

BOARD OF PUBLIC UTILITIES

Renewable Energy Portfolio Standard

Proposed Amendments: N.J.A.C. 14:8-2.2, 2.3, 2.8, 2.9, 2.10

Authorized By: Board of Public Utilities, Jeanne M. Fox, President, and Frederick F. Butler, Joseph L. Fiordaliso and Christine V. Bator, Commissioners.

Authority: N.J.S.A. 48:2-13 and N.J.S.A. 48:3-49 et seq.

Calendar Reference: See Summary below for an explanation of exception to calendar requirement.

BPU Docket Number: [Docket No.]

Proposal Number: PRN 2007-

Submit comments by [DATE] to:

New Jersey Board of Public Utilities

Kristi Izzo, Secretary

ATTN: BPU Docket Number: [Docket No.]

Two Gateway Center

Newark, New Jersey 07102

The agency proposal follows:

Summary

The BPU has provided a 60-day comment period on this notice of proposal. Accordingly, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Board of Public Utilities (“BPU” or “Board”) is proposing amendments to the regulations governing New Jersey’s Renewable Portfolio Standards (RPS) at N.J.A.C. 14:8-2. The New Jersey Electric Discount and Energy Competition Act, N.J.S.A. 48:3-49 et seq. (EDECA) provides the foundation for these standards, authorizing the BPU to adopt, readopt, and amend them.

The existing RPS rules require electric power suppliers and basic generation service providers (referred to as “supplier/providers,” defined in N.J.A.C. 14:8-1.2) to include minimum percentages of qualified renewable energy in the electricity they sell; those minimum percentages increase over time. The rules specify separate minimum percentages for solar electric generation, for Class I renewable energy, and for Class II renewable energy (N.J.A.C. 14:8-1.2 defines each of these categories of renewable energy). Currently, the rules require that solar electric generation be the source of at least 0.0817 percent of the electricity sold in New Jersey; by the year beginning June 1, 2020, that requirement will increase to 2.12 percent.

To comply with the solar energy portion of the RPS, suppliers and providers obtain and use Solar Renewable Energy Certificates (Solar RECs). A solar REC represents the

environmental benefits or attributes of one megawatt-hour of solar electric generation. A supplier or provider who holds too few solar RECs to meet the RPS can make up for the shortfall by paying a solar Alternative Compliance Payment (SACP).

The ability to meet the solar RPS depends on growth in solar installations. To some extent, a solar electric generation system brings its own incentives. A customer who installs a system will see lower electricity bills. The customer can also earn revenue by selling excess electricity back to the utility with net metering. The customer also has the satisfaction of meeting at least part of his or her electricity needs without causing emissions of greenhouse gases or other air pollutants.

However, those built-in incentives are often insufficient to overcome resistance to making the large initial capital investment, a lack of familiarity with the technology and its benefits and performance, a limited (but growing) installation infrastructure, and long-term uncertainties about markets and their regulatory underpinnings. A combination of incentives has therefore been necessary to help to spur the development of solar electric generation systems needed to enable electricity suppliers and providers to comply with the solar RPS:

- Federal tax credits are available for some solar installations.
- The need for suppliers and providers to comply with the solar RPS puts a monetary value on the solar RECs created when a solar installation generates electricity.
- The BPU's Clean Energy Program provides rebates to help offset the cost of installation.

The BPU has recognized the need to reduce reliance on rebates and to rely more heavily on other incentives. Between May 2001 and August 2007, 40 MW of solar generating capacity was installed in New Jersey, assisted by more than \$170 million in rebates, or about \$4.3 million per megawatt. If the rebate levels were to remain unchanged, achieving the 2.12% solar RPS requirement by 2021 would require an estimated \$10.9 billion in rebates, adding about 7.5% to electricity rates. Furthermore, strong interest and high participation in the solar portion of the rebate program has led to the program being over-subscribed, requiring queues for rebate funding since early 2006.

Therefore, the Board has sought a more efficient and sustainable means of providing the incentives needed to achieve the solar RPS, and has set a course toward transition to that more efficient and sustainable model. The Board's priorities in that transition include the cost that ratepayers bear; fairness and equity to all ratepayer classes; job growth; improved reliability and security of New Jersey's electricity infrastructure; the ability to achieve sustained orderly development of the solar portion of that infrastructure; reducing transaction costs; and supporting other policy goals, especially with respect to environmental protection and public health. The Board has also ordered that rebates be phased out entirely by May 31, 2012, and limited to small projects until then.

On December 6, 2007, the Board issued an Order outlining the solar transition (In the Matter of the Renewable Energy Portfolio Standard, Docket No. EO06100744; [www.nj.gov/bpu/...], the “Solar Transition Order”). Specifically, in the Solar Transition Order the Board decided to establish an 8 year schedule for the SACP levels for reporting years 2009 through 2016 (reporting year 2009 is the one-year period ending May 31, 2009), and to take related action to provide sufficient incentives to develop solar installations with less reliance on rebates. The Board also decided to take steps to limit the annual and total impact on ratepayers of financial incentives to meet the solar RPS.

The Solar Transition Order followed an in-depth stakeholder process that included representatives of a wide variety of interests. Participants represented the interests of consumers, electric utilities, the solar energy industry, wholesale energy companies, environmental advocates, and commercial and industrial energy users. In issuing the Solar Transition Order, the Board sought to understand and balance the needs and priorities of these interests in setting a direction to meet the following goals:

1. Sustained, orderly market development. The purpose of the RPS is to develop a robust and sustainable market for renewable energy in New Jersey. Meeting the standards, which increase substantially over time, depends on rapid growth in the market. At the same time, the BPU’s program must be capable of adapting readily to changing market conditions, such as a substantial oversupply or undersupply of solar RECs, or a breakthrough in solar technology or in the price of equipment. As market conditions change, the levels of incentives supporting the installation of solar electric generation should adjust as well, so that the incentive is close to the minimum level of support needed to meet the RPS.

A robust and sustainable market also depends on an environment that supports investor confidence. Greater uncertainty in the cash flow associated with solar projects lowers investor confidence, making financing dependent on a promise of higher returns on investment that would offset the greater risk. Reducing that uncertainty has the opposite effect, reducing the cost of financing by supporting lower interest rates and longer repayment terms; if financing costs are reduced, the level of incentives needed to achieve the solar RPS is reduced as well. Regulatory uncertainty, or the risk of possible changes to the program structure and rules that would affect cash flows, is the type of uncertainty most under the Board's control. Reducing regulatory uncertainty is therefore an essential part of supporting sustained, orderly market development.

2. Minimizing ratepayer impacts. The Board understands that energy customers’ money funds a major part of the incentives available to support solar energy. Prudence requires that this money be used as efficiently as is practicable. As discussed above, a structure that allows incentive levels to adjust quickly to changes in the market helps to ensure that the cost of the incentive is close to the minimum needed. A structure that reduces regulatory uncertainty also lowers costs and helps to protect the ratepayers' interests.

3. Minimizing transaction costs. Minimizing paperwork and approval processes associated with the incentives, and bringing buyers and sellers together to consummate

their transactions with maximum efficiency, maximizes the extent to which incentive funds can be spent on actual construction and installations of systems rather than overhead.

4. Supporting other policy goals. Solar electric generation and other sources of renewable energy support the State's efforts to reduce emissions of greenhouse gases and other air pollutants associated with electric power generation. In addition, the program design can support policy goals such as encouraging participation by a wide variety of types of customers, and relieving congestion on the electric transmission system.

The stakeholder process evaluated several alternative approaches to achieving these goals. Stakeholders evaluated straw recommendations from BPU's Office of Clean Energy as well as findings from studies performed by a consultant retained by the BPU. Examples of these documents include:

- New Jersey Renewable Energy Solar Market Transition, Office of Clean Energy, Revised - Final Straw Proposal, August 24, 2007, http://www.njcleanenergy.com/files/file/OCESolarMarketStrawUpdate_82407.pdf
- New Jersey Renewable Energy, Solar Market Transition, Office of Clean Energy, Discussion Paper, August 2, 2007, <http://www.njcleanenergy.com/files/file/OCE%20Solar%20Discussion%20Mtg%208-9-07%20fnl.pdf>
- Summit Blue Consulting, An Analysis of Potential Ratepayer Impact of Alternatives for Transitioning the New Jersey Solar Market from Rebates to Market-Based Incentives, August 6, 2007, <http://www.njcleanenergy.com/files/file/2NJ-BPU%20SACP%20RPI%20Analysis%20Report-revised-0806.pdf>
- Summit Blue Consulting, An Analysis of Potential Ratepayer Impact of Alternatives for Transitioning the New Jersey Solar Market from Rebates to Market-Based Incentives, April 25, 2007, http://www.njcleanenergy.com/files/file/NJ-BPU_SACP_RPIAnalysisRep_042507.pdf
- Summit Blue Consulting, Preliminary Review of Alternatives for Transitioning the New Jersey Solar Market from Rebates to Market-Based Incentives, March 15, 2007, http://www.njcleanenergy.com/files/file/1NJ-BPU_Market_Transition_Interim_Report_031507.pdf

In addition, BPU Commissioner Joseph Fiordaliso presided over two public hearings on the straw recommendations, and BPU staff's preliminary and final recommendations were discussed at multiple public meetings of the Board.

The proposed amendments implementing the Board's Order in Docket No. EO06100744 are summarized below in light of these goals.

SACP

The value of the solar RECs created when a solar installation generates electricity provides one source of incentives for solar development. Since a supplier or provider has the option of paying the SACP or obtaining solar RECs to comply with the solar RPS, the amount of the SACP in practice becomes the upper limit on the price of a solar REC - effectively capping the size of the incentive associated with solar RECs.

Currently, the SACP is \$300 per megawatt-hour. The existing rules at N.J.A.C. 14:8-2.10 establish a procedure that the Board follows in setting the SACP, and call for the Board to evaluate the SACP level at least annually. The proposed amendments to N.J.A.C. 14:8-2.10 increase the SACP effective June 1, 2008, and establish SACP levels for eight consecutive reporting years beginning with the June 1, 2008 - May 31, 2009 reporting year.

The Board also proposes to establish a different purpose for its annual review of the SACP. The annual review will not change the eight-year SACP schedule established in the rule, but will establish an SACP for a new “eighth year” in the schedule – that is, the next reporting year for which an SACP has not yet been established. These actions, coupled with the Board’s decision to limit and phase out solar rebates, will increase the portion of State incentives that are market-based rather than administratively set, and thus will serve several of the goals for the solar transition outlined above.

In the Solar Transition Order, the Board concluded that establishing an eight-year SACP schedule by rule, and eliminating the yearly or more frequent re-evaluation of the SACP, would reduce the level of ratepayer-funded incentives needed to achieve the solar RPS. This reduction would result from lower financing costs attributable to higher investor confidence that would flow from providing the market with greater, longer-term certainty than the current rules offer about future maximum prices of solar RECs. The Board reached this conclusion after considering the analyses by Summit Blue Consulting referenced above, and the reactions of stakeholders to those analyses and to the straw proposals for the solar transition.

Increasing the SACP will make the State's solar incentive programs better able to respond quickly to changes in the market. Since the SACP effectively caps the price of solar RECs, increasing the SACP will enable the price of solar RECs to fluctuate within a wider range. As a result, if insufficient solar RECs are being produced to meet demand as the solar RPS increases, the market will be better able to increase the price of solar RECs to reflect the imbalance between supply and demand. In contrast, the ability to adjust rebates to respond to market changes is limited by the funds available for rebates, the time needed to determine the needed change, the accuracy of that determination, the time needed to obtain approvals of the change, and other factors. Similarly, if there is an oversupply of solar RECs in the future, market forces are likely to lower solar REC prices more promptly and more accurately than administrative action to decrease rebate levels; the market response will help to keep incentive levels close to the minimum needed to support achievement of the RPS. Allowing market forces to better adjust incentive levels

also reduces the administrative burdens and transaction costs that would be incurred if it were necessary for the State to adjust rebate levels.

The Board set the SACP schedule based on an internal rate of return (IRR) of 12 percent. The IRR is a discount rate that results in a net present value of zero for a series of cash flows. At an IRR of 12 percent, the negative cash flow represented by the initial capital investment for a solar installation, along with the positive cash flows from revenues and incentives over a six-year period, together have a net present value of zero. In simpler terms, the 12 percent IRR translates into a 6-year payback period for the investment in the solar electric generation system.

Most stakeholders supported the 12 percent IRR. Some solar energy advocates and installers who supported it, however, emphasized in their comments that this was an absolute minimum, while developers stated that their investors generally sought payback periods of five years or less that would need a higher IRR. The Board determined that the 12 percent IRR and 6-year payback represented an appropriate balance between the industry's desire for as rapid a payback as possible and the need to control the cost to ratepayers, especially because discussions with commercial and industrial stakeholders suggested that most capital investments in projects with a longer payback period tended to be very difficult to justify.

The Board further determined that the eight-year SACP schedule should reflect an annual decrease of three percent in the solar REC price that would support a 12 percent IRR and 6-year payback. This decrease is consistent with the Board's expectation that the solar RPS will promote economies of scale in the solar industry, which in turn are likely to result in decreasing capital costs over time for solar electric generation systems. This decrease would continue to narrow the gap between the costs of installing and operating solar electric generation and the costs of installing and operating conventional electric generation. Narrowing that gap is critical to the transformation of the electric generating industry in New Jersey and elsewhere. Conversely, if the cost of installing and operating solar does not decrease in tandem with the decrease in the SACP, the decreasing SACP will help to insulate electricity customers from the higher-than-expected solar costs.

The Board set the SACP in the eight-year schedule at a level \$100 above the solar REC price necessary to support the 12 percent IRR and 6-year payback. The SACP not only effectively caps the solar REC price; it also sends a signal to the market which in the past has led to the solar REC price falling somewhat below the SACP. Some solar developers had sought a higher differential, especially in the early years of the SACP schedule, while other solar advocates supported the \$100 differential, and other interests sought a lower SACP than what the \$100 differential would yield. The Board concluded that the \$100 differential represented a compromise position that provided sufficient flexibility to allow solar REC prices to rise to their market-based levels.

Solar REC Trading Life

N.J.A.C. 14:8-2.8 currently requires that all RECs be used for compliance during the same reporting year in which they were generated. As a result, a REC generated at the end of the reporting year has only a three-month trading life before it expires and loses all of its value. The threat of those solar RECs becoming “stranded” (that is, expiring before they can be used) can create extreme time pressure for holders of solar RECs to sell any in excess of what will be needed for immediate compliance. That time pressure can create additional volatility in the solar REC market, undermining the ability of market participants to predict future prices.

The proposed amendments extend the trading life for the additional year. The majority of stakeholder comments on this issue sought a more flexible trading life for solar RECs, allowing them to be carried forward for one additional reporting year. The longer trading life will provide greater flexibility to holders of solar RECs, and will help to reduce volatility and uncertainty in the solar REC market.

The extension of the trading life would take effect for all solar RECs that are based on electricity generated on or after June 1, 2009. In other words, the longer trading life would apply to all solar RECs issued for the first reporting year in which the proposed amendments are expected to take effect, and continue to apply to all solar RECs issued thereafter.

Solar Electric Generation Facility Qualification Life

The "qualification life" is the number of years a solar electric generation facility can create solar RECs. Once the qualification life ends, the facility can no longer generate solar RECs that can be used to comply with the solar RPS; however, the facility will be eligible to generate Class I RECs that can be used to comply with the requirements for Class I renewable energy set forth in N.J.A.C. 14:8-2.3, Table A. For the reasons discussed below, the proposed amendments would establish a 15-year qualification life.

The qualification life would begin on the date that the facility interconnects with the local electric distribution system. The qualification life would end on May 31 at least 15 years after the date of interconnection. In other words, if the interconnection took place on August 1, 2004, then the facility's qualification life would begin August 1, 2004, and end on May 31, 2020.

The total cost to ratepayers of incentives associated with solar RECs tends to be lower with a shorter qualification life. A longer qualification life results in a higher total cost, but the impact on ratepayers each year is lower because that total cost is spread over a longer period of time. The situation is analogous to a home mortgage loan; the same borrower obtaining a loan from the same mortgage lender will face higher monthly payments on a 15-year mortgage than a 30-year mortgage, but the total cost of the 30-year mortgage will be significantly higher. Similarly, the shorter qualification life eventually reduces the supply of solar RECs and can therefore be expected to increase

their price eventually; however, the longer qualification life has higher total costs because more solar facilities earn more solar RECs over a longer period of time.

However, the time value of money means that differences in the qualification life beyond a certain level have little impact on the net present value of the entire stream of incentives. In the Solar Transition Order, the Board determined that the solar REC price needed to provide a 12 percent IRR was unaffected by extending the qualification life beyond 15 years. Accordingly, the proposed amendments to N.J.A.C. 14:8-2.2 define "qualification life" as the 15-year period beginning on the date a solar electric generation facility begins generating electricity.

Limiting Ratepayer Impacts

In the Solar Transition Order, the Board directed that two measures be implemented to limit the extent to which achieving the solar RPS could affect ratepayers: a cap on the total cost of solar incentives, and a cap on the amount of solar electric generation capacity that would need to be installed to meet the solar RPS.

Cost Cap. The cost of solar incentives includes three components:

- State financial assistance for solar electric generation;
- The value of solar RECs needed to comply with the solar RPS; and
- The amount paid under the SACP.

The State financial assistance portion of the overall cost of solar incentives includes only the actual financial assistance, and not the administrative cost associated with delivering that assistance. The financial assistance itself includes several possible components. Recently enacted legislation (P.L. 2007, c. 340) specifies several types of state sources that could provide financial assistance for renewable energy, including solar electric generation. That financial assistance may come from the societal benefits charge established under N.J.S.A. 48:3-60; the retail margin on certain hourly-priced and larger non-residential customers under the Board's continuing regulation of basic generation service under N.J.S.A. 48:3-51 and 57; and other monies appropriated for that purpose. The legislation also authorizes electric public utilities and gas public utilities to invest in renewable energy resources or offer renewable energy programs, and to seek the Board's approval of cost recovery for those efforts.

An accurate assessment of the cost of solar incentives must preclude any double-counting. Currently, monies from the SACP replenish the account in which revenues from the societal benefits charge are held. Accordingly, the estimated cost of solar incentives must be calculated in a way that prevents double-counting of the State financial assistance and the amounts paid under the SACP.

The proposed amendments at N.J.A.C. 14:8-2.3(j) trigger a capping mechanism if the estimated cost of solar incentives for a reporting year exceeds two percent of the estimated retail cost of electricity for that reporting year. After the close of the three-

month true-up period that immediately follows the reporting year, the Board will receive information on the estimated cost of solar incentives and the estimated retail cost of electricity for the reporting year. If the Board determines that estimated solar incentive costs exceed two percent of estimated retail electricity costs, then the percentage of solar electric generation needed to meet the solar RPS is frozen at the level in effect at the time of the Board's determination. Under N.J.A.C. 14:8-2.3(k), the freeze remains in effect until costs drop below the two percent threshold.

The Board expects to issue an order directing BPU staff to keep the Board apprised of the estimated cost of solar incentives and the estimated retail cost of electricity. [NOTE – ideally, we could include this in an order that the Board would issue simultaneously with approving the rule proposal.] Making that information public as it is made available to the Board will help market participants to develop reasonable expectations of whether the cost cap is likely to be triggered, at least several months in advance of any decision to impose the cost cap.

Megawatt Cap. As part of the State's development of an Energy Master Plan, Governor Corzine has set a goal of reducing energy use 20 percent below business-as-usual levels by 2020. With projected business-as-usual annual electricity consumption of about 100,000 gigawatt-hours in 2020, a 20 percent reduction would result in annual consumption of about 80,000 gigawatt-hours.

The proposed amendments at N.J.A.C. 14:8-2.3(l) set a maximum level of solar electric generating capacity needed to comply with the solar RPS, based on the 2.12 percent solar requirement in 2020-2021, and total annual consumption in that year of 80,000 gigawatt-hours. Assuming an expected annual capacity factor for a solar electric generation facility of 11.4 percent (at that capacity factor, the facility annually produces 11.4 percent of the energy that it would have produced had it been operating at full capacity for the entire year), it would take 1,700 megawatts of solar electric generation capacity to produce 2.12 percent of 80,000 gigawatt-hours annually.

Accordingly, under proposed N.J.A.C. 14:8-2.3(l) the solar RPS will be deemed to have been achieved in any year in which 1,700 megawatts of solar electric generation capacity is operating in New Jersey, and solar RECs representing 1.7 million megawatt-hours (2.12 percent of 80,000 gigawatt-hours) have been used for compliance in that year.

Wider eligibility for solar RECs

When the BPU adopted changes to the RPS in 2006, several commenters questioned the limitation in N.J.A.C. 14:8-2.8, which allows solar RECs to be generated only based on electricity generated on a customer-generator's premises. 38 N.J.R. 2186 (May 15, 2006). In response, the BPU stated:

There are significant differences between customer-sited clean energy generation sources and larger power plant scale generation sources used to supply the grid. Decentralized customer-sited applications warrant more

ratepayer support because of the higher cost of deployment and the greater benefits these applications provide to the local distribution system.

However, the BPU also stated, “As conditions evolve and additional information regarding the distribution system benefits of power plant scale projects is obtained, the Board may reconsider this stance.” For the reasons discussed below, the Board has reconsidered its position, and proposes to amend N.J.A.C. 14:8-2.8 to provide that solar electric generation facilities can generate solar RECs regardless of whether they are located on a customer-generator’s property. However, to ensure that electricity from these facilities is likely to be delivered to customers in New Jersey, the Board has retained the requirement at N.J.A.C. 14:8-2.9(d) that the facility must be interconnected with an electric distribution system that supplies New Jersey.

Most importantly, action by the United States Department of Energy (USDOE) has focused the Board’s concern on the importance of clean local electric generation in mitigating congestion on the electric transmission system. In August 2006, the USDOE issued a “National Interest Electric Transmission Congestion Study” (see Executive Summary at http://www.oe.energy.gov/DocumentsandMedia/NETC_ExSum_8Aug08.pdf). The USDOE defined “congestion” as a restriction on actual or scheduled flows of electricity across a line or piece of equipment below desired levels. The USDOE identified a “Critical Congestion Area” reaching from the New York City metropolitan area to the Washington, DC metropolitan area, including all of New Jersey, as an area where “it is critically important to remedy existing or growing congestion problems because the current and/or projected effects of the congestion are severe.”

In May 2007, the United States Department of Energy (USDOE) proposed a Mid-Atlantic Area National Interest Electric Transmission Corridor (Mid-Atlantic Corridor) that stretched well beyond the Critical Congestion Area to encompass areas of coal production and coal-based electric generation in Pennsylvania, Ohio, and West Virginia. Draft National Interest Electric Transmission Corridor Designations, Notice and Opportunity for Written and Oral Comment, 72 Fed. Reg. 25,837 (May 7, 2007). The Board asked the USDOE to refrain from designating the Mid-Atlantic Corridor until after the USDOE evaluated alternative means to mitigate congestion, including demand response, energy efficiency, and clean local generation. After the USDOE finalized the designation, the Board sought rehearing of that action.

The Board views clean local electric generation as an essential element in any strategy to mitigate congestion on the electric transmission system and protect the reliability of New Jersey’s supply of electricity. Larger-scale solar electric generation facilities in New Jersey, regardless of whether they are located on a customer-generator’s premises, emit no air pollution and certainly would be considered clean local electric generation. The Board believes that such generation should not be deemed ineligible for the incentives that result from generating solar RECs. The Board has therefore proposed to amend **N.J.A.C. 14:8-2.8 and 2.9** to allow solar electric generation facilities interconnected with an electric distribution system that serves New Jersey to generate solar RECs, regardless of whether the facility is located on a customer-generator’s premises. **The proposed**

amendments also address potentially confusing wording in existing N.J.A.C. 14:8-2.9(a), to clarify that the phrase “for use in complying with this subchapter” refers to the use of RECs to comply with the renewable portfolio standards, and to clarify that the phrase “in accordance with this section” refers to the issuance of RECs.

In addition, recently enacted legislation makes it clear that eligibility to generate solar RECs should not be limited to facilities located on a customer-generator’s premises or to facilities that use a net meter. P.L. 2007, c.300 directs the Board to establish rules that:

. . . require the board or its designee to issue a credit or other incentive to those generators that do not use a net meter but otherwise generate electricity derived from a Class I renewable energy source and to issue an enhanced credit or other incentive, including, but not limited to, a solar renewable energy credit, to those generators that generate electricity derived from solar technologies.

The legislation also provides for these rules to be effective as regulations immediately upon filing with the Office of Administrative Law, for a period not to exceed 18 months. Accordingly, the proposal to amend N.J.A.C. 14:8-2.8(c) will be effective immediately upon filing for 18 months; at the same time, the Board is proposing to adopt those amendments through normal notice-and-comment rulemaking.

Social Impact

The proposed amendments will have a positive social impact, by continuing to stimulate investment in renewable energy while reducing reliance on rebates for that stimulation. As discussed in the Summary above, it is unlikely that rebates could be sustained at levels needed to achieve the solar RPS as it increases. Increasing the portion of New Jersey’s electricity that comes from solar generation will help reduce air pollution by reducing the State’s reliance on fossil-fueled power plants, which emit air pollution to the detriment of public health and welfare.

Economic Impact

The BPU previously described the economic impacts of the RPS when it proposed the RPS in its current form in 2005, including the solar RPS. That description reflected Rutgers University’s December, 2004 report, “Economic Impact Analysis of New Jersey’s Proposed 20% Renewable Portfolio Standard.” The study used the Rutgers Economic Advisory Service Econometric Model of the New Jersey Economy (R/ECON™) as the basis for calculating estimated impacts of the increase in the RPS which the Board later adopted in 2006. Although the Rutgers study found that increasing the RPS would increase electricity prices, it also found that the increased RPS would add jobs associated with manufacturing, installing, and supporting renewable energy installations.

A 2006 study examining the economic impacts of the New Jersey RPS (Cureington, et

al., “The Impact of Implementing a 20 Percent Renewable Portfolio Standard in New Jersey,”) recognized that renewable energy development would result in job growth and other economic benefits. However, the study also stated that these benefits would be far outweighed by negative impacts resulting from increases in electricity prices, especially because the authors assumed that much of the renewable energy development that occurs under New Jersey’s RPS would be built with equipment manufactured outside the state, and that a large percentage of the economic benefit associated with renewable energy development in New Jersey would “leak” out of the state as a result. The Cureington study did not factor in the value of environmental and health benefits.

As both studies point out, predicting economic impacts so far into the future is challenging and heavily dependent on the assumptions used. A recent report released by Lawrence Berkeley National Laboratory examined RPS cost impact studies conducted across the country, including the Rutgers study for New Jersey. The report notes that many RPS cost studies use dated assumptions about technology costs and highlights the importance of updating cost assumptions for future studies.

The Board expects that the proposed amendments will have a positive economic impact, for several reasons.

Reduced financing costs. The proposed eight-year SACP schedule, and the elimination of the annual review of the schedule, will provide greater certainty about future SACP levels. That greater certainty will help to increase the confidence of investors interested in financing solar projects, which in turn can be expected to reduce financing costs and also reduce the amount of State incentives needed to achieve the solar RPS.

Greater responsiveness to changing market conditions. Placing greater reliance on the value of solar RECs as an incentive, and less reliance on State-funded financial assistance, will improve the ability of incentive levels to adjust readily to changing market conditions, such as a substantial oversupply or undersupply of solar RECs, or a breakthrough in solar technology or in the price of equipment. The value of solar RECs will change in response to market conditions automatically and immediately; in contrast, adjusting State-funded financial assistance depends on administrative choices that take time to evaluate and decide – so that market conditions may have changed again before the decisions can be implemented.

Cost cap. The proposed amendments to N.J.A.C. 14:8-2.3(j) trigger a capping mechanism if the estimated cost of solar incentives for a reporting year exceeds two percent of the estimated retail cost of electricity for that reporting year. That cap will place a new limit on total costs that New Jersey electricity customers will bear in connection with achieving the solar RPS.

Megawatt cap. The proposed amendments at N.J.A.C. 14:8-2.3(l) set a maximum level of solar electric generation capacity needed to comply with the solar RPS, and a maximum number of solar RECs that would be needed for compliance. Those maximums are based on 2.12 percent of total annual consumption in that year, taking into

account Governor Corzine’s directive to reduce electricity consumption by 20 percent. Without those maximums, the solar incentives could instead reflect a greater need for solar generation capacity and solar RECs, based on greater projected electricity consumption under “business as usual” without state action to reduce consumption. Like the cost cap, the cap on generation capacity and compliance obligations will limit the total costs that New Jersey electricity customers will bear for solar incentives.

Wider eligibility for solar RECs. The proposed amendments to N.J.A.C. 14:8-2.8 will allow solar electric generation facilities to generate solar RECs regardless of whether they are located on a customer-generator’s property **and regardless of whether they use a net meter or are eligible to do so.** The facilities not located on a customer-generator’s property tend to be larger power-plant scale generation sources. Allowing these types of facilities to generate solar RECs will make an incentive available that can make it more likely that such facilities will be constructed. These facilities have the potential to mitigate congestion on the electric transmission system in strategic locations, thus mitigating the cost that New Jersey electricity customers bear as a result of congestion.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal Standards Analysis. The RPS has no Federal analogue, and is not promulgated under the authority of, or in order to implement, comply with or participate in any program established under Federal law or under a State statute that incorporate or refers to Federal law, Federal standards, or Federal requirements. Accordingly, Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. do not require a Federal Standards Analysis for the proposed amendments.

Jobs Impact

As discussed in the Economic Impact statement above, the Board recognizes the uncertainty of predicting key factors influencing the jobs impact as far out as 2020. However, for the reasons discussed in the Economic Impact statement, the Board believes that the proposed amendments will help to limit the cost that New Jersey electricity customers bear in connection with achieving the solar RPS, which may have a positive impact on employment. In addition, the proposed amendments that allow power-plant scale solar electric generation facilities to generate solar RECs will encourage the development of more such facilities, creating more jobs for the development, construction, and operation of those facilities.

Agriculture Industry Impact

The Board does not expect the proposed amendments to have a direct material effect on the agriculture industry in New Jersey. To the extent that the proposed amendments make it more feasible to achieve the solar RPS, that achievement will benefit the agriculture industry, if increased solar electric generation displaces fossil-fueled generation that is linked to acid rain, global warming, and other air pollution that can

harm agricultural crops.

Regulatory Flexibility Statement

A small business, as defined in the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., is a business that has fewer than 100 full-time employees. Many of New Jersey's solar installation businesses are small businesses under this definition. In addition, small businesses are among those electricity customers who elect to install solar electric generation facilities on their premises. However, the proposed amendments do not impose additional reporting, recordkeeping, or other compliance requirements on small businesses. Accordingly, no Regulatory Flexibility Analysis is required.

Smart Growth Impact

The State Plan is intended to "provide a coordinated, integrated and comprehensive plan for the growth, development, renewal and conservation of the State and its regions" and to "identify areas for growth, agriculture, open space conservation and other appropriate designations." N.J.S.A. 52:18A-199a. Smart growth is based on the concepts of focusing new growth into redevelopment of older urban and suburban areas, protecting existing open space, conserving natural resources, increasing transportation options and transit availability, reducing automobile traffic and dependency, stabilizing property taxes, and providing affordable housing."

The proposed amendments are not expected to have any impact on either the achievement of smart growth or the implementation of the State Development and Redevelopment Plan. The proposed amendments apply uniformly Statewide, and the Board does not expect that they will materially affect the location of future development.

Full text of the proposed amendments and new rules follows (additions indicated in boldface thus; deletions indicated in brackets [thus]):

TITLE 14. BOARD OF PUBLIC UTILITIES

CHAPTER 8. RENEWABLE ENERGY AND ENERGY EFFICIENCY

SUBCHAPTER 2. RENEWABLE PORTFOLIO STANDARDS

14:8-2.2. Definitions

The following words and terms, when used in this subchapter, shall have the meanings given below, unless the context clearly indicates otherwise:

* * *

“Qualification life” means, for any solar electric generation facility, the period beginning on the date on which the facility was interconnected to the local electric distribution system; and ending on the first May 31 that is at least 15 years after the

date of completion of the interconnection. For example, if a facility’s inspections required under N.J.A.C. 14:8-2.9(i) were completed on August 1, 2004, then the facility’s qualification life would begin August 1, 2004, and end on May 31, 2020.

* * *

“Total estimated cost of solar incentives” means the sum of the following for a reporting year:

(i) the total amount of financial assistance for solar electric generation paid from (1) the societal benefits charge established under N.J.S.A. 48:3-60, (2) the retail margin on certain hourly-priced and larger non-residential customers pursuant to the Board’s continuing regulation of Basic Generation Service pursuant to N.J.S.A. 48:3-51 and 57, (3) other monies appropriated for such purposes, and (4) cost recovery for renewable energy programs approved by the Board under section 13 of P.L. 2007, c. 340 which is paid from any source other than (1), (2), or (3) above;

(ii) the total cost paid by all suppliers/providers selling electricity to retail customers in New Jersey have paid for solar RECs that they have used for compliance with the solar electric generation requirement under N.J.A.C. 14:8.2.10(a), Table A; and

(iii) the total revenue from the payment of solar alternative compliance payments, excluding any such revenue that has been placed in the account that holds the societal benefits charge, retail margin, or other appropriation as described in (i) above, and provided that the amount excluded shall not exceed the amount paid from the same account for financial assistance as described in (i) above.

“Total estimated retail cost of electricity” means the total revenue from New Jersey electricity sales over a reporting year, as stated in "Revenue from Retail Sales of Electricity to Ultimate Customers, All Sectors" reported by the United States Energy Information Administration based on Form EIA-826, "Monthly Electric Sales and Revenue Report with State Distributions Report," or the successor to such report and form designated by the United States Energy Information Administration.

14:8-2.3. Minimum percentage of renewable energy required

(a) Each supplier/provider, as defined at N.J.A.C. 14:8-1.2, that sells electricity to retail customers in New Jersey, shall ensure that the electricity it sells each reporting year in New Jersey includes at least the minimum percentage of qualified renewable energy, as defined at N.J.A.C. 14:8-2.2, required for that reporting year from each category specified in Table A below, except as provided at [(i)] **(h), (j) or (k)** below:

Table A

What Percentage Of Energy Supplied Must Be Renewable Energy?

Reporting Year	Solar Electric Generation	Class I Renewable Energy	Class II Renewable Energy	Total Renewable Energy
June 1, 2004 - May 31, 2005	0.01%	0.74%	2.5%	3.25%
June 1, 2005 - May 31, 2006	0.017%	0.983%	2.5%	3.5%
June 1, 2006 - May 31, 2007	0.0393%	2.037%	2.5%	4.5763%
June 1, 2007 - May 31, 2008	0.0817%	2.924%	2.5%	5.5057%
June 1, 2008 - May 31, 2009	0.16%	3.84%	2.5%	6.5%
June 1, 2009 - May 31, 2010	0.221%	4.685%	2.50%	7.406%
June 1, 2010 - May 31, 2011	0.305%	5.492%	2.50%	8.297%
June 1, 2011 - May 31, 2012	0.394%	6.320%	2.50%	9.214%
June 1, 2012 - May 31, 2013	0.497%	7.143%	2.50%	10.14%
June 1, 2013 - May 31, 2014	0.621%	7.977%	2.50%	11.098%
June 1, 2014 - May 31, 2015	0.765%	8.807%	2.50%	12.072%
June 1, 2015 - May 31, 2016	0.928%	9.649%	2.50%	13.077%
June 1, 2016 - May 31, 2017	1.118%	10.485%	2.50%	14.103%
June 1, 2017 - May 31, 2018	1.333%	12.325%	2.50%	16.158%
June 1, 2018 - May 31, 2019	1.572%	14.175%	2.50%	18.247%
June 1, 2019 - May 31, 2020	1.836%	16.029%	2.50%	20.365%
June 1, 2020 - May 31, 2021	2.120%	17.880%	2.50%	22.5%

(b) The Board shall adopt rules setting the minimum percentages of solar electric generation, class I renewable energy, and class II renewable energy required for reporting year 2022 and each subsequent reporting year. These minimum percentages shall be no lower than those required for reporting year 2021 in Table A above, **except as provided in (j), (k), and (l) below**. Each of the rules setting such minimum percentage shall be adopted at least two years prior to the minimum percentage being required.

(c) – (i) (No change)

(j) If the Board determines that the total estimated cost of solar incentives for a reporting year exceeds two percent of the total estimated retail cost of electricity for that reporting year, then the percentage of solar electric generation required under Table A for the reporting year in which the Board makes its determination shall continue to be the percentage required in each subsequent reporting year, until the limitation ends under (k) below. For example, if the Board determines on December 1, 2018 that the limitation in (j) above was triggered, the percentage of solar electric generation required shall remain at 1.572% until the limitation ends under (k) below. The Board may revise Table A accordingly by administrative correction pursuant to N.J.A.C. 1:30-2.7.

(k) The limitation in (j) above shall end after the Board determines that the total estimated cost of solar incentives for a reporting year did not exceed two percent of the total estimated retail cost of electricity for that reporting year.

1. For the next reporting year after the Board determines that the two-percent threshold has not been met, the percentage of solar electric generation required shall be the percentage in Table A for the reporting year immediately following the reporting year in which the limitation in (j) above was triggered.

2. Thereafter, the percentage of solar generation shall continue to increase each reporting year until it reaches 2.12 percent.

3. For example, if the limitation in (j) above is imposed in the reporting year ending May 31, 2019, and the Board determines on December 1, 2020 that the two-percent threshold was not met in the reporting year ending May 31, 2020, then the percentage of solar electric generation required for the reporting year ending May 31, 2022 shall be 1.836%, and the percentage for the reporting year ending May 31, 2023 shall be 2.120%.

4. The Board may revise Table A accordingly by administrative correction pursuant to N.J.A.C. 1:30-2.7.

(l) The requirements in Table A for solar electric generation, and the portion of the requirement for total renewable energy attributable to solar electric generation, shall be deemed to have been satisfied in any reporting year in which:

i. The amount of solar electric generation capacity operating in the State exceeds 1,700 megawatts; and

ii. A combination of solar RECs and SACP's representing at least 1.7 million megawatt-hours have been used for compliance with the solar RPS.

14:8-2.8 Renewable Energy Certificates (RECs)

(a) (No change)

(b) [All RECs used for compliance with this subchapter shall be based on energy that was generated during the reporting year for which the REC is submitted, in accordance with

N.J.A.C. 14:8-2.9.] RECs may be used for compliance with this subchapter as follows:

1. For solar RECs based on energy generated on or after June 1, 2009, a solar REC used for compliance with this subchapter shall be based on energy that was generated either during the reporting year for which the REC is submitted, or during the reporting year immediately preceding the reporting year for which the REC is submitted.

2. For solar RECs based on energy generated before June 1, 2009, a solar REC used for compliance with this subchapter shall be based on energy that was generated during the reporting year for which the REC is submitted.

3. For all RECs other than solar RECs, all RECs used for compliance with this subchapter shall be based on energy that was generated during the reporting year for which the REC is submitted.

4. For all types of RECs, fractional megawatt-hours may be carried over in accordance with N.J.A.C. 14:8-2.9(g).

(c) A REC used for compliance with this subchapter shall be issued by the Board or its designee, or by PJM-EIS through GATS, as follows:

1. A [solar REC or] class I REC that is based on electricity generated on a customer-generator's premises shall be issued by the Board or its designee in accordance with N.J.A.C. 14:8-2.9;

2. A solar REC shall be issued by the Board or its designee in accordance with N.J.A.C. 14:8-2.9;

[2.] **3.** (No change in text)

[3.] **4.** (No change in text)

(d) – (e) (No change)

14:8-2.9 Board issuance of solar RECs

(a) The Board or its designee shall issue [solar RECs and] class I RECs **in accordance with this section, for use in complying with the class I renewable portfolio standard in Table A of N.J.A.C. 14:8-2.3,** based on electricity generated by a customer-generator on the customer-generator's premises [for use in complying with this subchapter, in accordance with this section]. **The Board or its designee shall issue solar RECs in accordance with this section, for use in complying with the renewable portfolio standard for solar electric generation in Table A of N.J.A.C. 14:8-2.3, based on electricity generated by a solar electric generation facility.** The Board may, after public notice, issue an order discontinuing Board issuance of such RECs and/or approving use of such RECs issued by PJM Interconnection or another entity for compliance with this subchapter.

(b) – (d) (No change)

(e) [If a REC is to be used for RPS compliance for a reporting year, the REC shall be based on energy generated in that same reporting year, except for fractions carried over in accordance with (g) below.] **(Reserved)**

(f) – (g) (No change)

(h) Because each true-up period is also the first three months of a new reporting year, a REC based on energy generated during this three month period shall be used only for RPS compliance for the new reporting year; **provided however, that a solar REC generated during that three-month period can be used for compliance either in the new reporting year or the immediately subsequent reporting year.**

(i) A request for issuance of a solar REC or class I RECs [based on electricity generated on a customer-generator's premises] shall be submitted to the Board on a form posted on the Board's website at www.njcleanenergy.com. The Board shall require submittal of information and certifications needed to enable the Board or its designee to verify the generation that forms the basis of the requested RECs. The Board shall require inspections of generation equipment, monitoring and metering equipment, and other facilities relevant to verifying electric generation. The Board shall impose application fees, inspection fees, and/or other charges for work required to verify electric generation and issue RECs.

(j) Each REC shall include the following:

1. – 3. (No change)

4. An expiration date. **The expiration date of a solar REC shall be the last day of the true-up period following the reporting year after the reporting year in which the energy that formed the basis for the solar REC was generated.** The expiration date of a REC **other than a solar REC** shall be the last day of the true-up period following the reporting year in which the energy that formed the basis for the REC was generated.

(k) The Board or its designee shall not issue a REC based on electric generation that has previously been used for compliance with this subchapter, or that has been used to satisfy another state's renewable energy requirements or any voluntary clean electricity market or program.

(l) The Board or its designee shall not issue a solar REC based on electricity generated by a solar electric generation facility after the end of its qualification life. However, the Board or its designee may issue Class I RECs based on electricity generated by the facility after the end of its qualification life; such Class I RECs may be used for compliance with the requirements in N.J.A.C. 14:8-2.3, Table A, for Class I renewable energy.

[(1) (m) [In accordance with N.J.A.C. 14:8-4.3, a] A customer-generator that is eligible for net metering owns the renewable attributes of the energy it generates on or after October 4, 2004, unless there is a contract with an express provision that assigns ownership of the renewable attributes. The owner of a solar electric generation facility that is not eligible for net metering owns the renewable attributes of the energy it generates on or after [effective date of this provision], unless there is a contract with an express provision that assigns ownership of the renewable attributes.

14:8-2.10 Alternative compliance payments (ACPs and SACPs)

(a) – (b) (No change)

(c) The Board shall review the amount of ACPs [and SACPs] at least once per year, in consultation with the ACP advisory committee, and shall adjust these amounts as needed to comply with (b)1 and 2 above and to reflect changing conditions in the environment, the energy industry, and markets. **Each year, the Board shall also establish the amount of the SACP for the first reporting year for which no SACP has been established in Table C below, in consultation with the ACP advisory committee, based on the Board's determination of what will be needed to comply with (b)1 and 2 above in that reporting year.**

(d) – (e) (No change)

(f) Table C sets forth the SACP for each reporting year from reporting year 2009 through reporting year 2016:

Table C
SACP Schedule

<u>Reporting Year</u>	<u>SACP</u>
<u>June 1, 2008 - May 31, 2009</u>	<u>\$711</u>
<u>June 1, 2009 - May 31, 2010</u>	<u>\$693</u>
<u>June 1, 2010 - May 31, 2011</u>	<u>\$675</u>
<u>June 1, 2011 - May 31, 2012</u>	<u>\$658</u>
<u>June 1, 2012 - May 31, 2013</u>	<u>\$641</u>
<u>June 1, 2013 - May 31, 2014</u>	<u>\$625</u>
<u>June 1, 2014 - May 31, 2015</u>	<u>\$609</u>
<u>June 1, 2015 - May 31, 2016</u>	<u>\$594</u>