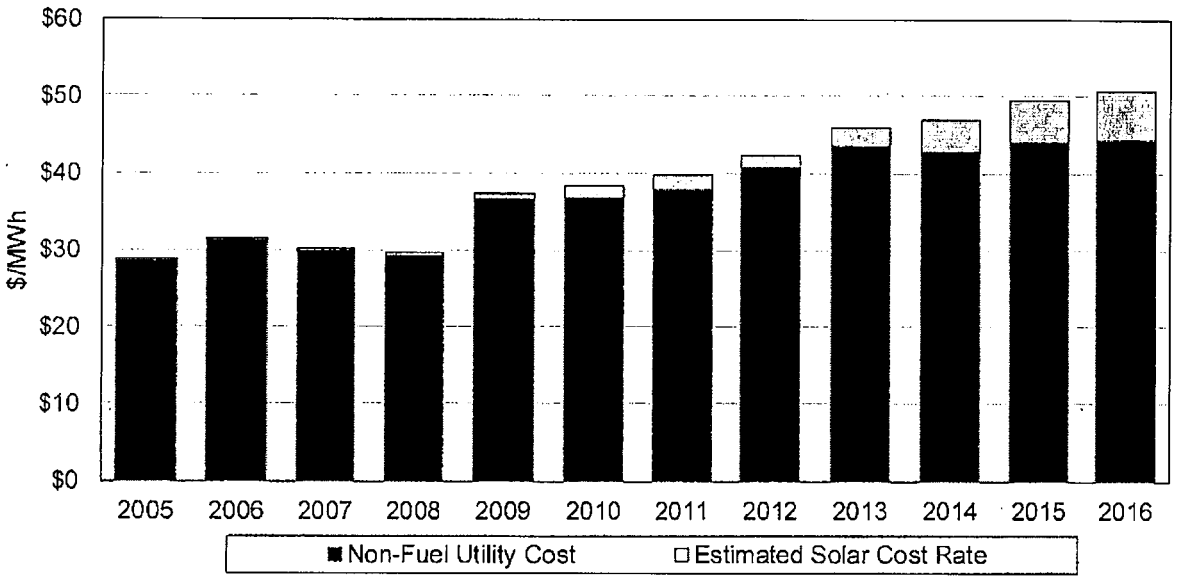

Figure 1. Estimated New Jersey EDC non-fuel utility and solar energy costs ($/MWh)
Source: FERC Form 1.

The increases in non-fuel utility and solar-related costs are even more problematic for lower income households. Figure 2 examines average, residential electricity expenses (including base charges and solar costs) as well as how those expenses have changed over time as a share of household income for both median and low-income households. Base electricity expenditures, including solar SREC costs, have been increasing dramatically as a share of income for lower-income households; to a level that, by 2016, has reached almost one percent of total lower-income household income. The annual average percent increase for these households is more dramatic increasing at an average rate of eight percent per year.

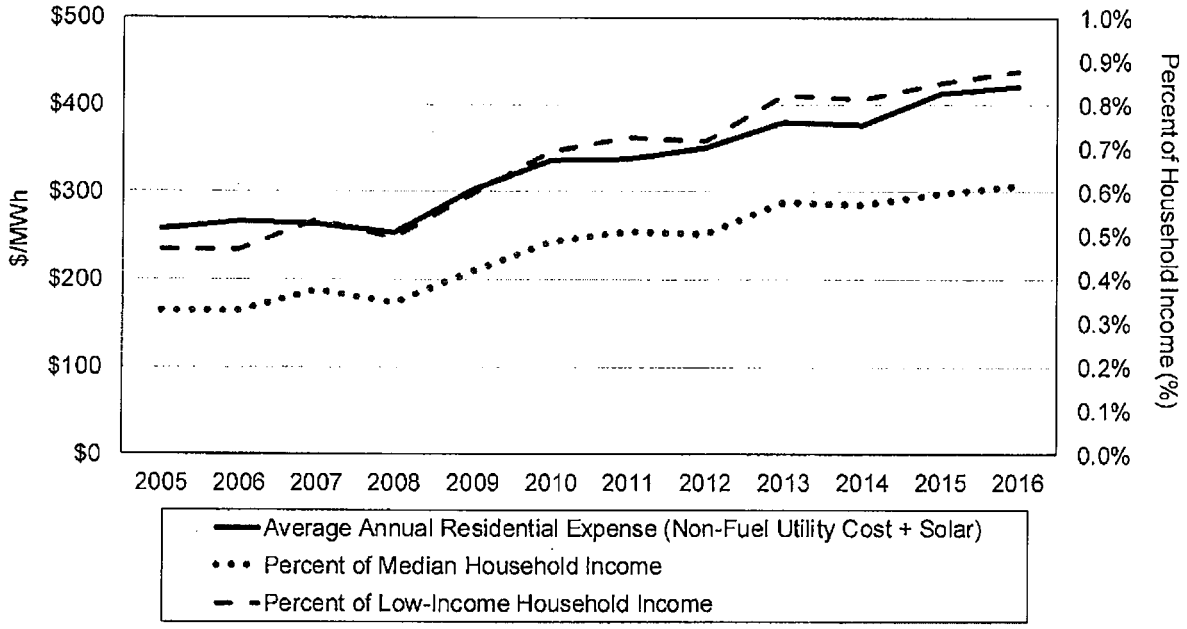

Figure 2. Estimated New Jersey EDC non-fuel utility and solar costs on a dollar ($/MWh) and share of household income basis (%)
Source: FERC Form 1 and U.S. Census.

Lastly, with regard to energy storage, Rate Counsel sees this as an issue that should be treated separately and differently from solar energy or other renewable energy policy issues. The Board should focus on reducing ratepayer financial support for solar energy, and ultimately all renewable energy development, and consider the role for energy storage, and any potential ratepayer financial support needed for these technologies, on a separate basis.

II. Solar Economics and Incentives:

i. **Are the current State/BPU policies sufficient to meet the State's solar goals. These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?**

Response:

In terms of meeting the State's solar RPS goals, current BPU policies are sufficient. As outlined in Rate Counsel's introductory comments, solar installations in New Jersey have grown exponentially and currently total 2.7 GW, or 13 percent of the State's electric generating capacity. Rate Counsel's primary recommendation is for the Board to continue with its currently established commitments and policies for solar energy with the goal of meeting the currently established solar RPS targets through EY 2028 and transitioning the solar market to one that is self-sustaining.

A recent OCE analysis presented in its October 27, 2017 webinar (Figure 3) shows that the projected number of SRECs available through EY 2027 far exceed the obligation for solar RPS compliance. The OCE stated that "under current requirements, the total SRECs available for compliance in the baseline is expected to exceed the solar obligation through EY2027."

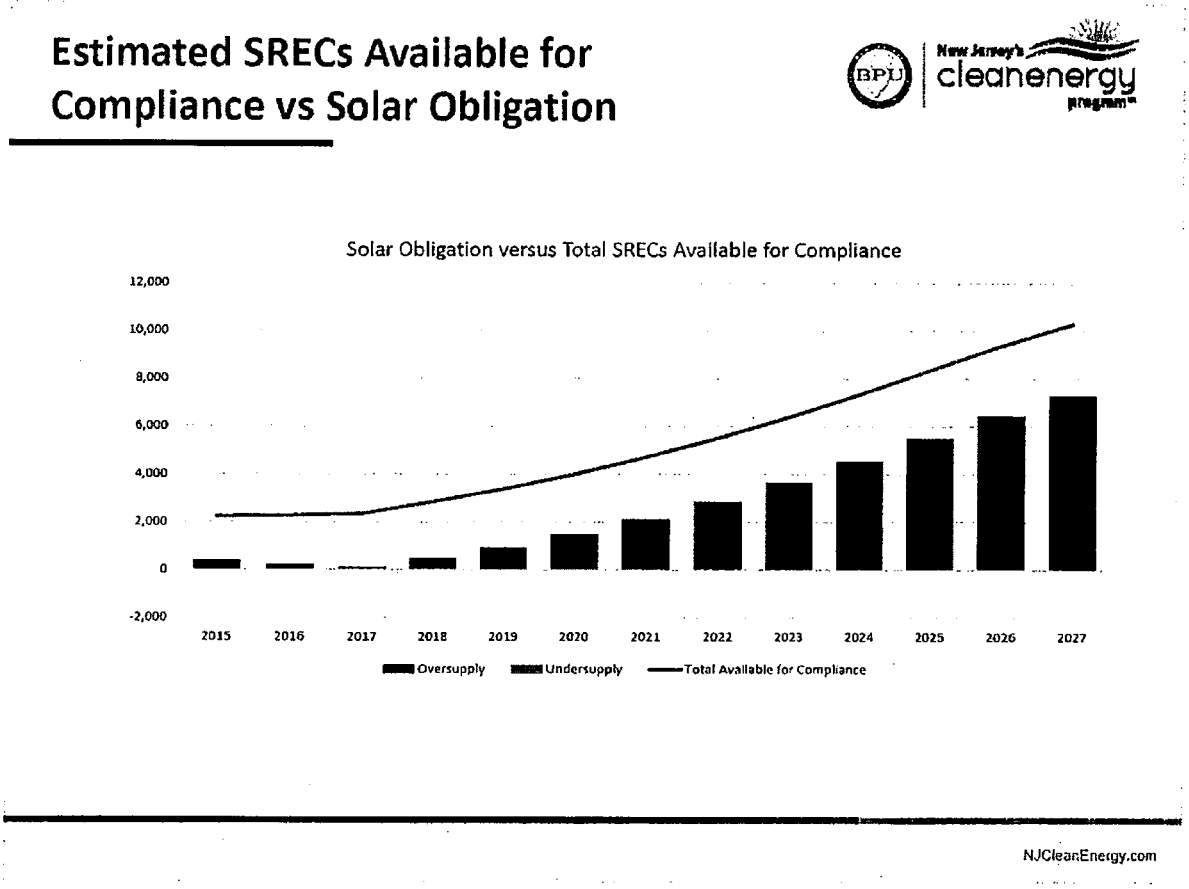

Figure 3. OCE analysis, solar capacity vs solar obligation
Source: TRC Solar Analysis, available at: http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-proceedings.

Should the Board choose to pursue new policies or development goals, it should only do so after thorough investigation of any proposed policy change. This would include a commissioned study to consider the economic and ratepayer impact of a policy change and modeled with financial targets and metrics that have been fully evaluated in contemporaneous data and research.

ii. If changes to the existing framework of incentives are recommended, please estimate the impact on NJ solar market economics and the cost and benefits to ratepayers.

Response:

Rate Counsel recommends that the focus of the State's solar policy should be one that reduces ratepayer subsidies for solar energy primarily through the aggressive reduction of the SACP. Rate Counsel recommends that the Board phase out the SACP in a linear fashion, reducing the value to zero by EY2028. This policy will gradually reduce ratepayer financial burdens, but will do so in a fashion that continues to support continued solar installations since (a) solar energy development costs continue, and are anticipated to continue, falling between now and 2028 and (b) most forms of solar energy are likely to be competitive and reach grid parity well before 2028.

Table 2 presents Rate Counsel's recommended phase-out of the SACP and the estimated impact on residential and commercial solar installations. The first two columns show the currently established SACP and Rate Counsel's recommended phase-out of the SACP. The third column is an implied SREC price, assuming that SRECs remain at a level that is 75 percent of the SACP. The last two columns calculate an implied rate of return, showing return a project would realize given the implied SREC price. For example, in 2020, if the SACP were reduced to $246 the implied SREC price would be $185. This would result in a project return of 18.1 percent for residential projects and 24.5 percent for commercial projects. Both of these returns are well above the target IRR of 12 percent that has been used to evaluate solar projects and programs. Residential projects do not fall below the 12 percent threshold until 2026, and commercial projects remain above 12 percent until 2028.

Table 2. Ratepayer exposure for New Jersey's solar RPS

Energy Year	Current SACP ($/MWh)	Recommended Phase-Out SACP ($/MWh)	Implied SREC at 75% ($/MWh)	Implied Rate of Return	
				Residential (%)	Commercial (%)
2018	308	308	231	19.6%	26.7%
2019	300	277	208	18.9%	25.7%
2020	293	246	185	18.1%	24.5%
2021	286	216	162	17.2%	23.3%
2022	279	185	139	16.2%	21.9%
2023	272	154	116	15.1%	20.3%
2024	266	123	92	13.9%	18.6%
2025	260	92	69	12.6%	16.7%
2026	253	62	46	11.1%	14.6%
2027	250	31	23	9.5%	12.2%
2028	239	-	-	7.7%	9.5%

iii. Are the financial targets used to inform policy choices in the "Solar Transition" referenced above still relevant (i.e. 12% Internal Rate of Return ("IRR"), < 10 year payback)? Given the maturity of the New Jersey market, are these metrics still meaningful? If these targets are outdated, what financial targets should be used in modeling to inform policy choices?

Response:

As discussed above, Rate Counsel recommends that the Board phase out ratepayer subsidies and allow the competitive market to determine rates of return on solar projects. Nevertheless, the analysis Rate Counsel presented in Table 2 above (in response to Question II.ii) shows that the market would not be adversely impacted, even if the 12 percent IRR used by OCE and Summit Blue in the 2006-07 Solar Transition proceeding is still relevant in today's market. Rate Counsel notes that, at a minimum, it may be the case that the 12 percent IRR was actually too high in establishing a threshold for solar installations given the number of installations over the past several years and that the SREC market is projected to remain long relative to overall market requirements. Further, the Board should be mindful that many of the other assumptions, outside those associated with the threshold IRR, have been undermined by actual market conditions that have materialized since the 2006-07 Solar Transition proceeding.

For instance, in the 2006-07 Solar Transition proceeding, OCE and its consultant Summit Blue, developed a model to analyze the potential ratepayer impacts of proposed market transition models.[7] This model was relied upon heavily throughout the Solar Transition proceeding. One of the assumptions included in the model was a projection of retail electric prices. These prices were used to calculate an "electricity savings" or an avoided cost, that solar installations would realize by generating their own electricity. Figure 4 shows the residential prices assumed by OCE in its model compared to the actual residential retail prices in New Jersey over the last 10 years. OCE assumed that the residential retail price would increase at an average annual rate of 2.99 percent, when in fact, prices actually increased at an average annual rate of 3.3 percent. And, in some years, the increase in the residential retail price was as much as 10 percent. This means that OCE's model under-estimated the savings realized by residential solar installations and it is likely that the projects installed during this time-period realized a return greater than the targeted 12 percent.

[7] OCE's "SACP Ratepayer Impact Model" is available at: http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-proceedings.

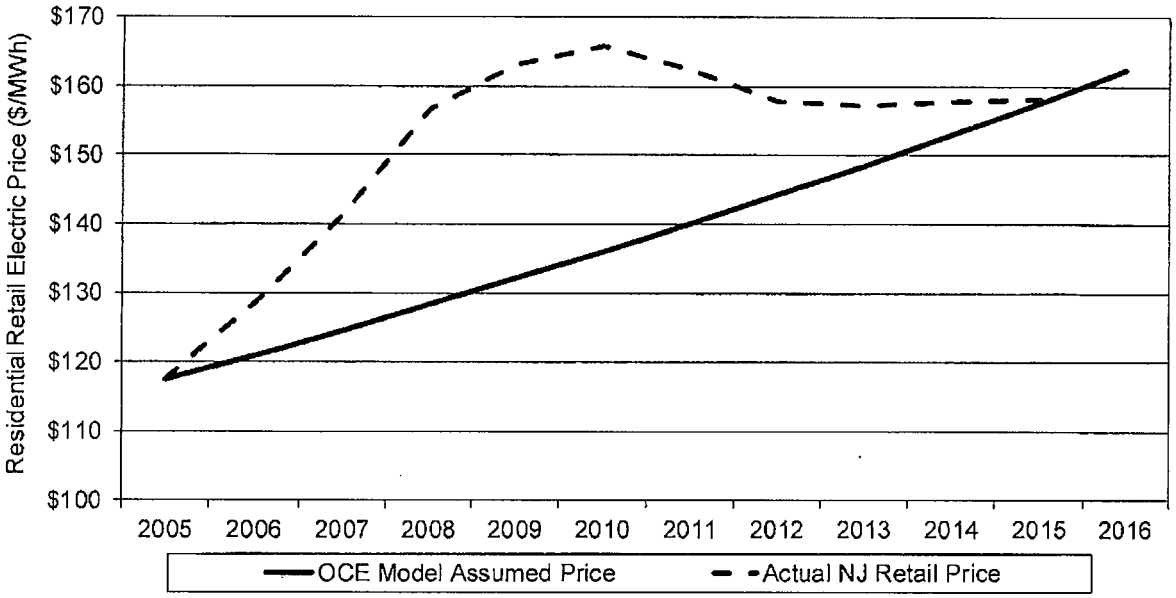

Figure 4. Residential retail electric price comparison: OCE model and actual prices
Source: OCE's "SACP Ratepayer Impact Model," available at: http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-proceedings; and Lawrence Berkeley National Laboratory. 2017. Tracking the Sun 10, available at: https://emp.lbl.gov/sites/default/files/tracking_the_sun_10_report.pdf

In addition, the OCE model used the U.S. Energy Information Administration's 2007 Annual Energy Outlook as support for its assumed residential solar installation cost. These assumed costs, presented in Figure 5 below, started at a 2005 price of $8.57 per watt and decreased at an average annual rate of 2.2 percent. As the figure shows, the cost of residential solar installations fell much more dramatically than the OCE model anticipated. This significant difference in installation costs translates into even greater savings and higher rates of return for solar installations.

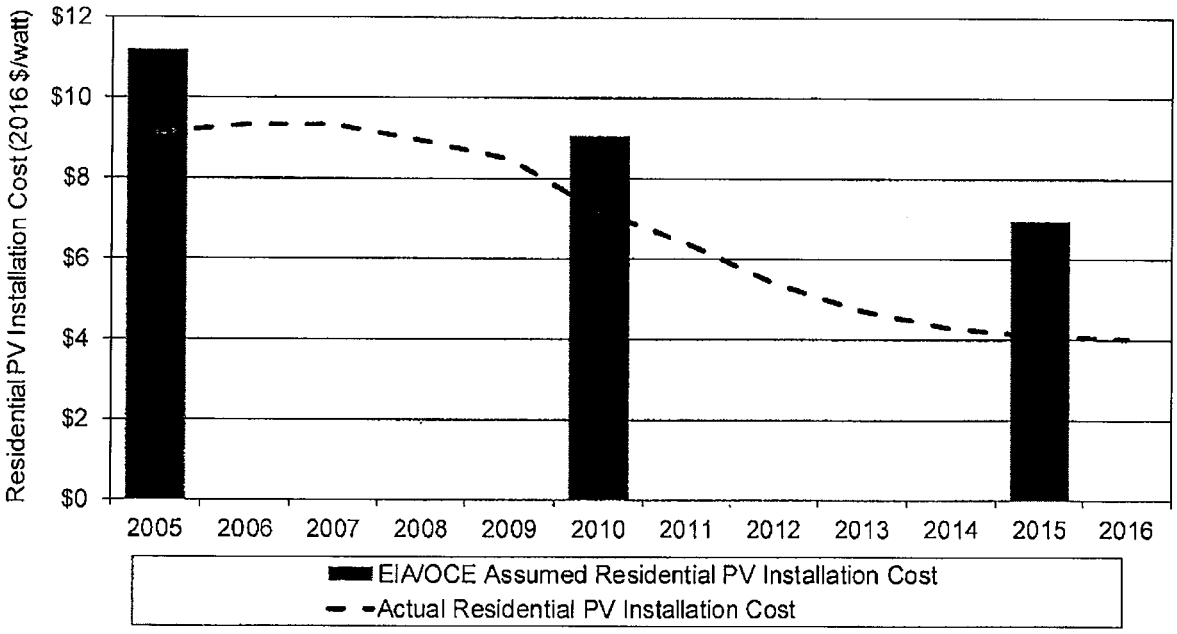

Figure 5. Residential PV installation costs: OCE model and actual

Source: OCE's "SACP Ratepayer Impact Model," available at: http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-proceedings; and Lawrence Berkeley National Laboratory. 2017. Tracking the Sun 10, available at: https://emp.lbl.gov/sites/default/files/tracking_the_sun_10_report.pdf

In addition to falling costs, solar PV economics have also improved by rising efficiencies. Figure 6 shows that since 2005, median module efficiencies have increased from 13.5 percent to over 17 percent in 2016. In comparison, the OCE model assumed an implied efficiency of just 11.4 percent. Even small improvements in efficiency can translate to large gains in output and thus reduced costs. The combination of these factors (retail price, installed cost and module efficiency) has likely made solar development much more affordable for a wide range of market participants from the most significant level of installation to the lowest.

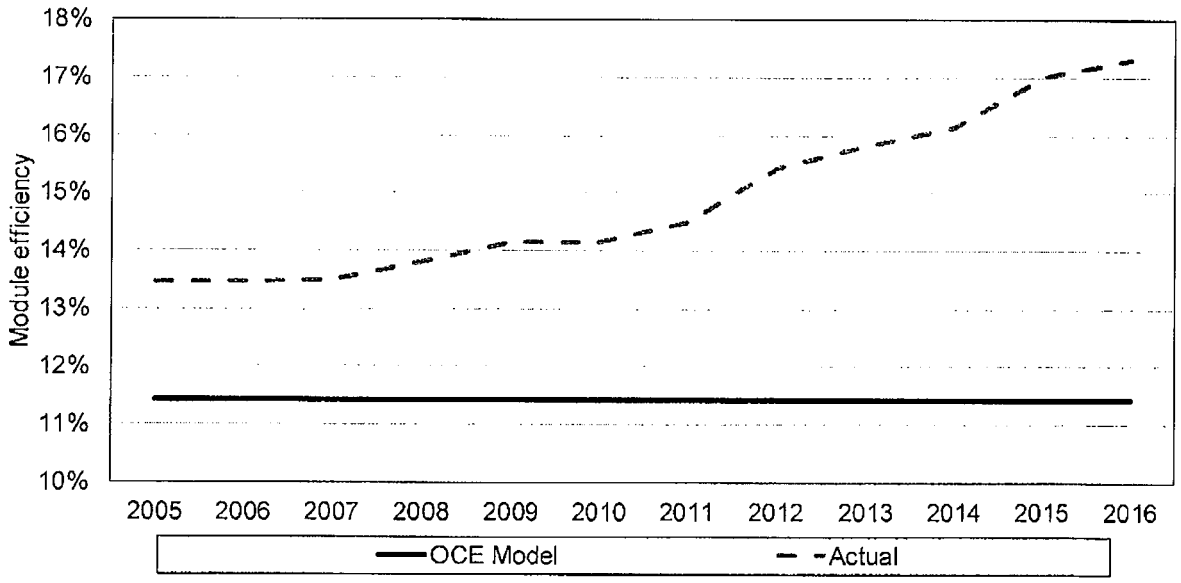

Figure 6. PV module efficiency: OCE model and actual

Source: OCE's "SACP Ratepayer Impact Model," available at: http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-proceedings; and Lawrence Berkeley National Laboratory. 2017. Tracking the Sun 10, available at: https://emp.lbl.gov/sites/default/files/tracking_the_sun_10_report.pdf

iv. How should or can any proposed changes in the State's solar incentive policies account for changes in the future solar and electricity markets such as the federal imposition of module import tariffs, more widespread adoption of electric vehicles, or increased costs from other priorities such as offshore wind, microgrids or storm hardening?

Response:

Rate Counsel recommends caution and continued study in examining the impacts that future market and regulatory changes will have on solar installations in New Jersey. Many of the issues offered in this question (offshore wind, microgrids, storm hardening) will take years to evolve and will not likely have an immediate impact on solar development. And, with regards to the issue of solar trade disputes, there is uncertainty as to how the imposition of tariffs on solar equipment will impact overall installations. It has yet to be determined what the tariff will look like, if one is implemented.

As noted in Rate Counsel's response to Question II.i, the projected number of SRECs available through EY 2027 far exceed the obligation for solar RPS compliance. If there is a negative impact due to module import tariffs, or any of these issues, it is unlikely to seriously affect New Jersey's solar RPS compliance. The Board will need to continue to be vigilant in its analysis of energy markets and policy, but any analysis of these potential issues is best addressed in the future, rather than in this general review.

v. **Should the Board consider providing more oversight to the market to ensure that the SREC market and the Electric Distribution Companies' ("EDCs") auction of SRECs are competitive and that no conditions could lead to market manipulation? Are the current practices for reporting installed capacity sufficient to ensure timely and accurate information in support of market transparency? If not, what improvements should be made?**

Response:

Yes, the Board should consider providing more oversight to the market to ensure SREC market competition and to help guard against market manipulation. Rate Counsel has expressed concern in the past regarding the potential for market manipulation in the New Jersey SREC market.[8] In 2012, the Solar Act accelerated increases in the solar RPS and limited the large grid supply projects that could receive SRECs. As a result, SREC prices increased. In fact, the weighted average SREC price increased 80 percent between March 2013 and March 2016, from $142 to $256 per SREC.

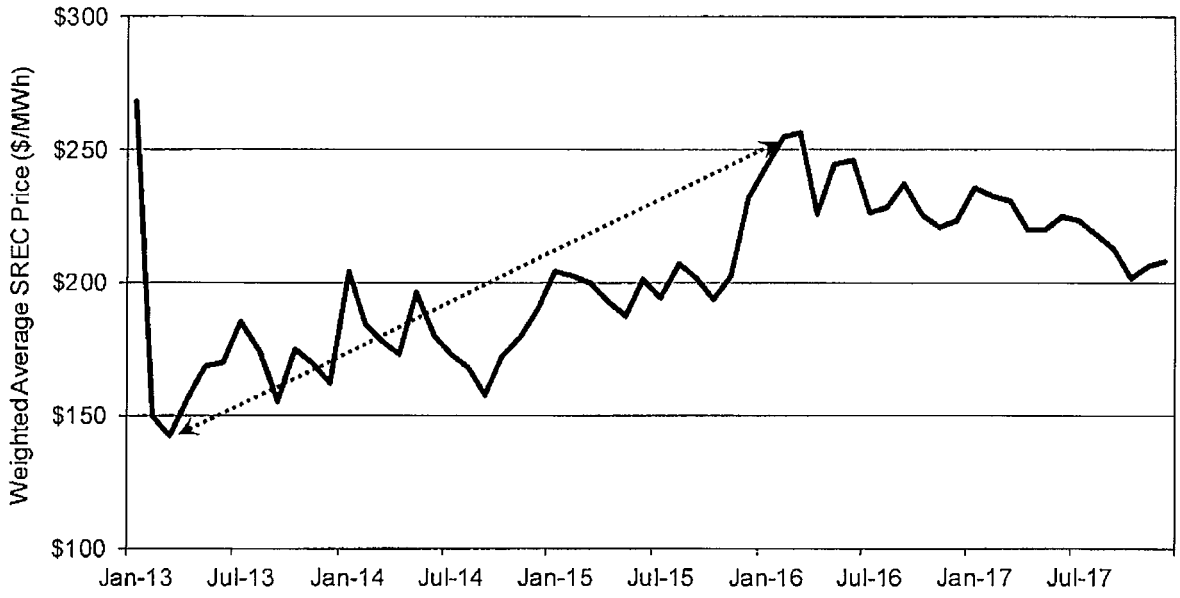

Figure 7. Weighted average SREC price trends
Source: PJM GATS, available at: https://www.pjm-eis.com/reports-and-events/public-reports.aspx.

More importantly, SREC prices were reaching levels that were close to parity with the SACP. As a result the SACP became less significant since the price of the SREC is nearly

[8] BPU Docket No. QO16020130.

equivalent to the penalty, thus failure to comply becomes less costly. In other words, the market price for solar energy (as represented by SREC prices) has been converging to the administratively determined cap, or maximum price for sola that is allowed in the market (as represented by the SACP).

A leveling in prices or even a modest increase following the 2012 restructuring of the RPS would not have been surprising as those changes began to take effect in 2014. However, the substantial and persistent increases over a 12 to 18-month period was perplexing at best, and at worst suggested that SRECs were not being offered into the New Jersey marketplace. The number of solar development programs and support mechanisms in place should have facilitated an increase in solar generation and the supply of SRECs. New Jersey's solar capacity had increased over 67 percent since 2012 and regional and national solar installation costs were falling. Further, Congress had agreed to extend the solar investment tax credit ("ITC") for an additional five years. Given New Jersey's robust SREC market and continued support for solar development, it was difficult to understand what market dynamics could be influencing these high prices, particularly when prices should have been flat or decreasing. At the time, Rate Counsel urged the Board to install a market monitor or establish a monitoring mechanism for the New Jersey SREC market. The appointment of a market monitor or monitoring process would help assure that policies are achieving their desired results. The resulting data and analysis would be useful to the Board and its Staff in determining how much additional capacity is needed to ensure an adequate supply of SRECs at prices that are reflective of the actual costs of solar projects. Ongoing monitoring would help identify and remedy abnormalities in the market on a more timely basis.

III. RPS Design Elements & Eligibility Criteria:

i. Should the RPS be phased out?

Response:

Yes. However, Rate Counsel's primary recommendation is for the Board to phase out ratepayer financial support for solar installations by 2028. The best method for doing this is not to reduce the total installations that are supported by SREC financing, but to help drive down SREC prices by driving the overall market cap price (the SACP). As noted in response to Question I.ii, Rate Counsel recommends that the SACP be phased out over the next 10 years. Current SREC prices of over $200 are a windfall for solar developers and a SACP of $308 only ensures an even greater excessive return. Ratepayers should not continue to fund technologies that are cost-effective and markets that are self-sustaining. Phasing out the solar set-aside will eliminate the need for any solar energy enforcement mechanism. Once the need for the solar set-aside is removed, it is likely any comparable renewable energy enforcement mechanism, such as the RPS overall, will no longer be needed since, if solar is at grid parity, it is likely that most other currently commercially available renewables will be driven by market forces to reach grid parity.

ii. **Should the RPS be restructured to set goals specific to each market segment (residential, commercial & industrial ("C&I") and grid supply connected to NJ distribution)? Can the NJ Class I provisions in the RPS be modified to enable more cost effective achievement of solar and other renewable energy goals. If so, how?**

Response:

No. Rate Counsel's primary recommendation is for the Board to continue with its currently established commitments and policies for solar energy with the goal of meeting the currently established solar RPS targets through EY 2028. Rate Counsel believes that the current review needs to strongly consider the transition of the solar market to one that is self-sustaining by rolling back SACP prices that, in turn will drive down SREC prices and ratepayer financial support costs for solar installations.

If the Board decides to consider policy changes to restructure goals specific to certain market segments, it should only do so after commissioning a study to explore whether this can be done in a cost-effective and sustainable manner. Such a study should investigate whether the identified market segment(s) could ever be cost-effective or self-sustaining (with or without government support); and at what cost to ratepayers. If the identified market segment(s) are deemed likely to not ever be cost-effective or self-sustaining, then such policies to support these segments should not be pursued.

iii. Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

Response:

Rate Counsel appreciates that larger-scale, grid connected solar energy projects are already cost effective with grid provided power and will be increasingly more competitive over time. One method of facilitating the ramp-down of ratepayer financial support for solar energy could be through the exclusion of large scale projects. While Rate Counsel supports larger scale solar installations, and their favorable economics, we understand that this option may afford a balancing of interests in any future solar transition. Rate Counsel is interested in considering this option as a form of market redesign in the future provided that the redesign has a defined time period for phasing-out all forms of ratepayer financial support.

iv. **Are the design concepts developed in the Solar Transition and modified by subsequent statutes still relevant? Should the Board consider changes to any of the following policies: the lack of a size limit on net metered project capacity; net metered "on-site generation" projects eligible for SRECs; 15-year Qualification Life; 15-year Solar Alternative Compliance Payment ("SACP") schedule; 5-year SREC vintage/bankability?**

Response:

Rate Counsel believes that the current market design characteristics are satisfactory given our broader recommendation that ratepayer financial support for solar energy should be ramped down by 2028. Rate Counsel recommends that the reduction in this ratepayer financial support should be through an aggressive compression of the SACP schedule to zero by 2028 – so, at least from the perspective of the current SACP schedule, Rate Counsel is recommending that SACP schedule be modified in such a way that it is ramped down to zero by a date certain. Rate Counsel is hesitant to recommend any other market design changes (like the qualification lives, etc.) since these recommendations could conflict, or lead to unanticipated consequences, relative to our broader recommendation to ramp down ratepayer solar energy financial support. Our positions on net metering are discussed below in Section IV.

v. **Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?**

Response:

The EDC SREC-based Finance programs should remain in place, with their original end dates, and should be allowed to expire, without renewal, at their scheduled end dates. No new utility-funded solar energy programs need to be offered or approved after these expirations.

vi. Has the Board's shared implementation of Subsection t of the Solar Act of 2012, N.J.S.A. 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting solar generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?

Response:

Yes, implementation of subsection t has been more than sufficient. The Board approved PSE&G's Solar 4 All Extension programs (S4AE) that included 75 MW of solar capacity to be installed on landfills and brownfields.[9] The anticipated unit costs for the capital investments associated with the S4AE programs were very large, averaging over $5,000 per kW. These costs were even more significant given the fact that these are large projects, comprised of several MW of capacity each, failing to recognize any economies of scale.[10]

Approval of the S4AE programs was based on a premise that the market needed new solar energy capacity development in certain underrepresented sectors such as landfills and brownfields. PSE&G argued that the S4AE programs were consistent with the EMP which discourages the development of solar farms in farmland and undeveloped open spaces and encourages development "on or above impervious surfaces or on landfills, brownfields or areas of historic fill."[11] While PSE&G was correct in that the EMP encourages development on such sites, the use of this statement as justification for the S4AE programs missed some of the more important, over-arching themes of the EMP. The 2011 EMP explicitly noted:

> The Christie Administration's pursuit of environmental goals does not subordinate other worthwhile resource planning goals centered on reliability and economics. Reducing energy costs, encouraging employment and embracing environmental stewardship are laudable but often competing objectives. New Jersey's policy initiatives are designed to accomplish these goals in a cost-effective manner and consistent with the State Strategic Plan. New Jersey's environmental, economic, and reliability goals require that cost/benefit studies rationally measure total impacts, including direct energy costs, quantifiable environmental benefits, and indirect socio-economic benefits. This will lead to informed decisions that incorporate good tradeoffs among competing resource planning objectives."[12]

The 2015 EMP Update does not distract from this as it states: "[t]he existing goals to promote solar projects that provide both economic and environmental benefits are sound and

[9] https://www.pseg.com/info/media/newsreleases/2016/2016-11-30.jsp#.Wi2sy0trxBw
[10] BPU Docket No. EO12080721. Direct Testimony of David E. Dismukes filed January 18, 2013.
[11] 2015 New Jersey Energy Master Plan Update, p. 29.
[12] 2011 Energy Master Plan, p. 75, emphasis added.

should be continued." Rate Counsel is concerned, however, that the approval of these plans may have "squeezed out" or discouraged more competitive alternatives that could have been developed in the market (primarily in PSE&G's service territory), but declined to do so in the face of ratepayer-supported utility programs like the one conducted by PSE&G.

Further, the other three EDC's (ACE, JCP&L and RECO) have all had long-term solar contracting programs that could have competed with PSE&G's S4AE programs. Unlike the PSE&G programs, the EDC longer-term SREC contracting programs have the added benefit of requiring all potential landfill developer participants to pay for the administrative costs of the program, minimizing ratepayer impacts. However, no bids for brownfields or landfill projects have been received for any of these EDC long-term SREC contracting programs.

IV. Net Metering & Interconnection Design Elements & Eligibility Criteria:

i. Are the Board's current net metering and interconnection rules consistent with the State's policy goals as expressed in the statute and RPS, objectives, design, eligibility criteria, etc.?

Response:

Rate Counsel believes that New Jersey's net metering program needs to be brought in line with changes occurring other states. In particular, net metered systems should transition from a tightly regulated, yet preferenced generation resource, to one that stands on its own two feet and has the ability to take advantage of market opportunities with fewer and more limited development constraints. In order for this to occur, the Board needs to transition the reimbursement and credit process by which net metered generation is "put" to the grid. Today, the month-to-month valuation of these net metered "puts" are valued at full retail rates, including generation, distribution, and surcharges. Rate Counsel believes these valuations need to be tied to the value of comparable, marginal generation being put to the overall grid at the same time as the net metered generation. Rate Counsel supports additional value being attributed to this net metered generation for certain additional benefits that it may have created (i.e., avoided distribution capacity, avoided transmission capacity, etc.) provided that these supplemental values are supported by reasonably quantified and documented estimates. These estimates should be "netted" against any costs attributed to the net metered generation resource, at that particular location, and that particular hour of the day. Once net metered generation resources are valued at their true opportunity costs, then Rate Counsel believes that further discussions regarding individual system size limitations, or total capacity limitations can be held with a view towards potentially relaxing many of these current restrictions.

ii. **Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?**

Response:

Rate Counsel does not believe size restrictions on individual installations, nor total EDC system installations, should be changed until such time that the current reimbursement methods for net metering output are changed. Net metered systems need to be reimbursed for all output at levels that represent the value of that energy, and any relevant capacity, avoided in the hour in which it is placed to the grid. This includes net metering output month-to-month valuations as well as overall annual evaluations for reimbursement purposes. The Board should not consider lifting any current size or total installed capacity restrictions until these net metering valuations are in line with market valuations. Rate Counsel sees these individual size and capacity installation restrictions not as barriers to solar market development, but as valuable ratepayer protections that limit ratepayer exposure to the large per unit subsidies that can arise with a full retail rate-based reimbursement process. These ratepayer protections (individual size, total capacity restrictions) need to remain in place as long as net metered systems are receiving such large additional subsidies through their net metering reimbursements or credits. If the net metering subsidies are lowered, then changes can be considered.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

Response:

As a general matter, Rate Counsel does not support any specific set-asides or special provisions for net metered C&I projects. Rate Counsel also sees no need to limit the development of these C&I projects provided that the net metering reimbursement process for their output is consistent with market valuations discussed in our prior response. Rate Counsel sees no other reason to limit the participation of these C&I systems without further evidence of this purported "crowding out" effect. Rate Counsel notes that it could also be the case that several C&I projects, particularly those associated with large rooftop installations, could be impeded from development given current net metering sizing restrictions. The impact of these limitations, their implications for solar development, and the rate impacts and other operational impacts of relaxing these sizing limitations should be explored in more detail by the Board.

iv. Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

Response:

No. The Board should not continue to compensate net metering installations at full retail rates. The reimbursement of net metering at full retail rates is a legacy policy adopted by the Board, as well as many other state regulatory commissions, during a time period in which solar energy costs were exceptionally high and the installations of behind-the-meter solar were limited. Some of the earliest net metering policies date back to the early 1980s and correspond with similar policy initiatives being taken for large-scale non-utility generation in the wake of the adoption of the Public Utilities Regulatory Policies Act of 1978 ("PURPA"). Back then, and for several subsequent decades, valuing distribution level generation put to the grid under net metering programs, at full retail rates, was more expedient and less administratively difficult than attempting to determine a distribution level avoided cost (for output reimbursement purposes), particularly when the installations participating in these net metering programs were so limited. The world has changed dramatically since the early 1980s however, and the Board's net metering policies should be updated to correspond with these changes.

At a minimum, the Board should consider modifying its net metering regulations so that net metering customers do not avoid non-by-passable charges such as the societal benefits charge. Net metering customers should contribute their fair share of these charges.

v. **What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?**

Response:

Rate Counsel does not believe a generalized answer to this question can be provided at this time. The impact of distributed net metered systems will vary across the state depending upon the systems to which they are interconnected, as well as the individual lines and feeders to which these systems are interconnected. These costs could range from a small, to a very large amount on a per net metered installation basis. However, as a general matter, to the extent that a net metering system imposes a cost on the grid, those net metered systems should be required to pay for the costs of these impacts. Rates that are imposed on net metered systems, for the costs they impose on other non-solar distribution customers, should be quantified and documented.

vi. **Have the aggregated net metering rules been effective at motivating publicly sited solar generation facilities? If not, what changes could improve adoption?**

Response:

Rate Counsel is not clear about what is meant by "publicly sited" installations. If this means installations at public facilities (like schools, hospitals, prisons, etc.), then it is likely the case that solar installation decisions at these types of facilities are influenced by a variety of factors and that net metering policies are likely one of several factors influencing those solar siting decisions. It is also likely that the Board's current net metering policies are of less importance for these public facilities than other factors such as budgeting constraints and financing barriers.

V. **Land Use Implications:**

i. **How can the State minimize impact of solar development on open space, wooded, and farmlands?**

Response:
Rate Counsel has no position on this issue.

ii. **In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?**

Response:
Rate Counsel has no position on this issue.

iii. **What changes to its policies, if any, should the Board consider related to its goal of protecting open space? Can tools like the NJDEP Solar Siting Analysis be used to inform incentive approval decisions? Should a condition of SREC eligibility for ground mounted solar facilities of a certain size include compliance with industry best practices such as those specified in rules promulgated by the State Agricultural Development Committee.**

Response:
Rate Counsel has no position on this issue.

Joint Comments on Staff Proceeding Questions for Stakeholder Discussion

Submitted by:

The Solar Energy Industries Association and the New Jersey Solar Energy Coalition

Date: December 15, 2017

Proceeding Questions for Stakeholder Comment
Updated 11.27.17

INSTRUCTIONS

To ensure that the 2017 Solar Generic Proceeding generates input that is comprehensive and relevant, the New Jersey Board of Public Utilities ("Board" or "BPU") directed Staff ("Staff") to undertake a Stakeholder Process to develop a set of TOPICS and QUESTIONS for discussion at the Generic Proceeding. The Generic Proceeding is the public's opportunity to provide substantive responses to the final questions.

Three hearing dates have been scheduled in the Northern, Central, and Southern regions of the State. A schedule is provided below, please note the change in time from the preliminary schedule provided previously. Stakeholder comments on responses to the Generic Proceeding questions should be submitted to publiccomments@njcleanenergy.com and are due by Friday, December 15, 2017.

- **Central Jersey** – December 4, 2017, 8:00 am – 10:45 am

New Jersey Department of Environmental Protection Agency
401 East State Street
First Floor Public Hearing Room
Trenton, NJ 08625

- **North Jersey** – December 5, 2017, 9:00 – 11:30 am

Hackensack City Hall, Council Chambers
65 Central Avenue
Hackensack, NJ 07601

- **South Jersey** – December 8, 2017, 1:00 – 3:30 am

Stockton University
Campus Center Board of Trustees Room
101 Vera King Farris Drive
Galloway, NJ 08205-9441

QUESTIONS FOR STAKEHOLDERS TO ADDRESS

I. Policy Goals and Objectives:

i. The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):

- Sustained Orderly Market Development
- Minimize Ratepayer Impact
- Minimize Transaction Costs
- Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security.

Are these goals still relevant? Please explain why or why not.

The goals and objectives are clearly relevant to evaluating policy approaches, however, it is equally important to keep in mind the longer-term goals associated with attracting investment and maintaining access to the capital markets that will support this development. In addition, policy objectives should take a longer policy view that would incorporate support for emerging technological advances that can and will significantly change the calculus. Battery technology, for example, is advancing rapidly and will have a significant impact on solar development and its underlying economics. Policy goals and objectives, therefore, need to take a longer steadier view that will not react to achieving short term goals at the expense of far more important long-term policy objectives. Policy goals that involve achieving "equity to all ratepayers" should also focus upon improving access to the benefits that solar provides to all new Jersey consumers.

ii. The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding To Review The State Of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?

Current analysis shows that existing solar projects will meet the 4.1% RPS target significantly ahead of the current timeframe in the statute, most likely within the next energy year. While achieving that set-aside recognizes a most important milestone, the state needs to make some firm determinations as to the next target level for solar

development in New Jersey. Several solar industry associations and organizations along with NJSEC and SEIA support S-2276/A-3918 which provides for a new target of 5.3% of retail sales by energy year 2020. This bill would also reduce the period solar projects are eligible for SRECS from 15 years to 10 years and provides for a phase out of the current SREC program in favor of a new, as yet to-be-determined incentive program.

iii. What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?

New Jersey solar installations represent more than 95% of New Jersey's operating indigenous Class I resources. In the absence of New Jersey's investment in solar energy all of our Class I renewable energy resources would come from other PJM states outside of New Jersey. New Jersey ratepayers should expect that a significant percentage of their investment in clean energy to create jobs here in New Jersey along with the economic development benefits that attend that local investment. These benefits can also be balanced with cost effective solar coming from other PJM states with the amendment of current BPU rules. However, New Jersey's leadership role in advancing a 22 1/2% requirement for Class I renewables by 2020, demands that local solar continue to play a robust and growing role in meeting these important goals with New Jersey resources. Solar will remain the only Class I renewable resource that will be available to contribute to these goals until well into the 2020's when, and if, offshore wind resources are ultimately developed.

iv. Are other goals more appropriate? Have low and moderate-income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate- income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?

The Board should explore ways to make the benefits that solar provide more accessible to low and moderate-income consumers. One pathway is the authorization of community solar programs. Many customers are not well situated for participating in on-site solar for a variety of reasons - lack of roof suitability (e.g. shading, age), lack of roof ownership (e.g. renters, multi-tenant buildings), and lack of customer ability to make a long-term

investment in their property. The BPU should consider expanding access to solar to all New Jersey electric customers, including families, businesses, local governments, and institutions. Importantly, community solar can extend the bill-saving benefits of solar to low income customers and underserved communities, helping reduce the energy cost burden on families and creating well-paying local jobs in one of the nation's fastest growing industries.

As the Board considers future reforms to the current incentive program, SREC factoring policies may also serve to match incentives more closely with the demonstrated needs of the various market segments that have significantly different development costs. Factoring can also provide enhanced access to potential solar consumers in the low and moderate-income ranges by creating factors greater than 1.0 for SRECs generated. Factoring can, therefore, serve both policy goals of better aligning incentives with demonstrated need and boosting the residential and multi-family markets in more equitable ways.

The most recently published staff recommendations regarding consumer protection appear to resolve many of the concerns that many solar industry groups previously posited regarding the original proposal. However, we urge the Board to consider the extensive body of existing federal and state consumer protection law to avoid duplication of provisions. Furthermore, we urge the Board to base any future decisions on new consumer protection on hard data and evidence, rather than on unsubstantiated reports or weak evidence of broader consumer protection problems. An evidence-based approach would help the Board clearly pinpoint a problem, establish a targeted policy response, and avoid establishing new potentially burdensome measures in the name of consumer protection that serve only to increase transaction costs for solar companies, create new barriers for solar firms, stifle innovation and hamper solar growth. We also believe that the privacy rights of the parties to these contractual agreements be respected and that market cost, financial, and statistical data collected by the Board in the process of obtaining these disclosure documents be respected.

Battery storage continues to play an expanding role in solar deployment in New Jersey. Storage resolves a number of technical interconnection issues with the utility grid and has the potential to significantly reduce ratepayer investment in utility infrastructure. Clearly, these ratepayer benefits should be supported in the form of incentives that will appropriately balance the costs and benefits of the deployment of these technologies. State supported grant programs followed by market based incentives such as factored SREC incentives should be explored to achieve these important goals going forward.

II. Solar Economics and Incentives:

i. Are the current State/BPU policies sufficient to meet the State's solar goals. These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?

Current State/BPU policies have worked well to create the robust solar market that has made New Jersey fifth in the nation in cumulative solar deployment per GTM/SEIA's Solar Market Insight Report. While current policies can be refined to better align incentives with the specific needs of each market segment, net metering policies have worked well to achieve our clean energy goals. S-2276/A-3918 outlines a number of policy alterations that can help further refine solar New Jersey's solar policies appropriate to current market conditions. It is important to remember that state policies must remain flexible to accommodate changes in federal tax policies as well as changes in solar cost structures and technological advancements.

ii. If changes to the existing framework of incentives are recommended, please estimate the impact on NJ solar market economics and the cost and benefits to ratepayers.

NJSEC and SEIA supports including the "benefits to all ratepayers" financial values from additional solar installations along with the costs of those incentives. Evidence continues to show that the net benefits to society from solar installations outweighs the costs of incentive programs.

iii. Are the financial targets used to inform policy choices in the "Solar Transition" referenced above still relevant (i.e. 12% Internal Rate of Return ("IRR"), < 10 year payback)? Given the maturity of the New Jersey market, are these metrics still meaningful? If these targets are outdated, what financial targets should be used in modeling to inform policy choices?

Policies needed to start our solar market are markedly different than the polices needed maintain and grow an existing market. Further policy action should be viewed from the

lens of what actions need to be taken to build on the market's current success and meet our next level of solar development goals. The investment community will continue to fund New Jersey's solar program if it judges that the expected investment returns are properly balanced against investment risk. Therefore, it is most important that New Jersey's solar program carefully analyze the financial targets used in modeling to create informed policy choices by the Board that will maintain and expand solar employment and economic development across New Jersey. New Jersey is currently home to more than 6,000 solar jobs across market segments.

iv. How should or can any proposed changes in the State's solar incentive policies account for changes in the future solar and electricity markets such as the federal imposition of module import tariffs, more widespread adoption of electric vehicles, or increased costs from other priorities such as offshore wind, microgrids or storm hardening?

Clearly, energy markets are in the midst of a long-term transition from fossil fuels to renewable clean energy. The utility grid is also grappling with issues associated with meeting increasing customer demand for distributed energy resources, such as solar, and creating the grid of the 21st century. These are massive changes in technology and markets. While there is no way to accurately predict when and how any of these areas of cost will impact New Jersey's solar program we would encourage the Board and policy makers to focus on the long-term goals of our clean energy program and recognize the continuing contribution that the New Jersey solar program has had in creating clean energy and jobs at home.

v. Should the Board consider providing more oversight to the market to ensure that the SREC market and the Electric Distribution Companies' ("EDCs") auction of SRECs are competitive and that no conditions could lead to market manipulation? Are the current practices for reporting installed capacity sufficient to ensure timely and accurate information in support of market transparency? If not, what improvements should be made?

NJSEC and SEIA strongly support, open, competitive, transparent and well-functioning markets. Market transparency is essential to our members. We believe that the Board has adequate safeguards in place to support competitive markets and prevent conditions that would lead to market manipulation. The Board, independent offices, and independent analysts currently have the tools at their disposal to monitor SREC values based on publicly available information from a variety of sources.

S-2276/A-3918 proposes that the vintage period for SREC eligibility should be reduced from the year generated plus four years to the year generated plus two years. This change to the eligibility period should significantly reduce even the remote risk of market manipulation and speculative trading. In addition, the legislation proposes the creation of a new requirement for projects greater than 25 kW to escrow $40/kW in their application for Board project approval. This proposal would significantly work to eliminate "place holder" projects that distort project pipeline and help market transparency.

III. RPS Design Elements & Eligibility Criteria:

i. Should the RPS be phased out?

No, the current SREC program has been successful and worked to achieve the goals established by the legislature. While policy makers should always be scanning the nation for successfully demonstrated solar policies that may become more appropriate for our program platform in New Jersey, our current platform should be maintained. The RPS can only be phased out when electricity markets adequately capture the environmental, public health, locational, and demand reduction values that solar provides.

ii. Should the RPS be restructured to set goals specific to each market segment (residential, commercial & industrial ("C&I") and grid supply connected to NJ distribution)? Can the NJ Class I provisions in the RPS be modified to enable more cost-effective achievement of solar and other renewable energy goals? If so, how?

NJSEC and SEIA agree that this question deserves Board consideration in part due to the fact that the solar projects have already reached the RPS target and adding MW for grid supply projects at this stage would only exacerbate an existing oversupply problem. Furthermore, the current BPU regulations – not the RPS statute – that exclude out of state solar from Class I should be fixed to allow out of state solar into Class I, which enables the state to more cost-effectively meet its renewable energy goals. Due consideration needs to be given to balancing the benefits of achieving a more cost-effective way to meet New Jersey's Class I renewable energy goals with the goal of creating in-state jobs and the further development of solar resources in New Jersey.

iii. Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

Fractional SRECs or factoring can be helpful to achieving the goal of aligning incentives with the demonstrated needs of various market segments. Again, in light of the fact that solar projects have already reached the RPS target and adding MW for grid supply projects at this stage would only exacerbate an existing oversupply problem. An updated RPS would allow for growth across all market sectors.

iv. Are the design concepts developed in the Solar Transition and modified by subsequent statutes still relevant? Should the Board consider changes to any of the following policies: the lack of a size limit on net metered project capacity; net metered "on-site generation" projects eligible for SRECs; 15-year Qualification Life; 15-year Solar Alternative Compliance Payment ("SACP") schedule; 5-year SREC vintage/bankability?

NJSEC and SEIA support the policy proposals created in S-2276/A-3918 which shorten the SREC eligibility period to 10 years and the 5 year SRC vintage/bankability period to three years. Size limitation on net metered projects needs to be considered in the much larger context of community solar and virtual net metering policies as yet to be vetted.

iv. Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

No, the competitive markets have matured and developed to the point where these supportive "jump starting" programs are no longer required to support the market.

v. Has the Board's shared implementation of Subsection t of the Solar Act of 2012, N.J.S.A. 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting solar generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?

No, landfill and brownfield solar development may require additional incentives such as positive factoring above 1.0 for SREC generation. These determinations, however, may require specific intervention by the Board on a case by case basis in determining the appropriate level of incentive because project needs vary significantly.

Landfill "buffer" areas also need to be considered as suitable sites for solar development. These lands are unusable for other development purposes and there appears no reason why sola development needs to be constructed solely upon closed "cells" within the landfill. A good deal of non-productive landfill land area has been excluded by current regulation.

IV. Net Metering & Interconnection Design Elements & Eligibility Criteria:

i. Are the Board's current net metering and interconnection rules consistent with the State's policy goals as expressed in the statute and RPS, objectives, design, eligibility criteria, etc.?

Yes.

ii. Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

No.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

Massachusetts has used SREC factoring to resolve any disproportionate competitive advantage in the SREC marketplace. Consideration should, however, be given to reserving a reasonable percentage of a distribution circuit's remaining "renewable capacity" for residential projects as a distribution circuit "fills" to its renewable resource capacity limitations.

iv. Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

The net metering discussion is complicated and deserves full consideration of all costs and benefits that inure to the distribution system and ratepayers. Clearly, solar generators have the potential to export power during peak periods at peak prices and then "buy back" during off peak hours and pricing. This arbitrage value needs to be factored into the net metering discussion along with the ratepayer benefits of delaying or eliminating grid infrastructure improvements due to reduced circuit loading. In addition, utility infrastructure can be operated at lower loads and reduced thermal deterioration of transformers and other equipment extending the usable life of these facilities.

Currently, New Jersey's total solar generation has offset statewide utility retail electricity sales by about 1.7%. Conservation, LED lighting, and other energy efficiency measures have offset sales by about 8.3% from historic peaks. Clearly, our EDC's need to decouple revenues from sales as has occurred in many other states. We support that effort. Subsequent to resolving this far larger issue, we think that the more nominal issues remaining to net metering equity issues can be resolved in that more appropriate context.

v. What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?

On a case by case basis, once the value of distribution grid savings associated with solar installations (see iv. above) are quantified any required upgrade costs can be properly deducted against those determined savings. Grid system accommodations to expand the incorporation of renewable technologies on the grid, however, need to be valued in the larger context of grid resilience and other long-term grid objectives and benefits that would be more properly borne by socializing these costs.

vi. Have the aggregated net metering rules been effective at motivating publicly sited solar generation facilities? If not, what changes could improve adoption?

New Jersey's aggregated net metering statutes have been far too restrictive to properly promote the advancement of this market segment. Land ownership requirements and transaction policies need to be revisited to make this segment viable.

V. Land Use Implications:

i. How can the State minimize impact of solar development on open space, wooded, and farmlands?

Existing statutes and current regulations appear to have this issue resolved to the extent necessary.

ii. In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?

Existing statutes and current regulations appear to have this issue resolved to the extent necessary.

iii. What changes to its policies, if any, should the Board consider related to its goal of protecting open space? Can tools like the NJDEP Solar Siting Analysis be used to inform

incentive approval decisions? Should a condition of SREC eligibility for ground mounted solar facilities of a certain size include compliance with industry best practices such as those specified in rules promulgated by the State Agricultural Development Committee.

Existing statutes and current regulations appear to have this issue resolved to the extent necessary.

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December 15, 2017

VIA ELECTRONIC MAIL ONLY

Office of Clean Energy
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Re: I/M/O the Board of Public Utilities Initiating a Generic Proceeding on the Solar Market in New Jersey
Docket No. QX17090949

Dear Sir or Madam:

This firm is counsel to the Retail Energy Supply Association ("RESA"). Enclosed please find RESA's responses to the Board of Public Utilities' (the "Board's") proposed questions in the above-referenced matter. For ease of review, the Board's questions have been included and are followed by RESA's responses to those questions.

RESA appreciates the opportunity to comment in this proceeding. Please do not hesitate to contact me with any questions.

Respectfully submitted,

Murray E. Bevan

Enclosures

I/M/O the Board's Establishing a Generic Proceeding to Review the State of the Solar Market
Comments of the Retail Energy Supply Association

I. Policy Goals and Objectives:

i. The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):

- Sustained Orderly Market Development
- Minimize Ratepayer Impact
- Minimize Transaction Costs
- Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security.

Are these goals still relevant? Please explain why or why not.

RESPONSE:

The Retail Energy Supply Association ("RESA")[1] believes that the goals and objectives outlined in the "Solar Transition" proceeding are still relevant, but should be expanded and take into consideration factors beyond the solar market. Sustained orderly market development, minimizing ratepayer impact, and minimizing transaction costs are interrelated goals which are crucial to the continued orderly development of the solar market in New Jersey. However, any proposal which involves increasing renewable portfolio standards ("RPS") requirements and not exempting existing retail suppliers' customer contracts while continuing the current practice of exempting BGS contracts runs against these key goals by introducing pricing uncertainty and volatility in the retail supply market. The solar market does not operate in a vacuum, and any changes to RPS impacts ratepayers, increases transaction costs, and without exemption of retail supply contracts, unnecessarily burdens retail suppliers and their customers with these unanticipated, increased costs. RESA supports the continued development of solar in New Jersey, but urges the Board to take a cautious approach if it intends to change RPS standards without appropriate warning and signals to the retail market.

ii. The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding To Review The State Of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?

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[1] The comments expressed in this filing represent the position of the Retail Energy Supply Association (RESA) as an organization but may not represent the views of any particular member of the Association. Founded in 1990, RESA is a broad and diverse group of more than twenty retail energy suppliers dedicated to promoting efficient, sustainable and customer-oriented competitive retail energy markets. RESA members operate throughout the United States delivering value-added electricity and natural gas service at retail to residential, commercial and industrial energy customers. More information on RESA can be found at www.resausa.org

RESPONSE:

RESA takes no position on this item.

iii. What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?

RESPONSE:

As far as RESA is aware, suppliers have no issue with achieving current percentage requirements for solar in New Jersey.

iv. Are other goals more appropriate? Have low and moderate income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?

RESPONSE:

RESA takes no position on this item.

II. Solar Economics and Incentives:

i. Are the current State/BPU policies sufficient to meet the State's solar goals. These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?

RESPONSE:

RESA believes the current net metering policy is confusing to solar developers, retail suppliers and customers alike. The current scheme for monthly crediting at the retail rate and annual true ups at the wholesale rate coupled with customer section of the annual true-up month leads to unintended mistakes on the part of retail suppliers, and headaches for customers. RESA urges the Board to implement an easy to understand net metering policy that does not require retail suppliers to serve net metered customers that some retail suppliers are ill-equipped to serve.

ii. If changes to the existing framework of incentives are recommended, please estimate the impact on NJ solar market economics and the cost and benefits to ratepayers.

RESPONSE:

RESA believes that any changes to the existing solar framework, without sufficient lead time prior to implementation of any changes, would result in increased costs to ratepayers and increased price uncertainty for suppliers. Without knowing the types of changes proposed by the Board or the OCE, it is difficult to gauge the ultimate financial impact on customers.

iii. Are the financial targets used to inform policy choices in the "Solar Transition" referenced above still relevant (i.e. 12% Internal Rate of Return ("IRR"), < 10 year payback)? Given the maturity of the New Jersey market, are these metrics still meaningful? If these targets are outdated, what financial targets should be used in modeling to inform policy choices?

RESPONSE:

RESA takes no position on this item.

iv. How should or can any proposed changes in the State's solar incentive policies account for changes in the future solar and electricity markets such as the federal imposition of module import tariffs, more widespread adoption of electric vehicles, or increased costs from other priorities such as offshore wind, microgrids or storm hardening?

RESPONSE:

RESA believes that the Board should remove regulations which inhibit retail suppliers from passing through costs related to material changes in a contract. If market changes and volatility are indeed the new path forward for the Board, then the Board should not hinder retail suppliers from passing through changes in actual cost to customers – no different than the utilities passing through costs to its BGS customers.

RESA further clarifies that this question is asking about a mix of items which affect different parts of the electric and gas markets – storm hardening, for example, has been handled by the State's regulated utilities, since the utilities own the distribution mechanisms for both electric and gas delivery, whereas offshore wind, by statute, requires the purchase of offshore renewable energy credits ("ORECs") by both the electric utilities and retail suppliers. RESA would start, therefore, by ensuring that these different policy goals are appropriately allocated to the correct party and then working to ensure implementation of one item (development of offshore wind, for example) will, at a minimum, not harm the continued development of other key projects (grid hardening).

RESA further notes that federal changes to tariffs can be best accounted for by allowing the utilities and retail suppliers to pass through any actual cost increases to customers, rather than delaying implementation and distorting market signals to customers.

v. Should the Board consider providing more oversight to the market to ensure that the SREC market and the Electric Distribution Companies' ("EDCs") auction of SRECs are competitive and that no conditions could lead to market manipulation? Are the current practices for reporting installed capacity sufficient to ensure timely and accurate information in support of market transparency? If not, what improvements should be made?

RESPONSE:

RESA does not oppose additional oversight on the SREC market and the manner in which generators report available SRECs to the Board and to the market in general. RESA believes the Board should revisit the timing of reporting installed capacity as it has resulted in suppliers purchasing RECs and SRECs from generators who were later not deemed qualified to sell those S/RECs in New Jersey.

RESA understands that the Board already reviews the EDCs' SREC programs and takes no position on that portion of the question.

III. RPS Design Elements & Eligibility Criteria:
i. Should the RPS be phased out?

RESPONSE:

RESA understands that the current RPS is mandated by statute and is supposed to level out in Energy Year ("EY") 2021. RESA does not support any changes on top of the statutory mandate. To the extent the Board wants to make changes to the RPS, RESA encourages the Board to ensure that changes are made on a three-year forward basis so suppliers can adequately price their customer contracts.

ii. Should the RPS be restructured to set goals specific to each market segment (residential, commercial & industrial ("C&I") and grid supply connected to NJ distribution)? Can the NJ Class I provisions in the RPS be modified to enable more cost effective achievement of solar and other renewable energy goals. If so, how?

RESPONSE:

RESA believes that this proposed market restructuring and setting RPS goals based on customer class will introduce unnecessary confusion into the retail supply market. RESA takes no position on incentives to certain customer classes, but requiring suppliers to account for RPS on a market segment basis would make the reconciliation process much more complicated.

RESA further asserts that any changes to the Class I provisions should be implemented on a three-year forward basis to allow retail suppliers adequate lead time to incorporate RPS changes into long-term contracts. This will also allow existing Class I generators appropriate time to re-evaluate any business impacts that changes to Class I RPS may require.

iii. Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

RESPONSE:

RESA believes that grid connected projects should should be still be given SRECs. Utility scale solar projects provide the lowest cost SRECs to ratepayers while achieving the same net environmental benefit. Reducing grid supplied projects will drive up costs for TPSs and ratepayers and significantly hurts low income ratepayers.

iv. Are the design concepts developed in the Solar Transition and modified by subsequent statutes still relevant? Should the Board consider changes to any of the following policies: the lack of a size limit on net metered project capacity; net metered "on-site generation" projects eligible for SRECs; 15-year Qualification Life; 15-year Solar Alternative Compliance Payment ("SACP") schedule; 5-year SREC vintage/bankability?

RESPONSE:

RESA believes that if the Board wishes to modify any of the design concepts mentioned in the above question, these modifications should be implemented on a three-year forward basis to mitigate or eliminate adverse impacts on the retail market. In addition, reducing the SREC qualification life or vintage/bankability without adequate notice to the SREC market could introduce unnecessary volatility in an otherwise stable and functioning market. RESA urges caution in implementing changes to these policies, as many companies and customers rely on the stability and longevity of these program features, and some may not have entered into the New Jersey solar market without these different mechanisms in place.

v. Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

RESPONSE:

RESA takes no position on this item.

vi. Has the Board's shared implementation of Subsection t of the Solar Act of 2012, N.J.S.A. 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting solar generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?

RESPONSE:

RESA takes no position on this item.

iV. Net Metering & Interconnection Design Elements & Eligibility Criteria:
i. Are the Board's current net metering and interconnection rules consistent with the State's policy goals as expressed in the statute and RPS, objectives, design, eligibility criteria, etc.?

RESPONSE:

As explained above, RESA believes the current net metering rules and requirements are unnecessarily confusing for both retail suppliers and customers alike. Residential customers in particular should have access to more consumer friendly information explaining how net metering works. RESA is aware of the OCE website and information but believes the explanations provided could be better simplified for residential customers in particular.

ii. Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

RESPONSE:

RESA takes no position on this item.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

RESPONSE:

RESA takes no position on this item.

iv. Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

RESPONSE:

RESA notes that this question is illustrative of the general confusion surrounding net metering and customer credits. RESA agrees that net-metered customers are credited at the retail rate on a monthly basis. However, this question leaves out the second part of net metering – the annual true-up at the *wholesale* rate. RESA urges the Board to revisit net metering standards in order to make them easier to understand.

RESA takes no position on the need for net metering for utility scale customers.

v. What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?

RESPONSE:

RESA takes no position on this item.

vi. Have the aggregated net metering rules been effective at motivating publicly sited solar generation facilities? If not, what changes could improve adoption?

RESPONSE:

RESA takes no position on this item.

V. Land Use Implications:

i. How can the State minimize impact of solar development on open space, wooded, and farmlands?

RESPONSE:

RESA takes no position on this item.

ii. In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?

RESPONSE:

RESA takes no position on this item.

iii. What changes to its policies, if any, should the Board consider related to its goal of protecting open space? Can tools like the NJDEP Solar Siting Analysis be used to inform incentive approval decisions? Should a condition of SREC eligibility for ground mounted solar facilities of a certain size include compliance with industry best practices such as those specified in rules promulgated by the State Agricultural Development Committee.

RESPONSE:

RESA takes no position on this item.

Sunrun Comments

THE STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

In the Matter of the Board's Establishing A Generic Proceeding to Review The State of the Solar Market	: : : :	Order Opening a Generic Proceeding

QUESTIONS FOR STAKEHOLDERS TO ADDRESS

I. Policy Goals and Objectives:

i. *The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):*

- *Sustained Orderly Market Development*
- *Minimize Ratepayer Impact*
- *Minimize Transaction Costs*
- *Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security.*

Are these goals still relevant? Please explain why or why not.

The above-referenced goals and objectives continue to be relevant to evaluating solar policy in New Jersey. It is equally important, however, to be mindful of long-term goals associated with attracting investment and maintaining access to the capital markets that will support solar deployment. In addition, policy objectives should take a longer view toward incorporating support for emerging technologies that will significantly change the calculus. Battery storage, for example, is advancing rapidly and will have a significant impact on solar development and its underlying economics. Policy goals and objectives, therefore, should be framed in a forward-looking manner so that the achievement of short-term goals will not be at the expense of long-term policy objectives. Policy goals that prioritize achieving equity to all ratepayers should also focus upon improving access to the benefits that solar provides to all New Jersey consumers.

ii. *The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding to Review the State of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?*

Current analysis shows that existing solar projects will meet the 4.1% RPS target significantly ahead of the current timeframe in the statute, most likely within the next energy year. While achieving that set-aside is an important milestone, the state needs to make firm determinations as to the next

target level for solar development in New Jersey. Several solar industry associations and organizations, along with Sunrun, support S-2276/A-3918 which provides for a new target of 5.3% of retail sales by energy year 2020. This bill would also reduce the period solar projects are eligible for SRECS from 15 years to 10 years and provides for a phase-out of the current SREC program in favor of new, as yet to-be-determined incentive program.

iii. *What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?*

New Jersey solar installations represent more than 95% of New Jersey's operating indigenous Class I resources. In the absence of New Jersey's investment in solar energy, most Class I renewable energy resources would come from other PJM states, outside of New Jersey. New Jersey ratepayers should expect that a significant percentage of their investment in clean energy include clean energy jobs created here in New Jersey along with the economic development benefits that flow from that local investment. New Jersey's leadership role in advancing a 22 1/2% requirement for Class I renewables by 2020, demands that New Jersey solar continue to play a robust and growing role in meeting these important goals with New Jersey resources.

iv. *Are other goals more appropriate? Have low and moderate-income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate- income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?*

SREC factoring policies can be an effective tool to match incentives more closely with the demonstrated needs of the various market segments that have significantly different development costs. Factoring can also provide enhanced access to potential solar consumers in the low and moderate-income ranges by creating factors greater than 1.0 for SRECs generated. Factoring can, therefore, serve both policy goals of better aligning incentives with demonstrated need and boosting the residential and multi-family markets in more equitable ways.

The most recently published staff recommendations regarding consumer protection appear to resolve many of the concerns that Sunrun previously posited regarding the original proposal. However, we urge the Board to consider the extensive body of existing federal and state consumer protection law to avoid duplication of provisions. Further, an evidence-based approach to clarify the extent and nature of any consumer protection challenges would help the Board identify specific problems that need to be addressed; establish a targeted policy response; and thoughtfully add only measures intended to add consumer protections, rather than consider measures that do little to protect consumers but do much to hamper innovation and solar growth in the state. Additionally, the privacy rights of parties to solar contractual agreements should be protected. Market financial and statistical data collected by the Board in the process of obtaining disclosure documents should be shielded from public consumption.

Battery storage will play an expanding role in solar deployment in New Jersey. Residential behind-the-meter (BTM) storage, especially when paired with solar, is a key component of a diversified

storage fleet. Residential BTM storage empowers customer choice and creates new economic opportunities, such as employment, by attracting new businesses to the state. Residential BTM storage also provides grid-facing benefits like distribution and transmission deferral, distribution and transmission cost reductions, energy and wholesale market cost reductions, increased renewable integration, resource adequacy, peak reduction, and ancillary services.

These ratepayer benefits should be supported in the form of incentives that will appropriately balance the costs and benefits of the deployment of these technologies. State-supported grant programs followed by market based incentives such as factored SREC incentives should be explored to achieve these important goals going forward.

II. **Solar Economics and Incentives:**

i. Are the current State/BPU policies sufficient to meet the State's solar goals? These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?

Current State/BPU policies have worked well to facilitate the solar development that has made New Jersey fourth in the nation in solar. While current policies can be refined to better align incentives with the specific needs of each market segment, we must remember the importance of our state's net metering policies which have been pivotal to our continuing success. Net metering must continue to play an important role in our long-term policy. S-2276/A-3918 outlines a number of policy alterations that can help further refine solar New Jersey's solar policies appropriate to currently accommodate changes in federal tax policies as well as changes in solar cost structures and technological advancements.

ii. If changes to the existing framework of incentives are recommended, please estimate the impact on NJ solar market economics and the cost and benefits to ratepayers.

Sunrun believes that this inquiry requires a comprehensive study of the costs and benefits of solar to ratepayers. Such a study should be coordinated by the Board. Sunrun supports including the long-term benefits to all ratepayers from additional solar installations along with the costs of those incentives.

iii. Are the financial targets used to inform policy choices in the "Solar Transition" referenced above still relevant (i.e. 12% Internal Rate of Return ("IRR"), < 10-year payback)? Given the maturity of the New Jersey market, are these metrics still meaningful? If these targets are outdated, what financial targets should be used in modeling to inform policy choices?

Policies needed to start our solar market are different than the policies needed to maintain and grow an existing market. Further, any policy action should be driven by an assessment of what actions need to be taken to build on the market's current success and meet our next level of solar development goals. We must provide fair and adequate incentive for consumers who choose to generate their own electricity, consistent with the value provided to all ratepayers by that

investment. Targeted reasonable returns, therefore, need to create appropriate levels of incentives for these stakeholders. As a result, it is most important that New Jersey's solar program carefully analyze the financial targets used in modeling to create informed policy choices by the Board that will maintain and expand solar employment and economic development across New Jersey. New Jersey is currently home to more than 6,000 solar jobs across market segments.

iv. *How should or can any proposed changes in the State's solar incentive policies account for changes in the future solar and electricity markets such as the federal imposition of module import tariffs, more widespread adoption of electric vehicles, or increased costs from other priorities such as offshore wind, micro-grids or storm hardening?*

Without question, energy markets are in the midst of a long-term transition from fossil fuels to renewable, clean energy. While there is no way to predict exactly what the impact of trade restrictions, and other federal policies will be, it is important that state policies maintain stability and continuity while these federal policies are in flux. We would encourage the Board and policymakers to focus on the long-term goals of our clean energy program and recognize the continuing contribution that the New Jersey solar program has had in growing the clean energy economy and creating jobs for New Jersey residents.

v. *Should the Board consider providing more oversight to the market to ensure that the SREC market and the Electric Distribution Companies' ("EDCs") auction of SRECs are competitive and that no conditions could lead to market manipulation? Are the current practices for reporting installed capacity sufficient to ensure timely and accurate information in support of market transparency? If not, what improvements should be made?*

Sunrun does not believe that increased oversight is necessary.

III. RPS Design Elements & Eligibility Criteria:

i. Should the RPS be phased out?

No, the RPS should not be phased out. The current SREC program has been successful and worked to achieve the goals established by the legislature. While Sunrun encourages the consideration of various successful solar policies, in other jurisdictions, that may become more appropriate for the program platform in New Jersey, our current platform should be maintained. The RPS can only be phased out when solar generation is at parity with wholesale grid prices and incentives are no longer required to support solar development. While the industry has made great strides to reducing panel and installation costs, there is more work to be done.

ii. *Should the RPS be restructured to set goals specific to each market segment (residential, commercial & industrial ("C&I") and grid supply connected to NJ distribution)? Can the NJ Class I provisions in the RPS be modified to enable more cost-effective achievement of solar and other renewable energy goals? If so, how?*

Sunrun agrees that this question deserves Board consideration to appropriately address the existing oversupply problem. Furthermore, New Jersey's Class I program's reliance upon out-of-state resources should be reevaluated. Setting a greater solar carve-out from the current Class I requirement would create additional support for jobs and economic development in New Jersey without altering ratepayer costs supporting the Class I program. Sufficient consideration needs to be given to how best to improve the RPS to provide a cost-effective means to meet New Jersey's Class I renewable energy goals and continue to create in-state jobs and the further development of solar resources in New Jersey.

iii. Should the utility-scale, grid supply solar segment continues to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

Fractional SRECs or factoring can be helpful to achieving the goal of aligning incentives with the demonstrated needs of various market segments. A thoughtful approach should be taken to adding MW for grid supply projects, so as not to exacerbate an existing oversupply problem. An updated RPS would allow for growth across all market sectors.

iv. Are the design concepts developed in the Solar Transition and modified by subsequent statutes still relevant? Should the Board consider changes to any of the following policies: the lack of a size limit on net metered project capacity; net metered "on-site generation" projects eligible for SRECs; 15-year Qualification Life; 15-year Solar Alternative Compliance Payment ("SACP") schedule; 5-year SREC vintage/bankability?

Sunrun supports the policy proposals created in S-2276/A-3918 which shorten the SREC eligibility period to 10 years.

iii, Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

No, the competitive markets have matured and developed to the point where these supportive "jump starting" programs are no longer required to support the market.

iv. *Has the Board's shared implementation of Subsection t of the Solar Act of 2012, N.J.S.A. 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting solar generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?*

No Comment.

IV. Net Metering & Interconnection Design Elements & Eligibility Criteria:

i. Are the Board's current net metering and interconnection rules consistent with the State's policy goals as expressed in the statute and RPS, objectives, design, eligibility criteria, etc.?

Yes.

ii. Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

No.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

SREC factoring would resolve any disproportionate competitive advantage in the SREC marketplace. Consideration should, however, be given to reserving a reasonable percentage of a distribution circuits remaining renewable capacity for residential projects as a distribution circuit fills to its renewable resource capacity limitations.

iv. Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all? Customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

Full retail net metering should continue to be implemented for customer-sited solar installations. The net metering discussion is complicated and deserves full consideration of all of the cost and benefits that inure to the distribution system and ratepayers. Ratepayer benefits created through the delaying or eliminating grid infrastructure improvements due to reduced circuit loading, among other benefits must be considered when evaluating appropriate compensation.

Currently, New Jersey's total solar generation has offset statewide utility retail electricity sales by about 1.7%. Conservation, LED lighting, and other energy efficiency measures have offset sales by about 8.3% from historic peaks. No change to net metering should be considered without a comprehensive study of all the costs and benefits of net metering and solar to New Jersey consumers. Short of the completion of such a study, any alteration of the net metering construct would be premature and could negatively impact the economics of solar for all ratepayers.

v. What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?

Residential solar installations are usually in the range of 5kW per installation. Most residential distribution circuits in New Jersey are designed to carry about 2000 homes or 10 MWs of peak load. Clearly, the impact of residential solar development scattered over a wide geographic area on distribution circuits has a minimal impact requiring utility upgrades.

vi. Have the aggregated net metering rules been effective at motivating publicly sited solar generation facilities? If not, what changes could improve adoption?

No Comment.

V. Land Use Implications:

i. How can the State minimize impact of solar development on open space, wooded, and farmlands?

No Comment.

ii. In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?

No Comment.

iii. What changes to its policies, if any, should the Board consider related to its goal of protecting open space? Can tools like the NJDEP Solar Siting Analysis be used to inform incentive approval decisions? Should a condition of SREC eligibility for ground mounted solar facilities of a certain size include compliance with industry best practices such as those specified in rules promulgated by the State Agricultural Development Committee.

No Comment.

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December 15, 2017

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RE: In the Matter of the Board's Establishing a Generic Proceeding to Review the State of the Solar Market
BPU Docket No. QX17090949

Dear Secretary Asbury:

On behalf of Atlantic City Electric Company ("ACE" or the "Company"), following for Staff's review, consideration and posting are ACE's input and responses to the list of topic areas and questions referenced in the Request for Public Comment released by the Secretary of the Board on November 29, 2017.. We look forward to reading the comments posted by interested parties on the Board's website in the very near future.

An original and ten copies of this correspondence will follow by overnight courier. Kindly return one date and time-stamped "filed" copy to the undersigned in the self-addressed, postage-prepaid envelope provided.

ACE Responses/Comments to the Proceeding Questions for Stakeholder Comment

I. Policy Goals and Objectives:

i. The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):

- Sustained Orderly Market Development

- Minimize Ratepayer Impact
- Minimize Transaction Costs
- Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security. Are these goals still relevant? Please explain why or why not.

RESPONSE: ACE is eager and prepared to continue providing energy services, managing the network, and piloting new, emerging technologies including energy storage, which will be an enabler for more solar energy. The Company believes that it is important for New Jersey to consider policies that focus more on advancing grid modernization, utility grid operational effectiveness, intelligence, equity, and resiliency.

ii. The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding To Review The State Of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?

RESPONSE: ACE agrees that the solar energy market in New Jersey is thriving. New Jersey has been a leader in solar development in the United States. As solar and other distributed resources develop, it is important that all customers utilizing the grid pay their fair share for maintaining the grid. One important area of focus of the State's solar policy should be proper rate design to ensure that no customers have to pay no more than their fair share for use of the grid.

iii. What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?

RESPONSE: Solar energy is an important component to meeting the State's overall clean energy objectives and achieving the State's RPS goals is an important milestone to that end. That said, proper rate mechanisms that compensate the utility fairly for the value of being connected to the energy system is critical to the evolving energy grid. ACE looks forward to investing in the system to make it more intelligent and resilient for all its customers and to enable the proper construction and siting of more renewable generation.

iv. Are other goals more appropriate? Have low and moderate income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?

RESPONSE: ACE encourages the development of programs that provide solar options for low income customers and underserved groups. The Company welcomes the opportunity to work with relevant stakeholders to seek out new focused solutions for these customers.

That said, the Board should explore the institution of further safeguards for consumers focused on developing consumers' understanding of the solar transaction, the technical capabilities/characteristics of the components, and the financial impact of the installation.

Additionally, the Company supports policies that encourage the development and deployment of economic energy storage in New Jersey. Energy storage, if operated correctly, has the potential to improve system reliability and operations, and aid in the integration of intermittent resources like solar and wind generation, thereby improving grid efficiency. Pairing energy storage with solar further expands the potential benefits, and ACE is eager to deploy this technology for the benefit of its customers in New Jersey.

II. <u>Solar Economics and Incentives</u>:

i. Are the current State/BPU policies sufficient to meet the State's solar goals? These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?

RESPONSE: ACE respectfully submits that current New Jersey polices are sufficient to meet the State's solar goals. Proper rate design is essential to ensure that customers pay no more than their fair share and should be a priority to ensure proper support for maintaining the grid. The Board should evaluate and consider different policy, rate, and program options focusing on advancing grid modernization, utility grid operational effectiveness, customer solutions, equity, and resiliency in the context of supporting New Jersey solar goals.

ii. If changes to the existing framework of incentives are recommended, please estimate the impact on NJ solar market economics and the cost and benefits to ratepayers.

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

iii. Are the financial targets used to inform policy choices in the "Solar Transition" referenced above still relevant (i.e. 12% Internal Rate of Return ("IRR"), < 10-year payback)? Given the maturity of the New Jersey market, are these metrics still meaningful? If these targets are outdated, what financial targets should be used in modeling to inform policy choices?

RESPONSE: The Company has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

iv. How should or can any proposed changes in the State's solar incentive policies account for changes in the future solar and electricity markets such as the federal imposition of module import tariffs, more widespread adoption of electric vehicles, or increased costs from other priorities such as offshore wind, microgrids or storm hardening?

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

v. Should the Board consider providing more oversight to the market to ensure that the SREC market and the Electric Distribution Companies' ("EDCs") auction of SRECs are competitive and that no conditions could lead to market manipulation? Are the current practices for reporting installed capacity sufficient to ensure timely and accurate information in support of market transparency? If not, what improvements should be made?

RESPONSE: The Company has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

III. <u>RPS Design Elements and Eligibility Criteria</u>:

i. Should the RPS be phased out?

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

ii. Should the RPS be restructured to set goals specific to each market segment (residential, commercial & industrial ("C&I") and grid supply connected to NJ distribution)? Can the NJ Class I provisions in the RPS be modified to enable more cost-effective achievement of solar and other renewable energy goals? If so, how?

RESPONSE: The Company has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

iii. Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

iv. Are the design concepts developed in the Solar Transition and modified by subsequent statutes still relevant? Should the Board consider changes to any of the following policies: the lack of a size limit on net metered project capacity; net metered "on-site generation"

projects eligible for SRECs; 15-year Qualification Life; 15-year Solar Alternative Compliance Payment ("SACP") schedule; 5-year SREC vintage/bankability?

RESPONSE: The Company has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

v. Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

RESPONSE: ACE respectfully submits that the SREC II program is not necessary as presently constructed. By way of comparison, the SREC I program had generally higher prices for SRECs and the ratepayers were responsible for paying the administrative fees. The SREC I program resulted in 87 SREC I projects through nine auction rounds.

At this writing, the SREC II program is expected to create only 16 projects though seven auction rounds. Participation by developers has been weak despite efforts to boost participation in the program. SREC II pricing has declined significantly over the past two years and is now benchmarked against spot prices when the bids are evaluated. An additional factor affecting participation in the program is that SREC II developers are responsible for absorbing the administrative fees instead of the ratepayers. Both factors limit the attractiveness of the program to developers.

vi. Has the Board's shared implementation of Subsection t of the Solar Act of 2012, N.J.S.A. 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting solar generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

IV. <u>Net Metering and Interconnection Design Elements and Eligibility Criteria</u>:

i. Are the Board's current net metering and interconnection rules consistent with the State's policy goals as expressed in the statute and RPS, objectives, design, eligibility criteria, etc.?

RESPONSE: The industry is evolving rapidly and rules need to be designed to allow flexibility for rapid change and must consider utility experience with grid optimization and modernization.

ii. Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

RESPONSE: Customer solar installations should be sized to meet and not exceed customer annual consumption. This capacity cap is a prudent requirement.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

RESPONSE: ACE's criteria for interconnection to the distribution system ("Criteria Summary" - hyperlink) has been successful in addressing the issue of grid access while allowing a significant amount of capacity for C&I, commercial, and residential projects.

iv. Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

RESPONSE: Many states are moving away from net energy metering to ensure that all customers pay their fair share for operation and maintenance of the grid. However, if net energy meeting is maintained in New Jersey, proper rate design should continue to be a priority to ensure that customers pay no more than their fair share to utilize the grid.

v. What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?

RESPONSE: ACE respectfully submits that all upgrades should be paid by the customer-generator requesting the interconnection triggering the upgrade.

vi. Have the aggregated net metering rules been effective at motivating publicly sited solar generation facilities? If not, what changes could improve adoption?

RESPONSE: The Company has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

V. Land Use Implications:

i. How can the State minimize impact of solar development on open space, wooded, and farmlands?

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

ii. In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?

RESPONSE: The Company has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

iii. What changes to its policies, if any, should the Board consider related to its goal of protecting open space? Can tools like the NJDEP Solar Siting Analysis be used to inform incentive approval decisions? Should a condition of SREC eligibility for ground mounted solar facilities of a certain size include compliance with industry best practices such as those specified in rules promulgated by the State Agricultural Development Committee.

RESPONSE: ACE has no comment at this time, but reserves the right to offer input at a later stage in this proceeding as the issues referenced in this section are developed.

ACE looks forward to its continued active participation in this proceeding. Thank you for your cooperation and courtesies. Feel free to contact me with any questions or if I can be of further assistance.

Respectfully submitted,

/jpr

Philip J. Passanante
An Attorney at Law of the
State of New Jersey

Enclosure

cc: B. Scott Hunter, BPU (Electronic Mail)

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PSEG
Services Corporation

December 15, 2017

Via E-mail (publiccomments@njcleanenergy.com) & UPS

New Jersey Board of Public Utilities
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PO Box 350
Trenton, NJ 08625-0350

Re: In the Matter of the Board's Establishing a Generic Proceeding to Review the State of the Solar Market
Docket No. QX17090949

To BPU Staff:

Please accept this correspondence on behalf of Public Service Electric and Gas Company ("PSE&G") and PSEG Energy Resources & Trade (collectively, "PSEG") in connection with the above-referenced matter. PSEG thanks Board Staff for its initiation of this generic proceeding, as well as the opportunity to provide comments and respond to Staff's questions. PSEG remains committed to working with the Board and all stakeholders to take steps to bring more transparency and competition to the New Jersey SREC market. Consistent with this objective, PSEG respectfully submits the following responses to the questions indicated:

I. Policy Goals and Objectives:

i. The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):

- Sustained Orderly Market Development
- Minimize Ratepayer Impact
- Minimize Transaction Costs
- Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security.

Are these goals still relevant? Please explain why or why not.

Response – PSEG believes these goals remain relevant today. These goals continue to be consistent with State renewable energy goals, and have served to place New Jersey among the

leaders nationally in supporting clean energy sources. New Jersey should continue to support clean energy sources.

ii. The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding To Review The State Of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?

Response – PSEG submits that the State should build on the success of its solar initiatives, with a focus on achieving the State's renewable energy goals, universal access, minimizing transaction costs and ratepayer impact, and an orderly and liquid SREC market. At the same time, the State should not lose sight of its need to support other clean energy sources, all of which provide substantial health and economic benefits to its citizens.

iii. What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?

Response – Solar energy should continue to play an important role in meeting the State's clean energy objectives from in-State resources. In addition, the State should provide the necessary support to ensure that all sources of clean energy within the State continue to operate, allowing all New Jersey citizens to benefit from the clean air of those sources and the economic benefits these facilities provide to the communities they support.

iv. Are other goals more appropriate? Have low and moderate income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?

Response – PSEG submits that the incentives and benefits of solar energy should be accessible to all customers regardless of income level. Programs that ensure that solar is affordably built and paid for by all customers while also ensuring that the environmental and economic benefits of that solar development are also shared by all should continue to be built upon. To the extent that customers are not being treated with integrity by solar market participants, it would be appropriate for the State to consider implementing consumer protection safeguards, particularly for residential customers. PSEG further believes that the utility through its management of the distribution grid can utilize energy storage to manage the impact of solar on the distribution system. In instances where distribution system capabilities are being stressed, the electric utility should be allowed to consider grid connected or behind the meter energy storage as a possible reliability solution.

II. Solar Economics and Incentives:

i. Are the current State/BPU policies sufficient to meet the State's solar goals. These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?

Response – New Jersey has been recognized as a national leader in solar development for well over a decade. Its policies have proven more than sufficient to meet the State's solar goals. However, as noted in the 2011 Energy Master Plan, "behind-the-meter solar programs are costly for non-participants, i.e., ratepayers who do not host a solar installation, yet pay for the subsidies in their monthly electric bills." 2011 Energy Master Plan at 5. The Board should continue its efforts to ensure that State-sponsored programs represent worthwhile initiatives that achieve a sensible balance among competing resource planning, economic, and environmental objectives from both a participant's and a non-participant's perspective.

For New Jersey residential electric customers, the retail rate of electricity is assessed on the basis of cents per kWh. This volumetric-based charge goes up and down depending on how much electricity the customer uses. However, many of the costs to serve residential customers, especially those associated with the transmission and distribution system, are not driven by volumetric usage, and instead are largely fixed. The traditional volumetric-driven residential rate structure -- acceptable in the past, when smart meters did not exist and distributed energy resources such as private solar generation were not as likely to be adopted on a widespread basis – may need to be re-considered as part of continuing to ensure just and reasonable solar development. Specifically, retail net metering allows residential solar customers to be compensated for all their self-generated electricity at the full retail rate, thereby over-compensating them and also resulting in under-collection of the fixed costs of maintaining and operating the energy grid that those customers rely upon 24-hours a day, every day of the year. The costs of the subsidy are shifted from private solar customers to those customers who do not have, do not want, or in some cases cannot afford or install private solar generation.

With this in mind, PSEG would note that in September 2017, the Department of Energy (DOE or Department) issued a Request for Information (RFI) on net energy metering (NEM). *See Costs and Benefits of Net Energy Metering: Request for Information*, 82 *Fed. Reg.* 43345 (Sept. 15, 2017). In the RFI, DOE notes that Congress has ordered the Department, as part of the ongoing Grid Modernization Initiative, to conduct a study on the costs and benefits of NEM. DOE intends to produce a report on cost-benefit analyses that assesses NEM's impact on electric companies, customers, and the grid. The Board may wish to review and factor in the DOE study as it continues to review and consider changes to retail net metering policies.

PSEG takes no position with respect to the questions listed in paragraphs (ii)-(iv) of Section II. With respect to the question listed in paragraph (v):

v. Should the Board consider providing more oversight to the market to ensure that the SREC market and the Electric Distribution Companies' ("EDCs") auction of SRECs are competitive and that no conditions could lead to market manipulation? Are the current practices for reporting installed capacity sufficient to ensure timely and accurate information in support of market transparency? If not, what improvements should be made?

Response – PSEG submits that the Board should provide more oversight to the New Jersey solar market to ensure transparency and competitiveness. With regard to market transparency, a competitive and efficient market requires timely and accurate information and reporting on installed capacity and SRECs generated. Absent this transparency, New Jersey ratepayers incur higher costs as market risk and uncertainty increase.

Many observers have noticed a chronic lag in the reporting of New Jersey solar capacity, where some projects may not be reported for many months or years after they are installed and operational. This situation contributes to market risk and uncertainty, as total installed capacity is opaque to the market at any point in time, and ultimately raises costs to New Jersey ratepayers. Understanding that administrative or other issues may delay the certification of some projects, PSEG believes that the Board should continue to improve upon its efforts to bring clarity to the market by promptly reporting all solar capacity that is operational. Specifically, all solar capacity should be reported to the Board promptly following the date it is placed into service and issued a permission to operate (PTO). The Board should then report this capacity as installed in the following month's solar installation report, thus providing an accurate and complete accounting of installed solar capacity.

Similarly, SREC generation statistics are currently opaque to the market as solar owners presently have no obligation to timely register SREC generation in PJM GATS. This enables a perpetual lag in the creation of SRECs in PJM GATS, where some SRECs may not be created for many months or years after actual generation. As such, the total supply of SRECs is unknown at any point in time. Each year, many SRECs are not created and are thus not available to the market in PJM GATS at the time that compliance obligations are due. This artificially reduces supply, raises costs to ratepayers, and undermines the integrity of the RPS and competitiveness of the market. The Board should therefore require that solar owners create SRECs in PJM GATS within a reasonable time. At a minimum, all SRECs generated within a compliance year should be reported to PJM GATS no later than one month prior to the RPS compliance deadline. This is necessary to maintain the integrity of the RPS, prevent manipulation, uneconomic withholding, and ensure the normal functioning of the market.

With regard to market competitiveness, the Board should take steps to ensure that the New Jersey SREC market functions competitively. To that end, PSEG recommends that the Board consider the New Jersey Division of Rate Counsel's recommendation, provided to the New Jersey Senate Environment and Energy Committee on June 6, 2016, that the Board establish a Market Monitoring unit to prevent market manipulation and safeguard the normal functioning of the market. The Market Monitor should provide independent expert monitoring of the competitive performance and efficiency of the New Jersey SREC market. This should include:

- Identifying attempts to exercise market power, collude, or otherwise manipulate prices in the secondary market and/or the NJ EDC SREC auctions;

- Making recommendations regarding proposed market rule changes to improve the efficiency of the market for NJ SRECs; and

- Assessing whether the NJ EDC SREC auctions are administered in accordance with the noticed auction rules and procedures.

The Market Monitor would monitor the NJ SREC market in order to protect and foster competition, as well as to increase the confidence of participants and the public in the SREC market. The Market Monitor would provide a critical oversight function similar to other established energy and environment markets. For example, PJM employs a market monitor to ensure a robust, competitive, and non-discriminatory electric power market in PJM. The Regional Greenhouse Gas Initiative ("RGGI") employs a market monitor to monitor the conduct of market participants in auctions and in the secondary market to identify indications of market manipulation or collusion and thus ensure the competitiveness of the RGGI market. Importantly, NJ EDC SREC Auctions provide a critical source of supply and market liquidity for prompt vintage SRECs that are eligible to satisfy current year RPS compliance obligations. The liquidity these auctions provide to compliance entities is especially necessary given that, as described above, large quantities of SRECs generated in a given compliance year may not be available to the market to satisfy its annual RPS compliance obligations. A market monitor that monitors the conduct of market participants in auctions and in the secondary market would therefore help prevent market manipulation and ensure that the market operates competitively.

III. RPS Design Elements & Eligibility Criteria:

PSEG takes no position with respect to the questions listed in Section III, paragraph (i), (ii), and (iv). With respect to the remaining questions:

iii. Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

Response – PSEG submits that the Board should be careful to avoid bias with regard to assessing the relative economics of grid-supply versus behind-the-meter projects. While grid supply projects may benefit from economies of scale with regard to their cost structure, perhaps more significantly, with respect to revenues, as discussed above, behind-the-meter projects benefit substantially from New Jersey's net-metering policies in ways that grid-supply projects do not enjoy and that arguably distort the market. Therefore, absent a thorough economic analysis, PSEG believes that the Board should refrain from structural changes to the solar market on the basis of perceived but unsubstantiated imbalances or (dis)advantages. Again, DOE's evaluation of the costs and benefits of net metering could perhaps be helpful for the Board to consider in this context.

v. Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

Response – PSE&G believe its solar programs are still necessary and uniquely support the State's renewable energy goals. The Solar 4 All program serves multiple state goals; *i.e.,* the program targets landfill and brownfield properties, putting unusable land to productive use in generating clean energy. To date, PSE&G has converted nearly 200 acres of unusable land to solar energy production. The design of the Solar 4 All program also allows all PSE&G customers to equally benefit from the value of clean solar energy while providing valuable jobs to workforces developing the skills to support the growth of the solar economy.

The PSE&G Solar Loan program provides an approach to financing of which thousands of customers have taken advantage in support of approximately 100MW of new, customer-sited solar capacity since program inception. The feedback that PSE&G receives from its customers is that given the uncertainty in the SREC market, having a mechanism that provides long term SREC price certainty is critical in their decision to invest in solar generation. PSE&G has also received significant positive feedback from many third-party solar installers that have leveraged the PSE&G Solar Loan program to enhance their customer interface and business opportunities.

vi. Has the Board's shared implementation of Subsection t of the Solar Act of 2012, N.J.S.A. 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting solar generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?

Response – PSE&G has worked closely with Board Staff and the New Jersey Department of Environmental Protection in developing multiple solar projects on landfills and brownfields in accordance with subsection (t), and believes that the implementation process has been effective.

IV. Net Metering & Interconnection Design Elements & Eligibility Criteria:

PSEG takes no position with respect to the questions listed Section IV, paragraphs (i), (iv), and (vi). As for the remaining questions in Section IV:

ii. Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

Response - PSEG is supportive of existing rules addressing this issue. However, as discussed above, PSEG would encourage the Board's continued review of the long term viability of net metering.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

Response - PSE&G has seen no indication that the premise underlying this question is correct, *i.e.,* that larger, C&I-sized solar projects have "crowded out" smaller projects from interconnecting on distribution circuits.

v. What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?

Response - Additional installation of distributed solar facilities could require upgrades depending upon the circuit, and each additional installation is evaluated on a case-by-case basis. In addition, solar energy can introduce both short term and longer term disturbances to the electric grid. As noted above in instances where distribution system capabilities are being stressed, the electric utility should be allowed to consider grid connected or behind the meter energy storage as a possible reliability solution.

V. Land Use Implications:

PSEG takes no position with respect to the question listed in Section V, paragraph (iii). As for the questions listed in paragraphs (i) and (ii):

i. How can the State minimize impact of solar development on open space, wooded, and farmlands?

Response – Current law provides for an easier regulatory path for the installation of solar facilities on brownfields and landfill sites. These provisions, combined with the State's support of PSE&G's Solar 4 All program, help to focus solar development on landfills and brownfields, rather than open space such as farmlands and wooded locations.

ii. In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?

Response - The State should continue to support programs and policies that support development targeted to landfills and brownfields, such as those landfills and brownfields developed under PSE&G's Solar 4 All program.

Once again, PSEG appreciates the opportunity to participate in this stakeholder process and to provide these responses. We thank Staff for its consideration of our submission.

Respectfully submitted,

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Cc: Irene Asbury, Secretary of the Board (via e-mail and regular mail)

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December 15, 2017

Via email to publiccomments@njcleanenergy.com

B. Scott Hunter
New Jersey Board of Public Utilities
Office of Clean Energy
44 South Clinton Avenue
P.O. Box 350
Trenton, New Jersey 08625

Re: Request for Comments – Generic Solar Proceeding

Dear Mr. Hunter:

Jersey Central Power & Light Company ("JCP&L" or the "Company") is pleased to submit comments on the Board of Public Utilities ("BPU") Staff's ("Staff") draft questions regarding the "2017 Solar Generic Proceeding", which commenced in September 2017. JCP&L thanks the BPU for allowing the EDCs as well as other interested parties to have the opportunity to comment on important policy issues as Board Staff completes its review of the state of the solar market in New Jersey. The Company has been, and continues to be, engaged in discussions relative to the solar market in the State.

Staff has proposed a number of questions in a variety of topical areas. In this submittal, JCP&L will address selected questions within those topics, which it hopes is helpful to Staff as it completes its review. The Company has arranged its response in the order of the topics posed.

I. Policy Goals and objectives

i. The Board found the following goals and objectives appropriate for evaluating various policy approaches in the "Solar Transition" Proceeding from 2006/07 (I/M/O Energy Portfolio Standards – Alternative Compliance Payments and Solar Alternative Compliance Payments, BPU Docket No. EO06100744, Order dated September 19, 2007):

- *Sustained Orderly Market Development*
- *Minimize Ratepayer Impact*
- *Minimize Transaction Costs*
- *Support other policy goals including environmental and public health, equity to all ratepayer classes, job growth, improved reliability and security. Are these goals still relevant? Please explain why or why not.*

For the most part, the goals established by the Board in the "Solar Transition" proceeding are still relevant. However, as the market has matured, the focus should no longer be "sustained, orderly market development" but more appropriately "orderly, sustained market operation".

Throughout its infancy, the solar market in NJ has benefitted from various market and non-market mechanisms, supported by legislative and regulatory policy, including rebates, net metering, renewable portfolio standards and tax credits/incentives. As the market continues to mature, the focus should shift toward continued liquid, transparent market operation, with less reliance on subsidies. The cost of solar has declined dramatically and the need for and magnitude of available subsidies should be reevaluated. Beyond efforts to jump-start adoption and nurture a fledgling industry, lucrative subsidies function to distort market signals and stifle efficiencies that are borne out of competition in the marketplace. Other states such as Arizona, Hawaii and Indiana, who also having maturing solar markets have moved away from net metering. Likewise, California is undergoing modifications of policy as it attempts to settle on a more precise and rational valuation of the electricity produced by behind-the-meter solar as it shifts from its legacy net metering program to its next phase entitled Net Metering 2.0.

Minimizing ratepayer impact and maintaining equity for all ratepayer classes are interrelated policy goals. JCP&L does not believe that net metering programs are consistent with these objectives. Net metering inherently picks winners and losers, in many cases along socio-economic lines, and creates inter-class and intra-class inequities. Solar non-participants bear a disproportionate responsibility for distribution system costs because of net metering. Solar participants pay little to no charge for the use of the transmission and distribution systems, although it consistently is used to receive or export electricity from their premises. Instead, transmission and distribution system costs are shifted from solar participants to solar non-participants, resulting in higher costs for solar non-participants.

ii. The September 22, 2017 Board Order (I/M/O the Board's Establishing a Generic Proceeding To Review The State Of the Solar Market – Staff's Update, BPU Docket No. QX17090949) establishing this Generic Proceeding describes a thriving solar market in New Jersey that far exceeds what market participants had predicted. Given that a robust and diverse solar market has been established, what should be the focus of the State's solar policy?

As stated above, the State's policies, thus far, have effectively jump-started the solar market such that a robust and diverse solar market now exists in NJ. There is a sufficient network of sales, financing, installation and service to support the State's solar policy objectives. Therefore, NJ policy makers need only to concern themselves with implementing necessary energy policies to establish an appropriate portfolio of market-based renewable, nuclear and fossil resources to secure NJ's energy future.

iii. What is the role of solar energy in meeting the State's overall Clean Energy objectives? How important is achieving the percentage requirements set-aside for Solar Renewable Energy Certificates ("SRECs") in the Renewable Portfolio Standards ("RPS")?

Solar is an important component in meeting the State's overall clean energy objectives, however, New Jersians cannot afford to meet these objectives "at any cost". Cost must be carefully factored into energy policy decisions. The Company believes there is no "most important goal"

for the State's solar policy. There must be a balanced, multi-faceted approach to ensure available, affordable solar that does not:

- Impose unreasonable costs on the State's residents and ratepayers that either choose not to install solar or cannot afford to install solar;
- Impact the financial performance and/or credit quality of the NJ EDCs from the erosion of revenue to electric distribution companies due to generous net metering policies; or
- Increase the cost of BGS due to unreasonable Renewable Portfolio Standards ("RPS") obligations and/or costs

Generally, Renewable Portfolio Standards have been implemented by states for policy reasons such as increasing the renewable component of the supply-side resource portfolio, promoting economic development and reducing emissions. Because many of the resources that qualify as a renewable resource historically have not been cost competitive with traditional supply-side resources such as natural gas, coal and nuclear, RPS subsidies were introduced to foster the development of qualifying renewable resources. More recently, due to the lucrative nature of combined and layered state and federal solar subsidies, the development of solar resources has increased dramatically.

New Jersey currently ranks in the top five states in the country and is ranked first in the Northeast as far as MWs of installed solar capacity.[1] However, such lofty stature has come with a cost to customers. In 2017, Solar Renewable Energy Credit ("SREC") prices in NJ have been reported between $219 to $260 per SREC while Maryland, who also has an in-state facility requirement, have been reported at $6 to $18 per SREC.[2] Like NJ, Maryland is also meeting its RPS goals which has a 1.15% solar requirement that is currently oversupplied with excess solar capacity as reflected in SREC market prices. In NJ, supply and demand for SRECs are aligned more closely.

JCP&L believes that a change to New Jersey's RPS law to increase solar percentages is unwarranted. Per the ICF presentation, Economic Fundamentals Analysis of New Jersey Solar Renewable Energy Certificate Market Scenarios, as presented to the New Jersey Clean Energy Program Renewable Energy Stakeholder Group on November 9, 2017, under current policy the market has responded to the policy goals and is currently overbuilt. Allowing current policy to stabilize will allow the SREC market to transition "towards economic fundamentals-based pricing levels by EY20 as participants reconcile to the existing policy design."[3] Additionally, as solar panel efficiency improves and the cost of solar panels decrease and become more cost competitive with traditional energy market resources, it is unclear that further incentives of any kind will be necessary to incent further investment in renewable resources such as solar. As reference, in 2015 West Virginia repealed its Alternative and Renewable Portfolio Standards law. Despite having no RPS requirements, West Virginia has the largest amount of renewable capacity per capita of any state in an 11-state region.[4] From the perspective of deployment as a function of population size, West Virginia has developed its renewable resources at a rate that is on-par with other states.[5]

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1 https://www.seia.org/research-resources/top-10-solar-states

2 Renewable Energy in West Virginia: Research for 5-year Energy Plan prepared by Center for Business & Economic Research 6/26/2017. Page 16.

3 Economic Fundamentals Analysis of New Jersey Solar Renewable Energy Certificate Market Scenarios slide 27.

4 Renewable Energy in West Virginia: Research for 5-year Energy Plan prepared by Center for Business & Economic Research 6/26/2017. Page 11. (11 state region is DE, IN, KY, MD, NC, NJ, OH, PA, TN, VA, WV).

5 ID at page 11.

Thus, resisting the temptation to move the finish line through new legislation and allowing the market to develop naturally through 2028, will provide the BPU with a well-developed record to determine if tweaks are needed to the RPS to meet policy objectives or if an RPS is even needed at all. Such an approach would be consistent with the tenets of the New Jersey Energy Master Plan to promote a diverse portfolio of new, clean, in-state generation and maintain support for the renewable energy portfolio standard while driving down the cost of energy for all customers.[6]

iv. Are other goals more appropriate? Have low and moderate income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate income consumers? Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers? Should energy storage market development be linked in some way to the existing solar policies and if so, how?

Historically, access to solar has been more suited to land owners with sufficient space to mount a solar array. In NJ, because of property values, land owners generally have higher household incomes. Low and moderate-income consumers have the same access to solar incentives, but perhaps lack sufficient space to mount an array, lack the financial resources to enter a lease agreement, rent rather than own a home, and/or type of dwelling (i.e., apartment, townhouse vs single family home). In short, the limiting factor for their participation is not clear. Research would be needed to determine the reasons that low to moderate income households participate at a lower rate.

Isn't the better question whether it matters where it is installed and by whom if the benefits are shared and the costs are borne equally among participants and non-participants? First, it goes without saying that there would be no inequities between solar participants and non-participants if there were no subsidies. To the extent that the cost of any subsidies is paid by both participants and non-participants and the benefits of lower summer peak demands, reduced emissions and improved supply-side diversity are enjoyed by both solar participants and non-participants then, while perhaps there is not parity for participants and non-participants, there is at least equity in the construct. Nonetheless, any equity among participants and non-participants falls away under the NJ net metering construct. Because the NJ net metering construct provides a full retail credit for each kWh generated up to the amount of the residential participant's load, the residential participant generally pays no monthly electric bill. Therefore, the participant pays no portion of the solar program costs, including any subsidies, leaving the full cost of the subsidies to be paid by non-participants. The NJ net metering construct is the mechanism primarily responsible for the disparity between participants and non-participants, regardless of their dwelling, location or household income. For these and other reasons discussed in these comments, JCP&L strongly urges that net metering be discontinued in NJ.

The Company does agree that additional consumer safeguards should be considered. Much as the BPU licenses BGS Suppliers, JCP&L believes that similar safeguards for less sophisticated

6 2011 New Jersey Energy Master Plan, Page 1

consumers, such as residential customers, should be instituted to protect customers from unscrupulous behavior. Further, solar leasing arrangements are complex agreements that require some understanding of electricity markets and, at least the future price of electricity. Consumer education and an informed public is necessary to ensure public confidence. The Company does not believe additional protections for commercial installations or for developers or investors in solar projects are warranted as they would be expected to be informed, sophisticated participants who understand the risks of solar investment, not to mention that would likely defeat the purpose of an open, competitive market with willing participants.

Lastly, respecting energy storage and the value of energy storage, the NJ net metering construct provides essentially a "free" storage service for net metering participants; de facto, there is no need to purchase, nor economics to support the purchase of, a battery for PV energy storage. As long as net metering is available in NJ, the market value of energy storage will not be transparent to solar owners and will mute market signals with respect to energy storage.

II. Solar Economics and Incentives

i. Are the current State/BPU policies sufficient to meet the State's solar goals. These policies include: retail net metering; streamlined interconnection of customer-sited solar; SREC eligibility for customer-sited solar connected to the distribution system serving NJ; SREC eligibility for utility-scale grid supply project; and state and local tax incentives? If not sufficient, what changes should be considered?

The policies in place are more than sufficient to meet the State's solar goals. This is supported by the currently existing, as well as the forecast of continued, oversupply of SRECs available to meet the RPS obligations as presented by TRC Solutions at the October 27, 2017 stakeholder webinar. Solar enjoys a variety of incentives, including federal tax benefits, accelerated depreciation, SREC credits and net metering, which in conjunction with declining solar module costs, has led to a rapid build-out of solar in the State. For additional discussion of retail net metering, please see our response in section IV below. The Company has observed that the streamlined interconnection application requirement of a 10-day turn-around is often difficult to meet in light of the unpredictable nature of the rate of incoming applications coupled with core business requirements such as storms and other emergencies. Generally, the 10-day turn-around does not appear to be a major factor for the vendors submitting applications.

The Company believes that SREC eligibility for utility-scale grid supply projects owned or operated by an electric public utility and approved by the Board pursuant to section 13 of P.L.2007, c.340 (C.48:3-98.1) should be preserved for in-state solar resources. Utility-scale projects have been shown to have a lower installed cost on an equivalent kW basis than residential solar PV installations. These utility-scale projects are not eligible for net metering, but should remain eligible for SRECs at a level sufficient to allow for these types of projects. This would be supportive of the solar and renewable generation goals of the State by providing a lower cost resource to meet energy policy goals.

Based upon information provided at various webinars that are part of this proceeding and the various solar tracking reports, it appears the current level of PV in NJ is meeting State goals and installation at the current growth rate is expected to meet future State goals. The Company

points out that in JCP&L territory there are approximately 28,000 net metered customers with an installed capacity of 484 MW. There is an additional 228 MW of grid connected solar in our territory. Combined, this installed nameplate capacity represents approximately 10.5% of the JCP&L peak load. Additionally, residential customers who fully offset their annual electric usage with the installation of PV, do not adequately pay their fair share for ongoing grid maintenance and upgrades. Consideration should be given to increasing the monthly customer charge, or adding an access charge for PV customers.

The net metering construct is not essential to sustain the economics for solar installations. As discussed further below, there are other incentives that offset the cost of solar installations. Net metering masks the value of storage, as net metering allows solar customers who generate some or all of their own electricity to use that electricity anytime, instead of when it is generated. The net metering construct allows these customers to use the distribution as a virtual storage since they are always connected and receive grid supplied electricity when they are not generating solar, which billable usage is negated due to the application of banked kilowatt-hours.

ii. If changes to the existing framework of incentives are recommended, please estimate the impact on NJ solar market economics and the cost and benefits to ratepayers.

A recent study of solar incentives was prepared for Consumer Energy Alliance which concluded that the existing incentives for solar PV were substantial, and in many states collectively exceeds the total cost of installing a solar PV facility. New Jersey was included among the states analyzed and the study calculated that the total incentive as a percentage of installed cost for a residential PV system was 183%, or the value of the incentives was greater than the cost of the solar PV. Net metering was identified as an offset to 80% of the cost of the installed solar, followed by SREC values at 73% and the federal tax credit at 30%. The study defined the net metering incentive as the difference between the present value of the customer's bill savings and the utility's avoided costs over the facility's life.[7] For additional discussion of net metering, see Section IV iv.

III. RPS Design Elements & Eligibility Criteria
i. Should the RPS be phased out?

The Company addresses the question of whether the RPS should be phased out in the next section entitled RPS Design Elements & Eligibility Criteria, Section III, question ii.

ii. Should the RPS be restructured to set goals specific to each market segment (residential, commercial & industrial ("C&I") and grid supply connected to NJ distribution)? Can the NJ Class I provisions in the RPS be modified to enable more cost effective achievement of solar and other renewable energy goals. If so, how?

7 Incentivizing Solar Energy: An In-Depth Analysis of U.S.Solar Incentives; Consumer Energy Alliance, Report prepared by Borlick Associates, LLC; p. 22

The Company agrees that the RPS should be restructured to set goals specific to each market segment. Currently large commercial/utility scale projects can take up much or all of the hosting capacity on a circuit, thereby making it harder for others to connect.

New Jersey is already well on its way to meeting the goals of its RPS. If no additional solar capacity is added in NJ, there is enough solar capacity to cover the solar obligations through 2023.[8] Also, the costs of solar continues to drop. The cost of a residential solar PV 5.7 kW system in 2010 cost $7.24 per Watt DC. The same installation in 2017 cost $2.80.[9] New Jersey has already paid a significant price to be an early adopter to develop its renewable market.

JCP&L believes increasing the RPS target for solar again will artificially inflate SREC prices, which action would more generally conflict with the first overarching goal of the New Jersey Energy Master Plan of driving down the cost of energy for all customers. Since the SREC market is maturing and the cost of solar installations is decreasing, the need for and magnitude of available subsidies should be reevaluated. JCP&L contends, specifically, that net metering should be discontinued. Additionally, continued improvements in solar technology will continue to make solar more cost competitive with traditional supply-side resources, paving the way for the eventual sunset of NJ's RPS program.

iii. Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?

As stated earlier, utility scale solar is more economical to install, providing the benefits of solar to all at the most reasonable cost. Excluding one form of solar resources to uneconomically support (subsidize) another form of solar resources does not support New Jersey's Energy Master Plan to promote a diverse portfolio of new, clean, in-State generation, capitalize on emerging technologies for power production and drive down the cost of energy for all customers.[10] The BPU should not put its thumb on the scale and pick winners and losers to the detriment of the New Jersey customers or the natural development of solar resources. The solar market and its ever-evolving technologies should be treated equally and price should determine what segment supplies the SRECs. It is in the customer's best interest to have the market determine the solar suppliers who can provide the SRECs at the lowest price.

iv. Are the design concepts developed in the Solar Transition and modified by subsequent statutes still relevant? Should the Board consider changes to any of the following policies: the lack of a size limit on net metered project capacity; net metered "on-site generation" projects eligible for SRECs; 15-year Qualification Life; 15-year Solar Alternative Compliance Payment ("SACP") schedule; 5-year SREC vintage/bankability?

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8 TRC Solar Analysis, NJCleanEnergy.com. Slide 4.
9 National Renewable Energy Laboratory, Q1 2017 Page vi.
10 ID at page 1

The Company believes that many of the design concepts developed in the solar transition are still relevant, but does suggest that consideration be given to capping net metering SREC eligibility at 2 MW for customers connected at distribution service less than 15 kilovolt, and 6 MW for customers connected between 15 and 35 kilovolt, or a similar formula such that the line to line kilovolts of the supplying circuit divided by 6 would produce similar results in terms of a size cap relative to the distribution voltage.

v. Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

The EDC solar programs were established to satisfy a particular need, which was to establish long-term contracts under which participants could obtain financing to construct solar projects. The Company does not believe these programs should be continued following the conclusion of the last approved programs. Existing contracts should be allowed to continue in accordance with the contract terms until their expiration.

ii. Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

The Company believes a capacity cap would be prudent; see the discussion above under section III iv., which suggests using supply circuit voltage to provides a general rule of thumb for hosting capacity. However, there may be additional connection limits from the Utility based on site specifics which would be identified as part of the interconnection study process.

iii. Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

From strictly a net metered, behind the meter installation perspective, the Company has observed instances in which larger projects have crowded-out, or restrained the ability for smaller project to be approved for interconnection on constrained circuits. Please reference the discussion on determination of capacity cap levels relative to circuit size above.

iv. Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

The Company notes that a number of states, including Hawaii, Arizona, Maine and Indiana, have either decided to phase-out net metering or reduce the subsidies inherent with net metering, with some states considering new or higher fees on solar customers. As an example, Arizona recently lowered the credit residential solar customers receive for excess energy sent back to the grid and limits how long these customers would be eligible to remain on a net metering rate. The retail rate policy changed to value export credits based upon a short-term valuation method which is a five-year average of utility scale PPA pricing. It also establishes rooftop solar customers as a separate rate class and eliminates the netting or banking of solar power credits to offset usage in later months.

As stated earlier, net metered solar customers benefit from the use of the distribution grid through the delivery of electricity and the export of excess generation, depending upon the needs of the customer. However, the banking provision contained within the net metering construct, which allows for the month-to-month creation of a bank of excess kilowatt-hours that can be used to offset subsequent monthly consumption, effectively reduces, and in many cases, eliminates the payment by net metered customers for their use of the electric distribution system. This effectively reduces the number of customers being billed for distribution system maintenance and upgrades through rates, with the non-solar customers burdened with a greater portion of these expenses. These net metered solar customers substantially benefit from this net metering subsidy, in addition to the other incentives, including federal tax benefits, accelerated depreciation, and SREC credits. As solar module costs continue to decline, the need for additional subsidies is lessened.

The Company believes that this review of the solar market in New Jersey is timely, and presents an opportunity for the Board to perform a full review of the suite of incentives available to solar. President Mroz in his opening statement at the public hearings expressed the Board's concerns about the solar market, including the cost of incentives in this time of a growing solar market with declining costs. While the federal tax and depreciation incentives are not within the Board's ability to make changes, the role of SRECs and net metering policies certainly is in its purview. The Company recognizes that contemplating changes to the net metering policy requires much thought and deliberation. However, many other state jurisdictions have recognized the fallacies of net metering and have made changes, which could provide some basis for future policy consideration and action.

JCP&L offers that this proceeding be used as a starting point for a review of net metering policies and provisions. There is an urgent need for all customers to fairly pay for their use of the distribution system. As an alternative to discontinuing net metering, a phase-out that alters net metering provisions, such as the ability to bank kilowatt-hours, the full retail credit, and alternative tariff charges to net metering customers should all be considered as possibilities to level the playing field for all ratepayers. Reducing the monthly retail credit to a value based upon generation or wholesale energy rates (as grossed up by loss factors) would effectively ensure that net metering customers pay for their use of the distribution system, as they still require the use of the distribution system for electric supply, both when they have a need for electricity because solar generation is inadequate to meet internal requirements, and for when excess solar generation is being exported to the grid. The Company recognizes that an endeavor such as this will take much thought and consideration, and would happy to participate in any proceedings that may take place.

v. What is the impact on the distribution grid of additional installations of distributed solar facilities? If upgrades are needed beyond those required to be paid for by individual customer-generators, who should pay for them?

Potential impacts are on a case by case basis. There are circuits that are currently considered 'saturated' while others have little to no amount of DG penetration. In the terms of a high-level look at 'available hosting capacity' there remains significant headroom available although that does not necessarily line up geographically with individual proposed new solar PV installation projects. The State should encourage development on 'underutilized' circuits in terms of hosting capacity to minimize required system upgrade costs before continued discussions of cost allocation in general. Ultimately, infrastructure costs should be borne by those parties who are receiving economic benefits directly from the projects- namely the developers/end use customers.

vi. Have the aggregated net metering rules been effective at motivating publicly sited solar generation facilities? If not, what changes could improve adoption?

The Company does not believe any changes to the aggregated net metering rules should be considered and would be opposed to any changes to aggregate net metering rules that would expand the eligibility for participation. Net metering that uses a virtual net metering scheme, much like a community solar construct, would entail subsidized use of the local EDC's delivery system. JCP&L believes that the construction of utility-scale solar facilities, by the utilities, is the most equitable way to allow all customers to participate. Community solar or virtual net metering simply further exacerbates the inequities among solar participants and non-participants under the current NJ net metering construct.

V. Land Use Implications

i. How can the State minimize impact of solar development on open space, wooded, and farmlands?

The company believes this is a policy consideration best addressed by BPU Staff.

The Company appreciates the opportunity to provide these comments, and hopes to continue to work with and be helpful to Staff as it addresses this review of the solar market in New Jersey. If there are any questions, please contact me.

Very Truly Yours,

Thomas R. Donadio

New Jersey Resources

December 15, 2017

New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, New Jersey 08625
Attn: Irene Kim Asbury, Secretary of the Board

Re: Generic Proceeding on the State of the New Jersey Solar Market

Dear Ms. Asbury:

New Jersey Resources (NJR) appreciates the opportunity to offer comments in response to staff's request for stakeholder input regarding the proceeding on the state of the New Jersey solar market.

Through its Clean Energy Ventures subsidiary, NJR is a major participant in the New Jersey solar market, owning and operating 190MW of solar projects in New Jersey, including 100MW of grid-connected, 30MW of commercial net metered, and 60MW of residential projects from approximately 7,000 customers. Our total investment in the New Jersey solar market is approaching $600 million.

The Board of Public Utilities (BPU) has defined many important questions which frame the discussion of the changes necessary to sustain New Jersey's solar market for the long term. In our view, the most relevant question concerns the goal of maintaining a stable, predictable and orderly market; a goal which we believe is essential to support future solar growth and is at-risk today given current market conditions.

With the recent pace of solar installations exceeding RPS requirements, the state again faces the prospects of a severe, multi-year industry downturn, reversing the gains of the Solar Act of 2012. As confirmed by the recent information presented by the NJCEP, our analysis indicates that by the end of this energy year the state will have achieved its EY 2028 RPS target, exceeded the net metering cap, and will not require any new solar projects to meet the solar RPS until well into the next decade. In the absence of policy intervention, market forces can be expected to significantly slow new construction, putting at risk 6,000 jobs and over $8 billion in solar investments made since 2009.

Given the urgency of the situation, NJR believes it necessary that policymakers place priority on proactively stabilizing the market. The Solar Transition Bill (S2276/A3918) provides a good solution, by increasing the RPS to a level sufficient to support jobs and investment for the next several years, and introducing measures to sustain market stability and balance. While providing an RPS increase for only a few years, the bill will force discussion of long-term strategy and transition as initiated by this proceeding, while providing sufficient time for the process to receive the attention and focus it deserves.

Please let us know if you have any questions or would like to discuss.

Sincerely,

Lawrence M. Barth
Director, Corporate Strategy

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From:	Stan Allison
To:	publiccomments@njcleanenergy.com
Cc:	Robert Sheppard; Ralph Thompson; John Forgash; Ben Molthen
Subject:	Stakeholder comments on responses to the Generic Proceeding
Date:	Friday, December 15, 2017 2:31:03 PM

December 15, 2017

Mr. Richard S. Mroz, President
Mr. Joseph L. Fiordaliso, Commissioner
Ms. Mary-Anna Holden, Commissioner
Ms. Dianne Solomon, Commissioner
Mr. Upendra J. Chivukula, Commissioner
New Jersey Board of Public Utilities
44 S. Clinton Avenue
Trenton, NJ 08625

Re: Solar Proceeding Stakeholder Comments

Dear Mr. President and Commissioners:

Holocene Clean Energy ("Holocene") is the owner of the first four projects listed on the "Subsection (r) Complete Expressions of Interest received in response to Board's May 2016 & Feb 2017 Orders". (These projects identify Conergy Development Corp. as the Developer; however, Holocene is the current owner of all four projects.)

The suspension of Subsection (r) and the initiation of the Generic Proceeding to Review the State of the Solar Market has had a major impact on developers of New Jersey solar energy generation projects. We cannot comment on the appropriate amount of new, utility scale solar generating capacity that should receive SRECs, we believe that *some* amount is appropriate, and we urge the Board to expedite decisions regarding the treatment of this minimum amount of new capacity.

When we acquired the four projects that we are developing, there was uncertainty over the size of the cap that the Board would establish for SRECs. We commented to the Board in June that a cap will result in some projects not receiving SRECs, thus disappointing the expectations of developers who may have expended substantial funds to develop a project that meets all appropriate criteria. Clearly, a project that is denied SRECs as a result of the cap or other policy change will have increased difficulty in receiving financing.

Notwithstanding the uncertainties created by the cap, we continued developing our four rooftop projects. The Board's Request for Comments issued June 15, 2017, suggested ranking projects by size, with smaller projects being favored. In response, we suggested that priority should be given to projects based on the order in which their EOIs were filed, because the earlier that an EOI was filed, the more likely it is that the developer has made substantial progress in developing the project. Moreover, when a scarce resource is to be allocated, it is normally regarded as fair to give priority to those parties that accessed it first.

The suspension of Subsection (r) and the initiation of the Review the State of the Solar Market has, however, created far greater uncertainties. Three of our projects have signed

Wholesale Market Participation Agreements (WMPAs) with PJM. (We were required by PJM's rules to sign the WMPAs when we did; we did not control the timing.) At the time we executed the WMPAs, we incorporated in each document a schedule that we believed was reasonable for us to complete each project and put it in service. A few days later, the Board announced the suspension of Subsection (r) and the market study.

We are not aware of any announced schedule for the study or projected date for its conclusion. While we have continued with development of the projects, it is unclear whether a decision regarding Subsection (r) will be made in time to enable us to meet the timetable to which we committed in the WMPAs.

Consequently, we urge the Board to announce a completion date for the market study and to establish an expedited treatment of some minimum amount of projects that submitted complete Expressions of Interest during the period that was established by the Board.

Regards,

Stanford H. Allison
CFO

CRS center for resource solutions

December 15, 2017

Irene Kim Asbury, Secretary of the Board
State of New Jersey Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
Trenton, New Jersey 08625-0350

Comments of Center for Resource Solutions (CRS) in Response to the November 27th Questions for Stakeholder Comment on the New Jersey Board of Public Utilities (BPU) Generic Solar Proceeding

Ms. Asbury,

CRS appreciates this opportunity to submit comments in response to the recently published questions for stakeholders to address regarding the New Jersey Generic Solar Proceeding. The intent of these comments is to provide information on industry best practices in regard to the treatment of Renewable Energy Certificates (RECs) and consumer protection standards for solar energy marketing and consumption claims.

Background on CRS & Green-e®

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy. CRS has broad expertise in renewable energy policy design and implementation, electricity product disclosures and consumer protection, and greenhouse gas (GHG) reporting and accounting. CRS administers the Green-e programs. Green-e is the leading certification program for voluntary renewable electricity products in North America. For over 20 years, Green-e staff have worked with independent third-party auditors to annually verify renewable energy purchases in the voluntary market and ensure purchasers receive full environmental benefits and sole ownership of each megawatt-hour (MWh) of renewable energy they purchase. Verification procedures ensure there is no double counting between voluntary and compliance markets, and that other renewable energy or carbon policies do not claim any of the environmental benefits of certified renewable energy. In 2016, Green-e certified retail sales of over 48 million MWh, representing over 1.3% of the total U.S. electricity mix. In 2016, there were over 963,000 retail purchasers of Green-e certified renewable energy, including 53,000 businesses.

Implementing Consumer Protection Safeguards

In Section I.iv of the document containing questions for stakeholders to address, the BPU asks,

> *"Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers?"*

CRS strongly encourages the BPU to develop and implement safeguards to ensure that both buyers and sellers understand what claims they can make regarding solar energy in New Jersey. Because the exact electrons generated by solar facilities cannot be directly transmitted through the electricity grid to individual customers, RECs must be used to track and account for the specified consumption of renewable

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energy. Therefore, if a solar developer in New Jersey sells the electricity from one of its projects to a local business, but then retires the Solar Renewable Energy Certificates (SRECs) for compliance with the Renewable Portfolio Standard (RPS), then the customer purchasing that electricity is not actually purchasing solar energy and is not receiving the environmental attributes associated with the consumption of renewable energy. For this reason, we recommend creating and disseminating educational materials regarding solar claims, as well as instituting marketing and disclosure requirements for solar developers and electricity suppliers that retire SRECs for regulatory compliance and also sell the associated electricity in competitive markets.

The US Federal Trade Commission (FTC) provides substantiation for these types of consumer protection safeguards and the relevant implications for double counting and double claims:

> *"A marketer should not make unqualified renewable energy claims, directly or by implication, if fossil fuel, or electricity derived from fossil fuel, is used to manufacture any part of the advertised item or is used to power any part of the advertised service, unless the marketer has matched such non-renewable energy use with renewable energy certificates."*[1]
>
> *"If a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy."*[2]
>
> *"[T]he operation of the renewable energy market relies heavily on the expectation of all market participants that these certificates have not been counted or claimed twice (i.e., double counted). Such double-counting can occur, for instance, through [...] renewable energy claims made by a company that already sold the RECs for its renewable generation. [...] Such double counting, in turn, not only risks deceiving consumers but also threatens the integrity of the entire REC market. By selling RECs, a company has transferred its right to characterize its electricity as renewable. Accordingly, the FTC's Green Guides advise that, if 'a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy.' See 16 C.F.R. § 260.15(d)."*[3]
>
> *"In addressing these issues in the Green Guides, the Commission [...] did warn that power providers that sell null electricity to their customers, but sell RECs based on that electricity to another party, should keep in mind that their customers may mistakenly believe the electricity they purchase is renewable, when legally it is not. Accordingly, it advised such generators to exercise caution and qualify claims about their generation by disclosing that their electricity is not renewable."*[4]

CRS has also published guidance on consumer protection and solar claims that might be useful to the BPU as it considers developing its own set of safeguards. The following are examples of relevant materials available on our website:

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[1] U.S. Federal Trade Commission (FTC). *Guides for the Use of Environmental Marketing Claims*. (2012). Sec. 260.15(a). Available at: https://www.ftc.gov/sites/default/files/documents/federal_register_notices/guides-use-environmental-marketing-claims-green-guides/greenguidesfrn.pdf

[2] *Ibid*. Sec. 260.15(d).

[3] US Federal Trade Commission (FTC). *Letter from James A. Kohm, Associate Director, Division of Enforcement, Bureau of Consumer Protection, to R. Jeffrey Behm, Esq., Sheehey, Furlong & Behm, P.C.* February 5, 2015. Available at: https://www.ftc.gov/system/files/documents/public_statements/624571/150205gmpletter.pdf

[4] *Ibid*.

- *REC Best Practices and Claims*. October 17, 2014. Available at: https://resource-solutions.org/wp-content/uploads/2015/07/REC-Best-Practices-and-Claims.pdf;
- *Solar Energy on Campus. Part I: Renewable energy Usage Claims*. December 28, 2016. Available at: https://resource-solutions.org/wp-content/uploads/2016/08/Solar-Energy-on-Campus-I.pdf;
- *Solar Energy on Campus. Part II: Solar Purchasing Options and Communicating Renewable Energy Use*. December 28, 2016. Available at: https://resource-solutions.org/wp-content/uploads/2016/09/Solar-Energy-on-Campus-II.pdf;
- *Solar Energy on Campus. Part III: Key Considerations for Developers Working with Higher Education Institutions*. December 28, 2016. Available at: https://resource-solutions.org/wp-content/uploads/2016/12/Solar-Energy-on-Campus-III.pdf; and
- *Solar Energy on Campus. Part IV: Community Purchasing Campaigns and Renewable Energy Usage Claims*. December 28, 2016. Available at: https://resource-solutions.org/wp-content/uploads/2016/12/Solar-Energy-on-Campus-IV.pdf.

SREC Issuance and Potential Use of Fractional SRECs

In Section III.iii of the document containing questions for stakeholders to address, the BPU asks,

> *"Should the utility-scale, grid supply solar segment continue to get SRECs since left unfettered this segment with its economies of scale and relatively lower priced SREC requirements can crowd out residential and C&I market segments? Is the award of fractional SRECS or NJ Class I REC multipliers a feasible means to level the economic incentives needed by different scale solar generation facilities?"*

The BPU should clarify what it means in regard to whether or not utility-scale solar facilities will continue to receive SRECs. If it intends for these projects to be ineligible for RPS compliance, then it should state this specifically. As it is written here, it seems as if the BPU may be proposing that these projects should not be issued RECs at all, which could create accounting issues in markets for renewable energy. As noted in the previous section, RECs are used to track and account for renewable energy production and consumption in both compliance and voluntary markets. Therefore, these facilities should continue to receive RECs for their production of renewable energy. State regulation can then dictate whether these RECs may be used toward RPS compliance or would need to be sold exclusively in the voluntary market for renewable energy.

CRS also cautions against the issuance of fractional RECs. Because one REC is universally defined as equivalent to the full suite of environmental attributes associated with one megawatt-hour (MWh) of renewable energy, there is an inherent risk in assigning less than one REC for each MWh of electricity generated. Fractional REC issuance can lead to inaccurate and incorrect accounting of renewable energy production and consumption, and at the very least, increased transaction costs in the voluntary market, where additional steps would be required to verify transactions and exclusive delivery/ownership of the environmental attributes of one MWh of solar energy produced in New Jersey. For example, if a MWh of utility-scale solar is issued only a fraction of a REC, or RECs representing less than the full suite of environmental attributes associated with one MWh of solar generation, and this generation is sold into the voluntary market, it may be unclear to the purchaser how many fractional SRECs are needed to match each MWh of their electricity consumption. To prevent consumer confusion and preserve accurate and consistent accounting, each MWh of solar generation should be issued one SREC, regardless of the facility's size, location, or purpose.

Similarly, we urge caution in the use and application of multipliers. When one MWh of generation corresponds to more than one MWh of compliance credit, it may be more difficult for electricity customers to understand how much renewable energy the system mix actually contains and can therefore become confused about how much additional renewable energy they would need to voluntarily purchase to match 100 percent of their consumption, if they so choose. Also, depending on how a multiplier is accounted for, there may be a risk that these MWh could be double counted within the PJM Generation Attribute Tracking System (GATS), which is also used to track MWh sold in the voluntary market. CRS recently published a paper on the intersection of compliance and voluntary markets for renewable energy, in which the need to avoid disaggregating or splitting RECs and the need to consider the implications of creating multipliers that complicate accounting are discussed in Sections 7 and 8, respectively.[5]

Conclusion

Should the BPU have any additional questions relating to these comments or the suggestions contained herein, CRS would be happy to provide clarifying information and participate further as the Generic Solar Proceeding progresses.

Respectfully submitted,

Noah Bucon
Senior Analyst, Policy and Certification Programs
Center for Resource Solutions
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415-561-2110

[5] Center for Resource Solutions (CRS), prepared for Clean Energy States Alliance (CESA). Two Markets, Overlapping Goals: Exploring the Intersection of RPS and Voluntary Markets for Renewable Energy. July 1, 2017. Available at: https://resource-solutions.org/wp-content/uploads/2017/08/RPS-and-Voluntary-Markets.pdf

December 15, 2017

New Jersey Board of Public Utilities
44 South Clinton Avenue
PO Box 350
Trenton, NJ 08625-0350

Via email: publiccomments@njcleanenergy.com

Re: In the Matter of the Board's Establishing a Generic Proceeding to Review the State of the Solar Market Docket No. QX 17090949

To Board of Public Utilities Staff,

GRID Alternatives (GRID) appreciates the opportunity to respond to the November 27, 2017 Proceeding Questions for Stakeholder Comment.[1]

GRID Alternatives is the nation's largest non-profit solar installer, exclusively serving low-income families (defined using the U.S. HUD definition of less than 80% of Area Median Income) and affordable housing owners through residential, multi-family, and community solar installations that target minimum 50% monthly electricity bill savings for each low-income participant. In addition to direct energy bill savings impacts, GRID also provides solar installation services to residents and managers of multifamily buildings, encouraging renters and building owners to realize the benefits of solar.

Using a "barn raising" installation model, GRID Alternatives' professional installation staff train and lead teams of local job trainees and other community members to install solar electric systems for our customers, in partnership with a national network of affordable housing developers, energy efficiency providers, local government agencies, workforce development programs, and solar industry partners. Since 2001, GRID has installed over 9,500 solar systems totaling nearly 40 Megawatts, saving low-income families over $337 million in lifetime electricity costs, and providing over 35,000 people with solar training. GRID works locally through twelve regional and affiliate offices to serve families in California, Colorado, and Mid-Atlantic regions. GRID Alternatives also has an international program serving Nicaragua, Nepal, and Mexico, a national multifamily affordable solar technical assistance program, and a tribal program serving families nationwide.

[1] http://www.njcleanenergy.com/main/njcep-policy-updates-request-comments/policy-updates-and-request-comments

RESPONSE TO STAKEHOLDER QUESTIONS

Have low and moderate income consumers been provided sufficient access to the incentives that make solar adoption affordable in New Jersey or should the Board explore means to increase access to low and moderate income consumers?

No, low and moderate income consumers have not been provided sufficient access to the incentives that make solar adoption affordable in New Jersey.

Yes, the Board should explore means to increase access to low-income consumers. Low-income customers pay a disproportionate amount of their income on utility bills. These same customers also contribute to solar energy rebate or incentive pools via bill or tax payments, but historically have not been able to participate in solar programs and directly benefit from state investments. Low-income customers should have at least proportionate access to incentives from ratepayer and taxpayer funded customer incentive pools. These customers stand to benefit most from solar energy, and must be prioritized through targeted policies, financing and consumer protections so that New Jersey renewable incentive programs are truly equitable.

Solar provides long-term financial relief to families struggling with high and unpredictable energy costs, living-wage employment opportunities in an industry adding jobs at a rate of 20 percent per year, and a source of clean, local energy sited in communities that have been disproportionately impacted by traditional power generation.[2] Using an equitable access approach, New Jersey should leverage ratepayer or taxpayer funds to ensure low-income solar incentives are created in proportion to low-income contributions. These upfront incentives should be administered by a nonprofit third party program administrator in a comprehensive program approach to deliver single family, multifamily, and community solar to income-qualified families and incorporate job training requirements into every solar installation to build and grow New Jersey's workforce.

Recipients could be low-income ratepayers already enrolled in bill assistance programs, already weatherized, or seeking energy efficiency upgrades. Recipients should also include affordable housing providers and tribes. Low-income customers often reside in multifamily building and do not pay their electricity bills directly. In these cases, property owners should still be encouraged to participate in programs and provide pass-through benefits to tenants. Because low-income residential customers face higher financial barriers to participation than low-income property owners, incentives for low-income residential customers should be set the highest.

The incentives available from this programming would cover a majority of the cost for low-income participants, affordable housing providers, and tribes. The nonprofit administrator, installers, and developers would leverage these incentives to make attractive solar offerings to low-income customers. **An attractive solar offering for low-income customers means no upfront cost, no ongoing payments, and immediate and significant savings**. Without appropriate incentives for developers and installers to use to provide attractive offerings for low-income customers, the low-income solar market will not develop or scale.

[2] http://www.lowincomesolar.org/why-act/

Should the Board institute consumer protection safeguards for solar consumers, for hosts of third party owned solar projects, for investors in solar projects, or for ratepayers?

The most insurmountable barrier for low-income homeowners is the financial barrier to access solar.[3] Low-income customers generally are unable to contribute out-of-pocket financing toward a solar electric system or a community solar subscription. They typically are adverse to taking on more debt with a loan, even a low or no interest loan, and generally lack the credit-worthiness or capital necessary to purchase or finance rooftop solar or community solar subscription. Moreover, income-eligible homeowners are less likely to have the tax liability to allow them to take advantage of the federal Investment Tax Credit. Consumer protection issues will arise from this financial barrier if families are offered a subprime solar deal that may not result in long-term savings, or a solar loan/lease product that could result in a negative economic outcome.

Without emphasis placed on savings in program design and requirements, participants could unfortunately experience a situation that doesn't positively impact their energy burden reduction. Therefore, consumer protection is of utmost importance for ensuring positive experiences for low-income access to solar. Incentives should be set to ensure that low-income customers face no upfront costs for participation, and can achieve significant savings through a rooftop project or ownership or subscription of community solar capacity. Significant savings should be defined as electricity bill savings goal (i.e. at least 50%[4]) or obtaining average electric energy burden for New Jersey (i.e. 6%[5]). This savings target may be achieved comprehensively, i.e. by coordinating a low-income customers services under this program with energy efficiency measures.

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[3] "SB 350 Low-Income Barriers Study, Part A - Commission Final Report," December 15, 2016, pg. 35-37. http://docketpublic.energy.ca.gov/PublicDocuments/16-OIR-02/TN214830_20161215T184655_SB_350_LowIncome_Barriers_Study_Part_A__Commission_Final_Report.pdf

[4] District of Columbia Solar for All Program: D. C. Act A21-0466, Renewable Portfolio Standard Expansion Amendment Act of 2016, Section 216(a) ensures seniors, small local businesses, nonprofits, and low-income households receive at least 50% of the savings, as compared to standard utility rates, from the solar generating equipment.
California Single-family Affordable Solar Homes (SASH) Program: The statewide program administrator for SASH ensures that all systems are cash-flow positive for a low-income household from day one. Incentives are deliberately set at a level to cover a significant percentage of the system cost. Any gaps in financing between the available incentive and the system cost are filled by the program administrator, a non-profit organization that contributes proceeds from a third-party ownership (TPO) arrangement and its own philanthropic fundraising to projects. Under the SASH TPO offering, participating households have no financial liability to the system owner. The SASH program's TPO model must meet 12 baseline consumer protection minimum standards, including ensuring customers receive at least 50% of the savings, as compared to standard utility rates, from the solar generating equipment. In practice, the minimum 50% savings is a "floor," as most SASH households participating in the TPO model realize 80% savings or higher.

[5] http://www.state.nj.us/dca/divisions/dhcr/faq/usf.html

Should energy storage market development be linked in some way to the existing solar policies and if so, how?

Yes, any solar incentives available to low-income customers should also apply to energy storage projects when paired with solar.

Thank you for asking such important questions in this proceeding.

Sincerely,

Ingrid Schwingler
Policy & Regulatory Coordinator

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December 15, 2017

NJ Board of Public Utilities
Clean Energy Program
44 S Clinton Avenue
Trenton, NJ 08625

RE: Stakeholder comments on responses to the Generic Proceeding

To whom it may concern:

AC Power is submitting brief responses to selected stakeholder questions in response to the Board of Public Utilities request to review the state of the solar market in New Jersey. AC Power develops solar projects on landfills and brownfields in New Jersey. We are planning to bring 20 MW online in 2018 and have a portfolio of 25 MW for deployment in 2019 – 2022.

The projects are situated on landfills and brownfields as prescribed in The Solar Act and allow for beneficial re-use of land that would otherwise likely sit vacant. Promoting and incentivizing solar on landfills can also provide an alternative to using open space or land that could otherwise be developed for other uses. However, developing solar on landfills requires more resources, time and capital. Each project must undergo substantive review by the NJ Department of Environmental Protection and often requires additional site work, permitting, engineering and other fees.

Initial project development for the projects that will begin operation in 2018 commenced in October 2015. By almost all standards a nominally sized project of less than 10 MW should not take more two years to develop. Reasons can vary as to why the development timelines are so lengthy but one example is the PJM interconnection process can take over two years to complete the study process before interconnection work even begins. Another example is that AC Power is developing solar projects on landfills that have been closed for decades but not "properly closed" under the NJ DEP so the permitting and site work is more extensive and costly.

AC Power has worked diligently to secure long term power purchase agreements on many of the landfill sites and most are considered "on-site generation facilities" where the solar project will sell the electricity to the adjacent neighbor under either a net-metering or behind the meter connection. As many landfills are owned by municipalities, AC Power continues to try and develop an aggregated net-metering project but given the way the program is structured has failed thus far (in fact there have not been any aggregated net metering projects).

For these reasons, AC Power is concerned about any policy changes to The Solar Act that would affect these projects eligibility or alter the net metering criteria. That said, AC Power does have some constructive suggestions as to how the Solar Act could be amended to promote growth in the solar market and continue to promote economic growth and jobs in New Jersey.

Lastly, there are many uncertainties at the federal level that could have a significant economic impact on the solar market and render some of these projects economically unviable. The pending solar panel tariff and tax plan overhaul are the biggest issues. It would be unwise to make judgements about the maturity of the solar market and its ability to "stand on its own two feet" before the impact of the federal changes are fully realized. It could have a devastating effect on the solar market in New Jersey and cause unnecessary job loss and market uncertainty.

Responses to specific questions:

III.v. Are the EDC SREC-based Finance programs still necessary (i.e., PSE&G's Solar Loan III, PSE&G Solar for All Extension II, and the ACE, JCP&L and RECO SREC-II competitive solicitations for ten year contracts)?

1. Depending on the outcome of the pending federal regulatory changes such as the tax overhaul and solar panel tariff these programs may be necessary as financing options, in particular the utility contracts.

III.vi. Has the Board's shared implementation of Subsection t of the Solar Act of 2012, NJSA 48:3-87(t), with the New Jersey Department of Environmental Protection ("NJDEP") been sufficiently effective at siting generating facilities on marginal lands such as landfills and brownfields? If not, how could it be improved?

1. According to The Solar Act, Subsection t directs the Board to establish a financial incentive that is designed to supplement the SRECs generated by solar facilities certified and located on brownfields, historic fills and properly closed landfills in order to cover the additional cost of constructing and operating a solar facility at these locations. It appears that the Board and NJDEP staff had started to work on this supplemental incentive back in 2013 but never finished. AC Power believes that the additional incentive will bring more Subsection t projects into the pipeline. As illustrated above, AC Power experiences significantly higher development costs and timeline to advance projects on landfills and brownfields.

Looking at the record, as of August 2017, only six landfills and one historic fill have been fully certified and completed providing 67 MW-dc. Given the very large number of landfills, brownfields and historic fill sites in the New Jersey, this is not a high success rate and we believe speaks to difficulties and costs associated with this category of sites.

That said, we believe situating solar on landfills and brownfields is a good policy position and could serve as an excellent impetus for owners to close and clean up landfills where previously no such incentive existed.

2. Currently the joint BPU/NJDEP policy is to generally restrict the location of solar panels on properly closed landfills to the footprint of the capped areas of the waste or the waste fill area despite the fact that the Solid Waste Facility Permit and Registration of the facility identify the blocks and lots of the permitted landfill. For older facilities that predate NJDEP, a municipal resolution identifies the block and lot of the landfill. The NJDEP has expressed concern that in some cases the size of the non-landfill area is disproportionately larger than the landfilled areas which could lead to large solar facilities. That said, the owner is required to maintain the entire site and often have restricted controls on areas off the footprint of the landfill. There is little else that can happen on the area off of the landfill but within the site. We would like to offer a compromise solution. The BPU/NJDEP could allow solar panels off the footprint of the capped area or waste fill but only up to 50% of the area covered with panels on the capped area or waste fill provided the area off the footprint is in a lot included in the Solid Waste Facility Permit or Registration or the municipal resolution for older sites predating NJDEP. It should be noted that a large amount of acreage on the landfill footprint is not usable for solar panels due to side slopes being too steep. For example, a 50-acre landfill footprint may have only 10 acres that is flat enough for panels. The 50% policy would allow panels on only 5 acres off the footprint of the capped area even if the landfill permit included 20 acres of additional of land off the capped area.

IV. ii Currently, net metered installations in New Jersey are restricted in size based on historic annual electricity consumption. Should there be an overall capacity cap for net metered project sizing? If so, how should it be structured?

1. AC Power does not believe that there should be on overall cap for net metered project sizing for projects that are "on-site generation facilities". There are significantly fewer installations of this type versus traditional net metering. This eligibility requirement is critical to the economic viability of landfill projects since they often have significantly higher installed costs. Selling to the grid under the wholesale market or capping the net metered size thereby reducing future revenues would be an unnecessary additional burden for these projects.

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IV. iii Should larger C&I sized solar projects be treated differently than residential projects due to their ability to crowd out smaller projects from interconnecting on constrained distribution circuits and their competitive advantage in the SREC market?

1. AC Power does not believe they should be treated differently due to crowding out residential projects. C&I projects are larger, yes, and therefore each installation has a more profound impact on our move to a renewable energy future. Favoring the residential market over larger installations seems completely contrary to our overall goals of building a robust solar program.

2. Further, solar companies are often focused on certain applications. AC Power, for instance, develops solar on landfills and does not do residential projects. It is possible that a scenario that favors residential projects would reduce the number of players in the other market segments resulting in reduced economic growth and job loss.

IV. iv Currently, net metered installations in New Jersey are compensated at the full retail value of electricity, including generation, delivery and variable rate surcharges on a monthly basis over an annualized period. Is full retail net metering still required for all customer-sited solar installations? Do utility scale customer-sited and "on-site generation" facilities still require full retail net metering to be cost effective?

1. AC Power believes that yes, utility scale customer-sites and "on-site generation" facilities still require full retail net metering to be cost effective. As pointed out, solar on landfills and brownfields are costlier then ground mounted solar on greenfields. Add to that the possibility that the cost of modules could increase by as much as $0.50 per watt due to the pending tariff. Unequivocally, the electricity rate a developer can secure under a long term PPA with a customer is instrumental to a projects economic viability given the projected cost to install a solar facility in NJ.

V.i. How can the State minimize impact of solar development on open space, wooded, and farmland?

1. Adopt the two recommendations above which will increase the number of viable projects on landfills.

V.ii In an effort to minimize the impact of solar development on open space, where and how should the State encourage solar development?

1. Floating photovoltaic systems could be encouraged in the following areas provided they are designed and installed to enhance the ecosystem:
    a. Bodies of water created from sand and gravel or rock mining operations;
    b. Large storm water basins;

c. Potable water reservoirs; and
d. Possibly select areas of the Barnegat Bay that suffer from chronic algal blooms.

These systems cover only a portion of the water body surface. They provide shaded habitat for fish. They reduce water evaporation. And there can be equipment with solar power aerators that can be activated prior to the onset of algal blooms. Moreover, floating wetlands systems could be integrated into the system design for further environmental enhancements.

Thank you for the opportunity to respond. We look forward to continuing to advance the renewable energy mandate in New Jersey. I can be reached at 646-370-4588 or annika@acpowered.com with any questions or follow up.

Warm regards,

Annika Colston

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New Jersey Board of Utilities
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Subject: Comments on 2017 Solar Generic Proceeding

The Conti Group ("Conti") submits these comments with respect to the 2017 Solar Generic Stakeholder Proceeding to the New Jersey Board of Public Utilities (the "Board"). Based in Edison, NJ, Conti is a 111-year old, family-owned company that develops and builds solar facilities. Conti employs over 400 people and is active in every major solar market in the United States, as well as select international markets. New Jersey's market made it possible for Conti to found, sustain, and grow its solar division, which has repeatedly been ranked as a top provider of Solar Engineering, Procurement, and Construction services in the U.S. Conti has installed 127 MW in New Jersey, currently owns 10 MW of generating solar assets in New Jersey, and has 26 MW of projects under development in the state. We look forward to continuing to participate in New Jersey's solar market, and are pleased to take part in this stakeholder proceeding.

The state's solar policy should strive to balance important priorities: continued growth in the solar market, stability and predictability for investors, and healthy competition that minimizes the costs to ratepayers. Conti believes that a balanced solution will allow for continued growth in the residential, commercial, and grid-supply sectors. Conti offers the following comments to the questions raised by Board staff:

1) Policy Goals and Objectives

We believe that the four goals outlined in the 2006/2007 BPU Docket are just as relevant today as they were when originally developed, and that these priorities should drive policy in the state. While achievement of the percentage set-aside should be a central focus of policymakers, it need not compromise other state solar policy goals. In short, the state solar policy can meet its percentage requirements in a competitive market that does not excessively charge its ratepayers.

Implementing reasonable safeguards for consumers, developers, and financiers can be appropriate measures, but should be considered a means to ensure "orderly market development".

2) Solar Economics and Incentives

While current Board policies have gone a long way in supporting the growth of solar energy in New Jersey, they should be adjusted to encourage the reasonable addition of grid-supply solar projects in the state.

The recent developments in grid-supply project eligibility have prevented the goal of "sustained orderly market development". The Subsection (r) process has caused significant stranded development assets in the State, which undermines a main goal of the SREC program. Developers relied on the initial Board guidance regarding Subsection (r) in 2015 and 2016, which gave developers a roadmap to obtain SRECs for their projects under Subsection (r) in 2016, starting with the Expression of Interest process. Developers invested significant capital into projects to align the timing of their projects with the Subsection (r) guidance. The Board's recent suspension of the Subsection (r) process has caused these projects to be stranded, and developers currently have no line of sight to complete these projects.

Grid-supply projects have been a valuable part of New Jersey's SREC market. They do not require the "net metering" subsidy, and can help reduce the price of wholesale power in the state. We believe that new grid-tied projects should qualify for a reduced SREC basis. The result will be increased clean energy production with less ratepayer-supported subsidies. In particular, we recommend the following changes:

- Provide SREC eligibility under Subsection (r) for the 144MW of stranded solar projects which submitted Expressions of Interest under the initial Subsection (r) proceeding in 2016.

- Allow certification of future grid-supply projects for SRECs based on 75% of their energy production. The ICF Analysis shows that grid-supply projects are viable with SREC prices that are at least 25% lower than smaller projects. Using this reduced basis will maintain market balance and prevent SREC prices from dropping to levels that are not sustainable for residential and C&I projects.

  In order to manage effects to the SREC market, the Board should implement one of the two following measures. In either case, the Board should require that developers have binding site control and an executed Interconnection Agreement to prevent SREC certifications for projects that are not viable.

  - Use a declining "block" system, similar to the structure successfully employed by the NY-Sun Program. In this structure, when a grid-supply capacity block (100 MW, for instance) fills up, the grid-supply SREC basis would drop to the lesser percentage as "Block 2" opens.

  - Hold an annual solicitation for grid-supply projects. Bidders would provide a percentage SREC basis, and the Board would accept the lowest bids until it fills its capacity goal.

3) RPS Design Elements and Eligibility Criteria

To date, all three segments of the market (residential, C&I, and grid-supply) have contributed to the state's goals under the same SREC program. We recommend that all three segments continue to participate in the SREC program. While larger projects tend to have lower build costs, they also tend to receive less non-SREC revenue.

While larger projects tend to have lower build costs and benefit from economies of scale, they also receive less non-SREC revenue than residential and commercial projects. While the latter two categories generally earn revenue at a small discount to relatively expensive retail electricity rates, grid-supply projects receive the much lower wholesale power revenue. Additionally, obtaining "hedges" or long-term contracts for wholesale power is particularly difficult for an individual solar project. The lower and more volatile wholesale power revenues counteract the economies of scale that are achieved by utility scale projects, ultimately leveling the playing field across the utility, residential, and commercial segments.

In our comments above, we recommended that grid-supply projects be eligible for SRECs for a percentage of their nameplate capacity. We believe that this factor, when combined with the significantly lower wholesale energy revenue, will strike the proper balance between the different segments.

4) Net Metering & Interconnection Design Elements and Eligibility Control

We believe that capacity caps for net-metered projects are unnecessary. The rigorous interconnection process managed by the state's EDCs ensures grid reliability.

These larger C&I customers generally pay significantly less for energy and delivery, with a large portion of the bill consisting of demand charges. Accordingly, developers must provide lower solar PPA prices to provide energy savings. This reduced energy revenue offsets the lower per unit build costs. Residential and C&I projects have both contributed to the state's solar set-aside, and the creation of separate programs seems unnecessary.

We also recommend an expansion in New Jersey's "aggregated net metering" program. Currently, only public entities can participate in this program, and must interconnect behind-the-meter, with additional energy production receiving net metering credits at the wholesale rate. We recommend two changes to this program:

- Allow private entities that have multiple meters in a utility's service territory to participate in the program.
- Allow "grid-supply" remote net-metered projects.
- For capacity that is not offsetting on-site load, EDCs should value the net metering credit at the commodity/generation charge (excluding any delivery charge).

5) Land Use Implications

New Jersey's solar Brownfield incentives have been extremely effective and have focused development on underutilized sites. We encourage the Board to continue its subsection (t) program to incentivize development on these sites.

Some of New Jersey's military bases contain Brownfield sites that are ideal locations for solar development because they have no other beneficial use. And while closed landfills on military bases have been certified under subsection (t), we understand that the New Jersey Department of Environmental Protection ("NJDEP") is reluctant to consider Brownfield sites that are located on military bases. The Board should encourage development and certification of these projects and encourage NJDEP to recognize their Brownfield status.

We believe that the NJDEP's Solar Siting Analysis is an excellent reference for developers and local permitting authorities. However, permitting authorities should have autonomy in determining the inherently subjective attribute of "open space".

Conti appreciates the opportunity to participate in this stakeholder process and looks forward to working with the Board to design the best solar policy for customers and ratepayers alike. Please do not hesitate to contact me with any questions or concerns.

Best Regards,

/s/ Eric K. Millard

Eric K. Millard
Vice President
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