COMMENT SUMMARY

New Jersey Renewable Energy
Solar Market Transition Straw Proposal

New Jersey Board of Public Utilities, Office of Clean Energy

August 24, 2007

By Order dated January 19, 2007, In the Matter of the Renewable Portfolios Standard, Docket No. EO0600744, the Board initiated a proceeding and stakeholder process regarding Alternative Compliance Payment (ACP) and Solar Alternative Compliance Payment (SACP) levels for energy years 2009 and 2010 or longer. OCE prepared and circulated a straw proposal for consideration and comment as part of this proceeding. Hearings were held in Newark on June 6th at the BPU Board Hearing Room and in Trenton on June 7th at the DOP Board Hearing Room regarding the January 19, 2007 Order Docket No. EO06100744 IMO RPS – Recommendations for ACP and SACP for Energy Year 2008 and ACP and SACP levels for Energy Year 2009 and 2010 or longer, and the Solar REC-only Pilot.

A Solar Transition Stakeholder Meeting to discuss the updated Ratepayer Impact Analysis from Summit Blue was held on August 9, 2007 and Revised Straw Market Transition Straw Proposal was released August 13, 2007. Following are the comments received via email to oce@bpu.state.nj.us.

MSEIA
MID-ATLANTIC SOLAR ENERGY INDUSTRIES ASSOCIATION

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August 21, 2007

VIA REGULAR MAIL AND EMAIL TO oce@bpu.state.nj.us

Honorable Kristi Izzo
Board of Public Utilities
Two Gateway Center
Newark, NJ 07101

Re: In the Matter of the Renewable Portfolio Standard, Docket No. EO0600744 Office of Clean Energy Revised Final Straw Proposal

Dear Secretary Izzo:

Enclosed are comments of the Mid Atlantic Solar Energy Industries Association ("MSEIA") on the Revised Final Straw Proposal issued by the Office of Clean Energy ("OCE") on August 13, 2007. MSEIA is a not-for-profit trade organization of companies and businesses working in New Jersey, Pennsylvania and Delaware, to develop, manufacture, design, finance, construct and install solar power systems. Our purpose is to advance the market for solar energy in this region and our 65 members run the gamut from small local companies serving the residential and small commercial markets to multi-national manufacturers and integrators. We are an affiliate of the national Solar Energy Industry Association ("SEIA").

MSEIA as an organization, and our members as individuals and companies, have been active participants in the policy discussions regarding structure and future management of the New Jersey solar market. We provided written testimony and comments on the Office of Clean Energy Staff's "Straw Proposal on the Alternative Compliance Payment and Solar Alternative Compliance Payment Levels for Energy Years 2009 and 2010 or longer". MSEIA has also been actively involved in the stakeholder meetings relating to the market transition strategies. We appreciate that this process has been open and transparent and has allowed stakeholders like us to participate.

In our comments we expressed our concerns that the original Straw Proposal contained economic assumptions and conclusions that could not be supported. The solar industry is encouraged by many of the conclusions and recommendations that have been reached in this process, particularly the acknowledgement that project economics differ based on their size, the need for continued rebates for smaller systems and the need for a securitized market. We are greatly encouraged that many of our concerns and those of other stakeholders appear to have been heard and a good faith effort has been made to address them. The approach set forth in the August 2, Discussion Document as supplemented by the August 13, 2007, Revised Final Straw Proposal sets a framework to re-start the solar industry in NJ.

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Concerning the August 13, 2007, Revised Final Straw, MSEIA comments as follows:

1. Adoption of a competitive multi-year model with rebates for smaller systems with commitment to address long term contracts

We have consistently maintained that the economics of smaller systems are substantially different and more expensive than for larger systems. Accordingly, if smaller systems are to be encouraged, and there are significant policy reasons why they should be, rebates will have to be continued for such systems. We recommend that OCE consider two rebate levels for private projects: one for under 10 kW and a second for 10 to 50 kW. MSEIA concurs in the recommendation that the details regarding the level of funding for rebates and project eligibility criteria should be considered in the Comprehensive Review Assessment ("CRA") proceeding to set funding levels for 2009 through 2012.

a. Securitization/Long term contracts

While MSEIA has favored a tariff mechanism to support long term SREC contacts as the preferred method to advance the growth of solar and achieve the RPS goals, we recognize the basis for the policy decisions that underlie the August 2, 2007, Discussion Document and the August 13, 2007, Revised Final Straw and regard many of the Revised Final Straw's recommendations as a thoughtful and positive step forward in building a solar market in New Jersey. At the same time, it would be a mistake to regard the decisions recommended in the August 13, 2007, Revised Final Straw Proposal as a conclusion, rather than an important step, in the process of implementing a solar market. **We recommend in the strongest possible terms, that the follow-up proceeding to establish long term secure contract mechanisms be treated as an essential part of the overall market design and that the BPU direct the Office of Clean Energy to implement that process in the near term.** It is imperative that the BPU implement this next step to establish a system that offers the benefits of long term SREC contracts and a stable market.

b. Target IRR.

An Internal Rate of Return ("IRR") of 12% is necessary if customers are to invest in solar systems as opposed to other forms of investment. This is true for all systems no matter their size or the segment of the market they serve. Accordingly, we support the proposed 12% IRR as the minimum necessary to support solar investment for all systems.

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c. Qualification Life of 15 years

As noted in the stakeholder discussions, solar systems have an expected life of 20 to 30 years. However, we recognize that specifying a term during which a system can generate SRECs that is shorter than the system's expected life will assist in providing necessary structure and certainty to the market and allow return on investment to be realized in a reasonable time frame without undue burden on ratepayers. We believe that a 15 year SREC qualification life with a subsequent opportunity to continue to generate Tier I Renewable Energy Credits is a reasonable balance of various policy goals.

d. Set the SACP level at $100 above the SREC level

The estimates of SREC prices and the establishment of a multi-year SACP schedule seem fairly reasonable. At the August 9 stakeholder meeting, there was discussion of the fact that the SREC cost plus the transactional cost associated with marketing and trading the SREC would have to be sufficiently less than the SACP to provide the necessary disincentive to paying the SACP. Our experience indicates that transaction costs are approximately $50 per SREC. We are concerned that a $100 differential, particularly at the start of the new program when there is greater uncertainty and before a long term contract requirement has been determined, may not be sufficient to motivate Load Serving Entities ("LSEs") to enter into SREC transactions rather than pay the SACP. If the differential is too low it could be disastrous to the industry and for the program as a whole. As discussed at the stakeholder meeting, if the differential is somewhat greater than necessary it should not have a significant adverse impact as the market will dictate the appropriate SREC price. Accordingly, we recommend that at least in the initial two years of the program and until the outcome of the Securitization/Long Term Contracting proceeding is determined, the differential between SREC and SACP prices should be $150. Thereafter the differential can be adjusted to $100 or some other appropriate number assuming market experience justifies that number. Throughout the next 8 years, the Board should monitor SREC trading activity and SACP payments on an annual basis. If there are stranded SRECs or significant SACP penalty payments being paid, the assumptions underlying the SREC/SACP number should be reexamined and a revised differential considered.

The note following Table 3 in the Revised Final Straw states that it assumes no SRECs after 2035. We understand this provision to indicate that projects approved in the final RPS attainment year 2020 with a 15 year qualification life would expire in 2035. We do not object to this assumption so long as it is not intended to be a binding statement of larger policy or purpose.

2. Legacy projects

MSEIA supports the decision to allow early adapters to see the reward of their foresight and allow their reasonable investment expectations to be realized. The numbers and size of such early systems are so small that their impact on total program costs is insignificant and it is not a

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worthwhile expenditure of effort to formulate specific policies to address their impact. We support the OCE compromise proposal to provide legacy systems a 15 year qualification life running from the date when the system first came on line, coupled with the ability to use Tier I Renewable Energy Credits after expiration of the qualification life.

3. Two-year trading life

MSEIA fully supports the increase in the SREC trading life from one to two years. This will provide a more stable market and eliminate the inequities created by the absolute one year cutoff.

4. Community-based Solar Programs

MSEIA supports the concept of allowing a site to provide solar energy to neighboring locations. This would allow more ratepayers to participate in the benefits of solar as many locations are not themselves suitable for solar but may be located near locations that are. We also support the idea of grid supply solar and allowing solar installations that are not rebated to connect to the grid. Such measures will help achieve the Renewable Portfolio Standard ("RPS") goals at a lower cost than otherwise. We look forward to working with OCE in identifying the regulatory framework for such systems.

5. SREC Only Pilot

The industry has supported the SREC Only Pilot as a way to gauge interest in and demand for projects that are based on an SREC income stream without rebates. Given the limitations on rebate funds, this was the only way that projects, particularly those in the greater than 10 kW queue, could be built. At this time there appears to be significant interest in such projects, although the only real measure is whether the projects that have evidenced interest are funded and built. In light of the significant volume of projects that have registered for Phase I of the Pilot (currently 54 MW), some industry members have expressed concern that Pilot projects will preclude the SRECs from the residential and small commercial sector and that program rules need to be defined for Phase I of the Pilot before proceeding to a Phase II.

As New Jersey transitions to a new market structure, it is critically important that the state and the industry monitor and provide to the market information on key indicators that will allow the market to function. Thus, the market will need accurate data on the project applications and status and the estimated SRECs that will be coming into the market in order to work properly. The Pilot should be used as an opportunity to develop the reporting systems to measure and report this data.

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6. Long term monitoring

MSEIA's long term goal is for prices of solar to achieve parity with other fossil fuel sources of energy. The general goal of providing two percent of the electricity through solar at two percent or less of the total cost is a reasonable one. Significant analysis and discussion will need to take place to determine how that goal is to be reached and within what time frame. The industry is in favor of establishing methods to monitor supply and cost for purposes of evaluating the development of the market and will participate in a proceeding to address this. We are prepared to discuss the need for a "safety valve" in the event that solar cannot meet annual RPS demand. However, there should be a mechanism that allows the RPS schedule to be accelerated in the case where there is the opportunity to install more solar in advance of RPS requirements. The determinant of this acceleration should be the maintenance of total Net Present Value ("NPV") of ratepayer costs.

7. Rule Making

The Solar Industry is ready to continue working with the Office of Clean Energy to define the details of the program. We urge that the timetable to establish a method to enable long term contracts and implement the rule changes implied by the Staff Straw be established and publicized immediately with an aggressive implementation schedule.

Respectfully ~~submitted~~,

Susan P. LeGros
Executive Director

cc: Noreen Giblin (via e-mail)
Lance Miller (via e-mail)
Michael Winka (via e-mail)
B. Scott Hunter (via e-mail)

From: john@cleanenergyadvocates.com
Sent: Thursday, August 09, 2007 2:18 PM
To: Winka, Michael; Hunter, Benjamin
Cc: OCE; Miller, Lance
Subject: Comments for Aug 9 meeting - Solar Discussion Paper

Please consider our comments below regarding the OCE Solar Discussion Paper for Aug 9 2007 meeting (which we were unable to attend). Our initial response to the Paper was to continue to argue for a Feed-in Tariff, but in consideration of the need to get a program in place soon, and the infrastructure set up to administer a SREC program, we focus here on aspects of the Staff analysis and proposal that can bear on reducing the cost of electricity from PV.

On pages 11 and 14 of the Discussion Paper, reference is made to eliminating incentives when the PV-installed cost (or price of electricity) is competitive with the marginal cost from a gas-fired unit:

OCE draft Position - Establish a set timeframe to eliminate all incentives based on PV-installed cost reaching parity with the marginal cost of a natural gas fired unit - estimated to be 2015 or sooner.

Long term monitoring - Direction should be established to monitor the decline in the installed cost to be able to close out all incentives based on a timeframe -2015 or at a certain average installed costs - parity with the marginal cost for a natural gas fired unit.
We assert that the comparison should not be the marginal cost from a gas-fired unit, but the retail price of electricity that a ratepayer is charged. This retail price could be Statewide-averaged, and could differ for different market segments (residential v. non-residential), but this retail price is the cost against which a customer will use to decide whether to install solar PV when incentives are eliminated. The marginal cost of electricity from a gas-fired unit is the highest-priced electricity, and not something a ratepayer sees directly in their bill.

The targets of the Solar America Initiative are to bring the cost of solar PV electricity down to the retail price of electricity from conventional sources, by 2015. Not the marginal cost. The SAI targets are in the range of 8-15 cents per kWh, the expected range of residential and commercial rates of electricity from conventional sources. For more on these targets, please see pgs 8-9 of the SAI Plan at http://www1.eere.energy.gov/solar/solar_america/pdfs/sai_draft_plan_Feb5_07.pdf .

Please note that even if these targets were not in place, the considered opinion of this DOE Agency projects solar PV electricity to be only a few cents per kWh higher. Also note these are levelized costs that are referred to. We propose instead that the OCE take the following position:
OCE draft Position A key objective of the OCE is to reduce the levelized cost of electricity from customer-sited PV to the state-averaged retail price of electricity from conventional (non-renewable) sources, by 2015, and to adjust or reduce incentives to achieve that objective.

Whether or not the OCE chooses to take this position, the fact remains that a credible Federal agency is projecting a retail cost of PV electricity declining far below that implied by the Blue Summit Report, the assumptions of which (2.2% annual decline in system costs) derive from EIA forecasts and are now part of the

OCE's most recent analysis and proposal for setting the SACP levels for the 8-year schedule. In fact the SAI projects an average decline near 10% per year, twice the rate of the historic trend. Our comments here are not meant to critize Blue Summit's assumptions, but we are pointing out that if costs actually drop much faster than 2.2%, then the proposed SREC schedule will be significantly over-paying the necessary incentive.

We recommend that the OCE consider performing the calculation for the Year1 SREC value and rate of decline in SREC values over an 8 year schedule, assuming system costs reduce at 10%, while maintaining the desired IRR and payback period. We will independently attempt this proposed calculation. We expect the ratepayer impact would be considerably less, making these SACP values more acceptable to the Board. The OCE and Board can defensively point to the DOE projection for cost reduction as the basis for determining the long-range SACP values. The consequence of these new SREC values will be to encourage the local industry and investors to achieve the desired rate of cost reductions in order to maximize their return on investment.

We know time is pressing, but setting a schedule 8 years out requires as much consideration as possible to try and get it as right as possible. We hope to raise these issues again in public comments to the next staff straw on Aug 13, or otherwise in comments to the Board prior to the Aug 22 update.

If you can kindly acknowledge receipt of this email, we would be most grateful.

Best regards,

john

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NJBPU – Office of Clean Energy Aug 21, 2007
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Attn: Michael Winka – Director

We wish to comment on the final straw proposal posted Aug 9 and the final SREC/SACP schedule posted Aug 13.

As we have commented previously, our primary interest in the solar transition process is to advocate for achieving parity within a decade between solar electricity costs and the utility retail price a customer would see in their bill. When this happens, the 8-16 GW of solar potential in NJ can become an economically realistic goal, and if combined with electric vehicles, vehicle-to-grid technology and electricity storage, can address the goals of the Energy Master Plan as well as the targets of recently-passed GHG legislation.

We are also motivated by recent analysis and reports indicating very significant difficulties in the production of oil and gas in the coming decade, events that will work their way into the price of energy, and economic stability, in the future. We believe it is essential to speed the process of cost reduction for renewables. Under business-as-usual scenarios (such as a 2.2% cost reduction forecast by the EIA or even the historic 5% cost reduction) parity will require two decades or more. We suggest this time frame must be accelerated.

While we believe that the 15-year tariff model is a better program than the SREC/rebate model, we accept the final Staff proposal as workable from the point of view of grid-parity, and respectfully suggest how the Board might consider achieving necessary cost reductions within the framework of the proposed SREC schedule.

First, we believe the Board should accept the proposed Staff schedule for SRECs for energy years 2009 - 2016, but adjust the SACP appropriately higher (as SRECs trade 25% - 50% lower than the SACP).

Second, we suggest the Board express their objective to bring solar PV costs in line with retail electricity prices within a decade, an objective consistent with accepting the 8-year schedule for the SRECs proposed by the Office of Clean Energy.

However, in order to bring about cost parity, installation costs will need to drop at approximately 12% per year for the next decade. To encourage these reductions, the Board should be aware that by setting the 2017 (and beyond) SACP equal to the current ACP, investors and industry will be motivated to reduce costs to achieve the desired reduction rate of 12% while preserving their margins.

We show in Table I the summary finances for a commercial installation, as an example, installed in years 2009, 2010, etc, using the NREL Solar Advisor Model. We compare, for two discount rates, the cost of electricity, payback, and net present value with the proposed SREC values (ending in 2016, after which SREC = REC value), or with SREC

set to REC values starting in 2009 (i.e. no SREC at all). We show that if system installation costs drop at a rate of order 12% per year, then by 2016 PV electricity will be competitive with utility retail prices. In other words, there would be no need to set the SACP higher than the ACP of $50/MWh beyond 2016. The ratepayer impact of achieving this objective amounts to saving billions of dollars.

We realize statements by the Board regarding intent on setting future SACP levels can add to the regulatory risk that the OCE and stakeholders have worked for over a year to minimize. But we believe the Board, given the proposed 8-year schedule and a goal to make solar PV economic within a decade, must see that setting future SACP values are its principal means to steer costs lower. We certainly hope other no-expense incentives can be found to additionally encourage cost reduction.

Respectfully submitted,

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TABLE I. Levelized cost of electricity (LCOE), payback, and NPV assuming 11.7%/yr reduction in system cost, for commercial 150 kW system, assuming federal ITC of 30% thru 2017, and inflation rate of 2.5%. Lifecycle analysis is taken to be 20 years. System assumed to be 100%-financed with a 15-year loan at 6%. For reference, tax-adjusted utility rate is 7.8 ¢/kWh.

Discount rate (real) = 5.5%			with SREC as in final straw				without SREC incentive			
			REC = $40/MWh after2016				REC = $40/MWh after 2008			
EY	system cost $1,000s	$/Wdc	remaining years of SRECs	LCOE real ¢/kWh	LCOE nominal ¢/kWh	payback years	NPV $1,000s	LCOE real ¢/kWh	LCOE nominal ¢/kWh	payback years	NPV $1,000s
2009	$983	$6.50	8	-3.3	-4.0	6.1	$196	13.4	16.4	20+	-$103
2010	$880	$5.82	7	-2.7	-3.3	5.6	$185	12.1	14.8	20+	-$80
2011	$788	$5.21	6	-1.9	-2.4	5.2	$171	10.9	13.4	20+	-$60
2012	$706	$4.67	5	-1.0	-1.2	4.8	$155	9.9	12.1	20+	-$41
2013	$632	$4.18	4	0.1	0.1	5.4	$135	9.0	11.0	20+	-$24
2014	$565	$3.74	3	1.3	1.6	7.3	$113	8.2	10.0	18.5	-$10
2015	$506	$3.35	2	2.8	3.4	9.4	$87	7.4	9.1	16.7	$4
2016	$453	$3.00	1	4.4	5.4	11.8	$57	6.8	8.3	15.1	$15
2017	$403	$2.67	0	6.1	7.5	13.5	$27	6.1	7.5	13.5	$27

Discount rate (real) = 10%			with SREC as in final straw				without SREC incentive			
			REC = $40/MWh after2016				REC = $40/MWh after 2008			
EY	system cost $1,000s	$/Wdc	remaining years of SRECs	LCOE real ¢/kWh	LCOE nominal ¢/kWh	payback years	NPV $1,000	LCOE real ¢/kWh	LCOE nominal ¢/kWh	payback years	NPV $1,000
2009	$983	$6.50	8	-12.7	-15.1	6.1	$261	7.2	8.5	20+	$6
2010	$880	$5.82	7	-11.3	-13.5	5.6	$243	6.5	7.8	20+	$14
2011	$788	$5.21	6	-9.8	-11.7	5.2	$225	5.9	7.1	20+	$22
2012	$706	$4.67	5	-8.2	-9.7	4.8	$203	5.4	6.5	20+	$28
2013	$632	$4.18	4	-6.3	-7.5	5.4	$179	5.0	5.9	20+	$34
2014	$565	$3.74	3	-4.3	-5.0	7.3	$153	4.5	5.4	18.5	$36
2015	$506	$3.35	2	-1.9	-2.3	9.4	$123	4.2	5.0	16.7	$44
2016	$453	$3.00	1	0.7	0.9	11.8	$89	3.8	4.6	15.1	$49
2017	$403	$2.67	0	3.5	4.2	13.5	$53	3.5	4.2	13.5	$53

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Honorable Kristi Izzo
Board of Public Utilities
Two Gateway Center
Newark, NJ 07101

Re: In the Matter of the Renewable Portfolio Standard, Docket No. EO0600744
Office of Clean Energy Revised Final Straw Proposal

Dear Secretary Izzo:

Thank you for the opportunity to comment on the most recent iteration of the OCE Straw Proposal for a Solar Market Transition. As the owner of Green Alternatives Inc. and an active stakeholder in the solar industry for over ten years I am greatly appreciative of the BPU's enthusiasm for an open and free discussion regarding the regulatory framework to be put into place to encourage the development of solar in New Jersey.

It is also encouraging to see the BPU respond in a positive manner to the constructive criticism expressed by stakeholders as expressed in this latest version of the straw proposal.

I agree with the BPU's choice of a Competitive Model with Multiple Year SACP set in advance with Rebates for Smaller Projects. I also believe a target IRR of 12% represents a realistic assessment of the markets expectations for project economics.

Having stated the above I still have reservations regarding the current straw proposal. By declaring a qualification life of an SREC by any finite length of time you are fundamentally changing the concept and definition of an SREC. An SREC represents the environmental attributes of solar generated electricity as long as the system is operating. Most solar panels are warranted for between 20 to 25 years. The first solar panel invented in New Jersey is still functioning after 50 years.

SRECs are not an incentive payment. The price an LSE pays for an SREC represents the societal value of the environmental attributes only. I therefore believe the "qualification life" should be limitless.

If the BPU insists on a "qualification life" for an SREC than at a minimum it should coincide with the warranted life of the solar panels or 25 years.

By placing a "qualification life" on all systems the BPU is changing the rules of the game retroactively for installed systems. This sends a negative signal to the market. I understand the thinking behind it as a comprise solution to a very difficult problem. Maybe there is another way to solve this problem that results in the same outcome of reduced financial exposure.

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I applaud the BPU's creativity in recommending, in response to stakeholder comments, an SACP schedule which has a high initial value with a higher reduction that maintains a reasonable NPV value for the total cost of the program and limits the ratepayer impact in the out years of the program.

The note to Table 3 states that it is based on no RPS increase through 2035 with decreasing new solar capacity"

This assumption was not discussed in the Stakeholder Meetings and I don't understand why this statement is included in the proposal. The State of New Jersey should continue to encourage the growth and deployment of solar and not prejudice the market this far in advance. What happens after 2012 is well beyond the scope of the current proceeding. In place of such an unsettling assumption, the Straw would do more to advance the growth of solar if there were language which discussed a review of our success including actual cost of deployment, etc.

"OCE recommends that RPS rule making be initiated to implement a safety value which would maintain the current RPS if the Solar REC supply does not match demand. This safety value would include both a review of the total installation cost/panel cost and the supply of Solar RECs."

As I stated verbally at the last stakeholder meeting, the 2% level or 1500- 1800 MW of solar is not a sacrosanct goal. A market adjustment mechanism should be bi-directional. It should allow for an acceleration of the RPS goals if industry is overly successful in building solar systems and a break should be used if the goals can't be met in any given year. The recommended 2 year SREC life should help smooth the ups and downs in the market. The more solar that can be deployed in New Jersey (and elsewhere for that matter) the better.

Respectfully,

David Weisman

Principal

Green Alternatives Inc.

Jersey Central Power & Light
A FirstEnergy Company

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August 21, 2007

Office of Clean Energy
Board of Public Utilities
Two Gateway Center
Newark, NJ 07102

Re: New Jersey Renewable Energy
Solar Market Transition
Office of Clean Energy–Final Straw Proposal

Dear Sir or Madam:

These comments are being submitted on behalf of Jersey Central Power & Light Company ("JCP&L") in connection with the Final Solar Market Transition Straw Proposal, dated August 13, 2007 ("Proposal"), promulgated by the Board of Public Utility's ("Board") Office of Clean ("OCE") following the submission of reports by Summit Blue Consultants, public stakeholder discussions, hearings, written comments and related activities.

JCP&L commends the Board and the OCE for their leadership and initiative in undertaking this broad-based, inclusive review of the solar marketplace in New Jersey so as to begin a transition from a reliance on government supports to a more market-based approach. JCP&L shares the general view that the development of the solar industry and the expansion of solar installations in New Jersey is a worthwhile and laudable goal. In that spirit, JCP&L generally supports the approach embodied in the Proposal, but nonetheless has a few observations that it believes may enhance the transition, while limiting the financial impact on customers.

1. Base proposed solar alternative compliance payment ("SACP") payment on more current pricing data so as to reduce the financial impact on customers

The project financing analysis performed by Summit Blue to support the values presented in the Proposal's Table 1–"SREC Levels Required to Achieve Target IRR" used retail electric rates provided by the Federal Energy Information Agency (see July 31 Summit Blue report, page 29). Worksheets distributed show a 2005 starting value of $0.117/kWh for residential customers and $0.107/kWh for commercial/industrial customers. After reflecting the results of the 2007 basic generation service ("BGS") auction, however, current average retail electric rates are about 30% higher than the rates on which the OCE was relying. By updating the analysis underlying the Proposal to reflect more current New Jersey pricing data, a larger share of the investment in new solar systems can reasonably be expected to be recovered from savings on electricity costs or from sales of the output of the solar installations, thus leaving a smaller portion of the investment to be recovered through the solar renewable energy certificates ("SRECs"). As a result, it may be

possible to reduce the level of the proposed SACP payment without jeopardizing the effectiveness of the new solar model.

New Jersey is approaching a period beginning in EY 2009 when there will be a predictable shortfall in solar capacity and SRECs -- an estimated shortfall of 30MW for EY 2009 was discussed at the August 9, 2007 stakeholder discussion. This raises the prospect of scarcity pricing, higher supplier pricing and energy costs to the consumer at least equal to the SACP times the shortfall. Those suppliers that do not have longer term contracts to cover their solar requirements will necessarily raise their proposed pricing to reflect the pricing of these requirements at the SACP level. This was recognized by the Board in its December 18, 2003 Order in Docket No. EX03080616 setting the current alternative compliance payment ("ACP") and SACP rates:

> The ACP and SACP provide a back-stop type of mechanism that protects suppliers, as well as consumers, from the cost implications of excessive market risk. The ACP and SACP set an upper limit for the cost of [renewable portfolio standards ("RPS")] compliance; remove the risk of unknown financial penalties for any renewable energy shortfalls; provide protection against the possibility of market power exertion and unforeseen scarcity of renewable energy and REC shortages; and gives suppliers some flexibility in complying with RPS requirements.

In addition, without being critical of Summit Blue and its extensive and professional efforts, it is inescapable that there are numerous opportunities for errors in the assumptions used in the various analyses that led to the Proposal, including forecasts, pricing and market internal rate of return financing requirements. JCP&L recognizes that there has been considerable and vital input from the solar community during this process and commends the OCE for advancing a Proposal representing its best effort to reflect an appropriate balancing of the various interests. However, given the number of important and concurrent issues being addressed at this time in New Jersey (e.g., Energy Master Plan, demand response initiatives, PSE&G's solar petition, etc.), there may have been insufficient time and resources available for all of the inputs and underlying data behind the Proposal to have been adequately vetted by all parties.

Moreover, the potential impact on customers of the SACP levels that are set in this process cannot be ignored. The risk of <u>overstating</u> the SACP will be higher BGS and energy supplier pricing to cover anticipated shortfalls, an over-subsidy for solar projects and a corresponding increase in consumer costs. The risk of <u>understating</u> the SACP will be lower BGS pricing and a more modest rate increase, but a growing solar shortfall relative to the RPS.

Given the above considerations, JCP&L recommends a moderate approach to setting the SACP level, with a smaller spread between it and the assumed required SREC level, resulting in a somewhat more modest initial SACP rate than that reflected in the Proposal. The SACP level could then be increased either on an annual basis, or at a specified time (e.g., 2010), if and as needed. In particular, JCP&L proposes that the SACP be set at $600, subject to annual review to determine if interim adjustments are necessary. JCP&L believes that, in light of the updated pricing data noted above, this level would be sufficient to foster SREC prices that meet project

financing requirements. Moreover, a flat $600, which represents a doubling of the current SACP level, is a much simpler model and also lessens the implied precision that is reflected in the precise-sounding SACP levels contained in the Proposal–a level of precision that is simply not possible in light of the uncertainties noted above.

2. The new SACP levels should be phased in so as not to undermine confidence in the BGS auction process and competitive markets

The new SACP levels should be phased in to maximize confidence in the BGS auction process and New Jersey's competitive markets for electricity. New Jersey's commitment to competition, both through the competitive default pricing fostered by the BGS auction process and the encouragement of third party suppliers ("TPSs"), is a national model in which energy suppliers should continue to have confidence. Introducing a change in SACP pricing for energy years for which BGS and TPS contracts have already been executed may well undermine confidence in those processes. JCP&L suggests that the new SACP levels apply prospectively to contracts awarded during the coming auction year, and that a process for exempting existing BGS and TPS contracts from the increase be developed.

3. All qualifying solar installations should be metered

JCP&L understands that the intent is to revise the existing rules so as to require metering of all qualifying installations, rather than continuing to permit estimates of output for small systems. JCP&L strongly endorses this approach. The proposal should be explicit about this principle in the section discussing "long term monitoring". Increasing the SREC value and volume will also increase the financial risk imposed on customers associated with errors in estimates or fraud is too great. Thus, a metering requirement and metering procedures for all solar installations must be clearly included in the new model, to become effective EY 2009. Any existing solar installations that do not have meters should be required to retrofit their installations with meters meeting applicable standards.

4. Eliminate the "qualification life" aspect of the Proposal

The Proposal suggests that solar facilities should have a 15-year qualification life and that they not be eligible for SREC generation thereafter, but would "count" against a different class in the portfolio standards. JCP&L opposes this concept for several reasons. First, implementation of a qualification life is inconsistent with the fundamental nature of solar generation and its associated SRECs as a market commodity, and, instead, emphasizes the regulatory construct of the commodity, potentially raising concerns about regulatory risk. If a New Jersey solar system is generating electricity, it should count against the portfolio standard. Second, one of the stated goals of the solar transition process is to maximize consistency with national and regional standards. JCP&L is not aware of any state that assigns a finite eligibility life for renewable generation. Third, JCP&L is concerned that the introduction of a finite SREC life for solar facilities would limit the validity of the analyses of customer impact undertaken by the Center for Energy, Economic and Environmental Policy in connection with the development of the RPS requirements that form the basis for the solar/SREC program. Finally, the addition of a

qualification life concept would substantially increase long term solar portfolio requirements. An alternative would be to ramp down the RPS solar requirements based on the vintage of the installation, but it seems preferable to simply allow systems to qualify for their entire operating life.

5. Legacy systems should be fully included in the model

For the reasons discussed above, JCP&L believes that metered legacy systems should also qualify for SRECs as long as they are producing qualifying solar power and should count towards meeting the RPS solar requirements.

6. A Community Based Solar Program should not be implemented at this time

JCP&L does not believe that there has been sufficient discussion and development of the concept of a community based solar program to warrant implementation at this time. Indeed, such a program does not seem logically to fit within the current solar transition process and should, therefore, be considered at a later date.

JCP&L has no comments on the other aspects of the Proposal, although JCP&L may well have comments with respect to any proposal for "securitization". However, JCP&L is not setting forth its views on that subject in this submission because under the Proposal the concept of "securitization" is to be considered in a subsequent stage of this process. JCP&L reserves its right to comment on any securitization proposals, and any other elements of the evolving solar transition process, as it deems appropriate in the future.

Once again, JCP&L commends the Board and the OCE for working to advance solar development in New Jersey and expresses its appreciation for this opportunity to share its views.

Very truly yours,

Christopher W. Siebens
Manager–Demand Response Programs

COMMENTS OF THE NEW JERSEY LARGE ENERGY USERS COALITION REGARDING THE OFFICE OF CLEAN ENERGY REVISED-FINAL STRAW PROPOSAL

As we have reiterated throughout this proceeding, the New Jersey Energy Users Coalition ("NJLEUC") supports the use of renewable resources, including solar, as part of a diverse portfolio of energy resources that are needed to provide reliable and environmentally responsible supply for New Jersey's ever-expanding load requirements. Several NJLEUC members have already developed solar projects, some significant, while others are now in the process of doing so. There should be no doubt at this point that NJLEUC supports the state's efforts to foster the growth of solar power through this proceeding.

However, while NJLEUC supports the further development of renewable energy, we remain extremely concerned regarding the funding of renewable energy projects, both under the current rebate system, as supported by the Societal Benefits Charge ("SBC"), and the successor mechanisms now being discussed as part of the Office of Clean Energy ("OCE") Final Straw Proposal (the "Proposal"). Because the SBC is assessed on a usage basis, NJLEUC's members have paid steadily increasing contributions to the SBC as it has expanded each year, in part to support the CORE solar rebate program. *Several of our members currently contribute between $1-2 million annually in SBC charges, almost as much as they pay for distribution charges.* The SBC, 30% of which funds the current CORE solar rebate program, can only be described as a considerable expense for New Jersey businesses.

In light of the current magnitude of the SBC, which is obviously paid in addition to actual energy-related costs, we continue to urge the Board to exercise great caution when considering

expensive alternative approaches that will further increase the already high energy costs paid by New Jersey consumers of all rate classes.

Our overarching concern in this proceeding has been the need to fully understand the cost impact to ratepayers of the various proposals being considered on ratepayers. We are extremely concerned and skeptical whether the OCE proposals are cost-justified and consistent with the Governor's important economic development initiatives. Our concern is heightened by the fact that if key assumptions that underlie the proposals, including the assumed annual decline in cost of solar technology and equipment, prove to be overly optimistic, the adverse ramifications to New Jersey consumers and our economy could be very significant and unwarranted.

The evolution of the various drafts of the straw proposal have not cured the fundamental problem regarding the proposed solar program—the fact that the program is not subject to a budget of any kind, so that the ultimate cost of the program is completely open-ended. While it is uncertain what the actual cost of solar equipment will be going forward and what value SRECs will fetch in a market environment over time, it is certain that ultimately ratepayers will be required to pay these costs, whatever they prove to be. Given the numbers that have been blithely debated in this proceeding, the prospect of footing the potential bill for this program is a truly sobering one, and one that should give all of us pause. There are significant risks inherent in this program, and it should be adopted with considerable caution, and only after adequate economic protections designed to cap solar program costs at a certain and reasonable level are implemented and the level of SBC funding going forward is decided.

THE OCE REVISED-FINAL STRAW PROPOSAL ("PROPOSAL")

The Proposal contains very generous provisions and incentives to the solar industry that will no doubt spur the development of solar power. However, there is nothing in the Proposal that provides any countervailing measure of balance to ratepayers, either in the form of an explicit budget for the program or a mechanism by which increased costs associated with the program would be capped at an agreed amount in defined circumstances. Regrettably, the Proposal only pays lip service to the notion of cost containment, the OCE recommending only that the Board "adopt in concept the idea of capping ratepayer subsidies for solar...". However, this recommendation would only be considered after the Proposal is addressed by the Board, in the context of an undefined "continued stakeholder process".

We urge that this "recommendation in concept" is wholly insufficient, because budget and cost cap considerations should be an integral part of the Board's decision regarding the Proposal. In fact, the Proposal, the "continued stakeholder process", and the Comprehensive Resource Analysis proceeding (in which future BGS rates will be established) should be decided together by the Board, in a comprehensive fashion, to assure that integrated, well-articulated and financially responsible renewables and social benefit programs result from this process. Considerations of ratepayer impacts, as well as potential long term affects on the State economy are of such obvious import to require that they be considered as primary issues in each of these proceedings, rather than in the afterthought manner suggested.

We observe that each of the elements of the Proposal are at the high end of the financial parameters that have been discussed to date. Thus, for example, while the prior draft of the

Proposal identified 10-12% as the potential range for assumed internal rates of return ("IRR"), the Proposal adopted a 12% target IRR. In addition to the generous rate recommended, we are concerned regarding the underlying value of the assets on which solar developers will earn their return. There are no protections built into the plan that would preclude the use of excessive costs that could mask a higher return than is reasonable in the circumstances.

Further, the Proposal establishes high SREC values, on the theory they are necessary to achieve the proposed 12% IRR. Although the prior draft of the Proposal notes that SRECs currently trade in the range of 50-75% of the current $300 SACP level, the Proposal would implement SREC values starting at $611 in 2009, ultimately declining to $494 in 2016. The Proposal also proposes to set the SACP level sufficiently higher than the SREC level to incent electric suppliers to purchase SRECs instead of paying the SACP, thereby fostering the development of a robust SREC market.

The SACP levels proposed--$711 in 2009, declining to $594 in 2016 can only be described as alarming and wholly inconsistent with the Board's December 2006 Order regarding future SACP values. In the Order, the Board observed that one of the challenges to setting the SACP level is to anticipate the level needed to motivate the installation of adequate capacity to balance the supply of SRECs with the Renewable Portfolio Standard ("RPS") percentage requirements. In response to industry comments that urged SACP levels in the $750-850/MWh range for non-rebated projects, the Board determined that through 2008, the current $300/MWh SACP value was reasonable, and balanced the need to support renewable energy generation and to protect ratepayers and electricity consumers, the Board observing that "over-subsidization of the industry is a serious concern."

Thus, less than one year after the Board issued its well-reasoned decision, the Proposal would increase the SACP value from $300 to $711. The Proposal does not purport to characterize the impact of the Proposal on ratepayers, but it will be considerable. By the year 2021, the Proposal would result in annual SREC costs of $905 million, representing 7.23% of "total retail sales". By any measure, this increase is significant and will cause considerable harm to the State's economically challenged industrial community, as well as all other ratepayers, particularly our most vulnerable residential consumers. These numbers, which also greatly exceed the $475 SREC value assumed in the PSE&G Solar Proposal, represent real, substantial dollars that will be paid by every New Jersey ratepayer in addition to high BGS auction rates, the billion dollars ratepayers will now contribute each year under the PJM Reliability Pricing Model ("RPM"), transmission and distribution costs, and all other related energy charges.

In fact, the Proposal is reminiscent of the approach taken by PJM with RPM and could likely result in the same mistake. NJLEUC and others were critical of PJM's apparent belief that if you throw enough money into the till, people will come and build generating plants, driving down costs. While only time will tell if RPM achieves its intended purpose, programs like these tend to upwardly skew market values. We suspect that by doubling the ceiling value represented by the SACP, the Proposal will upwardly influence where the SREC market trades, thereby needlessly raising market prices and increasing ratepayer cost exposure.

The Proposal also proposes that the Board continue to support rebates for "small" systems. We assume that the funding source for these continued rebates will continue to be the SBC. Therefore, this recommendation, if adopted, would limit the anticipated 30% reduction of the SBC (if the OCE programs were to be eliminated) that would have counter-balanced the payment of the increased costs associated with an SREC-based system. Thus, rather than obtain a

discount on the SBC going forward, ratepayers will likely continue to pay a large SBC in addition to the cost of SRECs.

Further, the SBC funding values for the years 2009 through 2012 are not scheduled to be determined until completion of the Comprehensive Resource Analysis proceeding, which will occur well after the Board is scheduled to consider the Proposal. Thus, if the Board adheres to its current schedule, actual ratepayer impacts from these various programs will be handled in piecemeal fashion, which will inhibit the Board's ability to determine the total ratepayer impacts that will ultimately result from these proceedings.

We urge the Board to delay consideration of the Proposal and to determine the critical issues regarding both the solar and SBC-related programs together, so that all risks and ratepayer cost exposures that derive from these programs may be reviewed and addressed in a comprehensive manner.

ANALYSES REGARDING THE IMPACT OF IMPLEMENTING THE 20% RPS

Based on assumptions regarding, among others, the continuing decline in the cost of solar technology and equipment, the Proposal projects a total NPV cost of annual SRECs in excess of $3.1 billion through 2023. This amount, which is equivalent to the rate base of a small utility, can be expected to have considerable impact on rates, particularly in later years when the annual RPS is increased. Given the enormity of these numbers, NJLEUC urges that the rate and economic impacts of the Proposal—and desirability of cost control "circuit breakers"-- be thoroughly considered by the Board before definitive action is taken regarding the Proposal.

We are aware of two studies that have been conducted regarding the anticipated impact of the implementation of the 20% RPS here in New Jersey. The first, *"Economic Impact Analysis of*

New Jersey's Proposed 20% Renewable Portfolio Standard", was prepared by the Bloustein School at Rutgers in December 2004 ("Rutgers Report"). As the Rutgers Report readily acknowledged in its opening paragraphs, "projecting the future over a period of 15 years is a difficult exercise and requires making assumptions regarding many key parameters that are inherently uncertain." (at p.3). Notwithstanding these uncertainties, the Rutgers Report projected that under a base case scenario, the then-proposed 20% RPS would raise electricity prices approximately 3.7% by the year 2020, and would only have a negligible impact on the growth of New Jersey's economy. It also projected that 11,700 jobs would be added, representing new positions for those involved in the solar and wind power industries. (at p.4).

However, as the Rutgers Report duly noted, " The economic and electricity price impacts of the proposed 20% RPS, however, depend substantially on whether the expected technological improvements and other factors occur that reduce the cost of PVs and wind power. For instance, if additional cost reductions do not exceed the pace of those that have historically occurred to date in PV and off shore wind technologies, the proposed 20% RPS would raise electricity rates by approximately 24% in the year 2020 and have a measurable, negative impact on the state's economy." (at p.4)(emphasis supplied). Accordingly, the study recommended, among other things, that "if cost reductions occur slower than anticipated, consideration should be given to adjusting downward the level of renewables required." (at p.65).

The second report, entitled *"The Impact of Implementing a 20 Percent Renewable Portfolio Standard in New Jersey"*, was authored in June 2006 by Professors Cureington and Dismukes, of the Center for Energy Studies of Louisiana State University ("Dismukes Study"). Professor Dismukes has appeared as an expert in this proceeding on behalf of Rate Counsel.

Unlike the Rutgers Report, the Dismukes Report paints a chilling picture of potential long term rate impacts, particularly if the assumptions regarding the declining unit installed price per kW of solar technology and equipment, achievable capacity factor, annual installed cost decreases, and carrying factors (depreciation, return on investment, taxes, cost of capital) prove to be incorrect. The Dismukes Report contains projections of significantly higher rate increases and large scale job losses that have the potential to do real harm to ratepayers, employment levels, and the state's overall economy:

> "If the historic renewable energy cost reducing assumptions do not occur, the economic impacts on the state could be significant. Total annual economic output could be reduced by as much as $5.0 billion in 2021, annual employment losses could amount to 51,802 jobs, and annual wages would be reduced by $2.0 billion." (at p.18).

The Dismukes Report also noted how the impacts of the proposed RPS increase over time as the shares dedicated to renewable resources increase. Thus, for 2005, it was projected that a typical residential customer would receive a $3.09 increase in his/her annual bill, yielding a statewide increase in electricity expenditures of about $29 million per year (somewhat equivalent to the increase that attends a small utility rate case). However, by 2021 the proposed RPS would result in an 8.4% annual increase for residential customers, amounting to a $76.54 per customer increase. Statewide, estimated electricity expenditures could increase from $29 million per year in 2005, to $838 million per year. The Dismukes Report states that "in NPV terms, this could be a $3.3 billion cumulative increase in estimated electricity expenditures above and beyond what New Jersey ratepayers would have paid if the proposed RPS were not adopted." (at p.9-10). It is estimated that commercial and industrial customers would receive annual increases of almost 27 and 30 percent, respectively. (at p.12).

The Dismukes Report concludes as follows:

> "Under all scenarios, the proposed RPS will cost New Jersey ratepayers considerably in terms of higher rates and decreased economic activity. What is most dramatic are the potential impacts associated with the proposed RPS if the speculation that exceptional (renewable energy) cost reduction opportunities do not materialize. *Ratepayers will bear the entire risk of this miscalculation. This report estimates that cumulative total net economic output will be reduced by $8.6 billion, employment by 278,740 jobs, and wages by $4.0 billion. Clearly this is an exceptionally risky policy proposal for New Jersey ratepayers and one that should be entered into with considerable analysis and caution.*" (at p.30)(emphasis supplied).

Unfortunately, there is simply no way to know today which, if either, of these reports contains correct projections of future costs and ratepayer and economic impacts. This is precisely our concern. *Because of the divergent views they express, the Reports underscore the danger of relying too heavily on economic theory and critical assumptions that, in the long term, could prove not to be reality based.* The several Summit Blue Reports upon which the Office of Clean Energy has relied—which do not purport to predict future SREC values-- are likewise based on cost and other assumptions (including the assumption that PV costs will decline at the rate of 2% annually) that may or may not prove to be correct.

If actual market conditions over the program period are other than as assumed, the only protection to ratepayers would be that costs could not exceed the SACP ceiling amount. This "protection" should afford little comfort to the Board or ratepayers, because if the SACP values are utilized, the rate and economic impacts that would result would be extraordinary and harmful not only to ratepayers, but to the overall New Jersey economy.

Therefore, the uncertainties that surround the Proposal should dictate caution in the manner in which we proceed here, because the numbers are far too large, and the potential economic impacts far too significant for us to rely inordinately on scholarly studies or well-

intentioned assurances that will doubtlessly be forgotten years from now if proven wrong with the passage of time. It is imperative that safety valve mechanisms, including rate caps and downward adjustments to RPS levels, be incorporated into the RPS program, consistent with the recommendation cited from the Rutgers Report.

PROPOSED COST CONTROL AND ADJUSTMENT MECHANISMS

Given the sheer enormity of the potential cost exposure to ratepayers, it is critical that methods be adopted that will cushion the blow of high SREC values and offer other forms of rate relief that would serve as a counter-balance to these anticipated rate increases. For example, if we move away from a rebate-based system, it is vital that increases in the price of SRECs be offset by decreases in the SBC rate. As the SBC provides funding support for the current CORE solar rebate program, the move substantially away from a rebate-based system should result in an approximate 30% reduction in the SBC, all else being equal. Such a reduction in the SBC should be directed by the Board in a comprehensive fashion, as part of its decision regarding the increases that will be part of the Proposal.

In addition, in order to provide an alternative to ratepayers, the Board should include an opt-out exemption from the portion of the SBC, or any successor charge, that funds energy efficiency initiatives. The opt-out would apply to a "self-managed" customer who can demonstrate that the energy efficiency programs implemented by the customer provide the state with "more bang for the buck" than would achieved under an SBC-funded energy efficiency program. This would enable customers to self-invest in their own chosen programs if they are able to demonstrate to the Board's satisfaction that they have achieved a predetermined level of efficiencies that would equal or exceed established performance standards.

With regard to the move to SRECs, NJLEUC's concerns would be allayed to a large degree if on a net present value basis, the cost of SREC-based programs did not exceed—or only exceeded by an agreed amount—the costs of the current rebate program. We must know with reasonable certainty what the bottom line is going to be for the ratepayers who will ultimately pay for these programs. We urge the Board not to approve any program whose price tag is either uncertain, unknown or unknowable.

We believe that the best way to accomplish the necessary fiscal restraint is to interpose reasonable rate caps or specific limitations on spending that will permit the proposed programs to proceed, but establish clear outer financial boundaries to contain rate increases to agreed levels. This approach has been adopted in a number of states and is appropriate here as well.

COST CAPPING OF RPS COSTS BY OTHER STATES.

Information provided by the Office of Clean Energy, as well as the latest Summit Blue Report (at p.61), reveals that several states with significant renewable portfolio standards have implemented RPS-related cost caps to protect consumers. Thus, for example, Colorado has, by statute, established a maximum retail rate impact of one percent of the total electric bill annually for each customer. Similarly, in New Mexico, utilities are not required to acquire renewable energy resources that result in costs above a reasonable cost threshold established by the Public Regulation Commission. The reasonable cost threshold was set at an overall customer rate increase of no more than one percent in 2006, and no more than an additional 0.2 percent per year until capped at two percent for each year beginning in 2011. New Mexico also caps the price of resources by type. Solar projects of less than 10 kilowatts are capped at $0.15 per kWh, and projects of greater than 10 kilowatts are capped at $.10 per kWh.

It is noteworthy that New Mexico has also implemented a cost cap for industrial customers that have electric loads that surpass 10 million kWh. These customers are protected against paying RPS charges higher than $49,000 in 2006, a ceiling amount that will increase by $10,000 per year until 2011.

New York and California use only capped SBC funding to pay for the above-market costs of renewable energy used for RPS compliance, eliminating additional pass-throughs of RPS compliance costs to ratepayers. (see, Summit Blue 7/31/07 Report at p.68). Pennsylvania has adopted a similar approach to renewable purchase costs that exceed the Locational Marginal Price of energy, allowing the above-market costs to be deferred and collected pursuant to an automatic energy adjustment clause. Pennsylvania's recent "Energy Independence Strategy" includes the creation of an Energy Independence Fund for clean energy projects, including solar, rebates, sunshine grants, venture capital grants and loan programs. The fund, whose budget is approximately $850 million, is supported by a System Benefits Charge of $0.0005 per kWh to be assessed against all consumers. It is noteworthy that the charge to industrial customers for the fund is capped at $10,000 per year.

A variation on the alternative "capping" device suggested by the Rutgers Report is also worthy of consideration. As noted earlier, Rutgers had suggested that if anticipated solar cost reductions occur more slowly than anticipated, consideration should be given to downwardly adjusting the level of renewables required (Rutgers Report at p.65). While we agree with this recommendation, we would urge the Board to also consider establishing a flexible approach to the RPS that would enable the Board to downwardly adjust the solar requirement in a given year if certain predetermined annual cost thresholds are reached. In so doing, the Board would

establish an annual budgetary ceiling for the solar program, thereby lending a needed measure of cost certainty and ratepayer protection.

POTENTIAL RATE IMPACT OF THE PROPOSAL: A LARGE END-USER CASE STUDY

The need for cost capping as a component of the Proposal is made clear by a case study performed by an NJLEUC member. In an effort to demonstrate the Proposal's actual impact on a customer, the anticipated rate impact of the Proposal to the customer was calculated throughout the duration of the program period. The calculations, which are an attachment to these Comments, adopt all of the cost elements and assumptions of the Proposal as presented, as well as the current RPS requirements. The cost impact of the Proposal on the customer is as large as it is sobering, and one can easily predict the detrimental impact these costs would have on the general New Jersey business community (as well as residential consumers) if the Proposal were to be adopted in its current form.

The calculations utilize the proposed SACP values throughout the program to determine cost impact. We recognize that these values represent the ceiling value of SRECS and that SRECs are expected to have a lower value in a market environment. However, because SREC values cannot be accurately predicted over time-- and because the SACP values could be utilized if the critical assumptions that underlie the Proposal prove to be wrong-- the SACP was viewed as providing a known and potentially accurate value for the calculations. We observe, however, that even if the SREC values of the Proposal were used for the calculations, the numbers derived would still be quite large and equally sobering.

As set forth in column 16 of the attachment, the calculations reveal a year one program cost to this customer of $386,818. This figure represents only the costs associated with the

Proposal. It does not include the Societal Benefits Charge, for which the customer would also be responsible. As shown in column 17, if the solar program and SBC charges are combined, the result is a $2,537,542 charge in year one of the program. If the SBC is not utilized to fund solar programs going forward (an unlikely prospect given the proposal to continue providing rebates to "small" customers), the SBC charge should be reduced by about 30%, representing the portion of the SBC currently utilized to fund these programs, yielding a combined first year cost of $1,892,325 (column 18).

These first year costs increase dramatically over time as the RPS requirement increases each year. By the year 2021, this company would pay an additional $3,499,379 in SACP costs annually (column 16) and a combined SACP/SBC charge of either $5,650,103 (column 17) or $4,144,596 (column 18), depending on whether the 30% clean energy portion remains in the SBC. (Here, we assume, very conservatively, no increase in SBC costs during the entire program period—a highly unlikely prospect given the history of SBC increases.) In the calculations, SBC and solar program costs would continue annually at the 2021 level through 2035. If, as suggested, SRECs actually trade in the market at a discount below the SACP value, these costs would be discounted in like amount. *However, by any yardstick, even these "discounted" values would cause costs to the customer that can only be described as onerous.*

Columns 20 and 22 of the attachment demonstrate the impact that RPS-related rate caps would have on this customer. While the charges would remain the same in the initial three years, beginning in year four, under a 2% cap the SACP costs (excluding SBC) would be contained at $841,654 per year for the duration of the program. Under a 1% cap, SACP costs would be contained at $420,827 per year for the duration of the program.

These additional costs, although capped, are considerable and this example should not be interpreted as NJLEUC's endorsement of costs capped at these high levels. This exercise is merely intended to underscore the potential rate impact of the Proposal on a single large customer. Increases of this magnitude will clearly have the potential to hurt the competitiveness of New Jersey businesses in the regional, national and international markets, particularly when cost caps are in effect in neighboring states, and will unquestionably be detrimental to the Governor's efforts to retain and expand the state's business community.

However, the costs associated with the Proposal are not just a business issue. On a macro level, given the current level of total annual retail sales of electricity in the state (about 81 million MWh), the Proposal would increase costs to all New Jersey ratepayers by up to $81 in the first year, or by $1.03/MWh. This "SACP premium"(found in column 12 of the schedule) would increase annually as the RPS requirement increases. The premium would ultimately plateau in 2021, at $9.17/MWh. Assuming, very conservatively, that annual statewide usage remains the same, the premium could add up to $742 million in increased annual costs through 2035. These figures would significantly eclipse the cost increases generally associated with a large utility rate case. Even if the lower proposed SREC values were to be used for this calculation, the resulting numbers would remain huge by any measure.

CONCLUSION

Our analysis underscores the necessity for cost containment devices to be implemented as part of the proposed solar program. We submit respectfully that the imposition of these significant RPS related costs will significantly increase energy costs to all consumers and further increase the cost of living in New Jersey. These costs would also put to rest any thought of spurring economic development or maintaining the competitiveness of New Jersey-based

businesses in the region. When these charges are combined with all other energy related costs, New Jersey will achieve the dubious distinction of being the state with the highest energy costs in the country. Given the significance of energy costs to a company's bottom line, this "distinction" could only act as a poison pill that will hasten the exodus of businesses from the state and discourage others from locating here.

We urge the Board to exhaust every possible avenue to provide some measure of relief to ratepayers. Apart from caps, the Board should consider emphasizing larger solar projects, whose cost structures are considerably lower than smaller projects, spreading program costs over a longer period of time to reduce annual payments, and permitting commercial and industrial customers that achieve prescribed levels of energy efficiency relief in the form of program credits or opt-out opportunities.

In sum, it is critical that we craft a responsible, prudent and fiscally method by which the New Jersey solar program can be financed over time. NJLEUC urges the Board to proceed with extreme caution, consistent with its mission statement to "ensure the provision of safe, adequate and proper utility and regulated service at reasonable rates". The stakes are considerably too high for anything other than a well-reasoned and fully considered outcome here—one that takes into account all aspects of SREC and SBC financing of solar projects going forward, and their impacts on all consumers who will pay these costs. These issues must be decided together, in a comprehensive manner, with due consideration given to appropriate cost capping/program reduction mechanisms to assure that actual program costs are contained within reasonable boundaries.

NJLEUC looks forward to continuing to work with the Board in crafting appropriate resolutions of all of these issues.

Respectfully submitted,

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Attorneys for New Jersey Large Energy Users Coalition

Dated: August 21, 2007

	2006 Rates	kWh All	$ All	$/kWh All	kWh G&T	$ G&T	$/kWh G&T	$/kWh Dist	* 2006 Energy $/kWh	Existing SACP $/mWh	Cost Ex Existing SACP $/kWh	(0.07774 - 0.00017 * 300 / [1000] / (1 - 0.00017))
	LDC	381,740,136	25,997,596	0.06810	165,026,394	13,500,652	0.08181					
	TPS	215,809,878	16,104,588	0.07462	215,809,878	16,104,588	0.07462		**0.07774**	**300**	**0.07769**	
		381,740,136	42,102,184	0.11029	380,836,272	29,605,240	0.07774	0.03255				
					Percent Total Rate:		70.48%	29.52%				

Base Data

Year	Tier I	Tier II	Tier III (NJ Solar)	Total	Proposed SACP	SACP Annual Percent Change	* Energy Cost Less Existing SACP 2006 Dollars	* Energy Cost Less Existing SACP Real Dollars	Total Cost Less Existing SACP Real Dollars	Real Energy Cost with Straw SACP$/kWh	Real Straw SACP Premium $/mWh	Real Total Cost with Straw SACP$/kWh
					Supply Cost Escalation:			0.0%				
Reporting Year ending May						(6 final - 6 initial) / 6 initial		(1+[0%])^(Year - [2006]) * Column 8	(1+[0%])^(Year - 2006) * (Column 8 + [0.03255])	4 * 6 / [1000] + ([1] - 4) * 9	(11 - 9) * [1000]	10 + 12 / [1000]
Column:	2	3	4	5	6	7	8	9	10	11	12	13
2006	0.98%	2.50%	0.017%	3.50%			0.07769	0.07769	0.11024			
2007	2.04%	2.50%	0.039%	4.58%			0.07769	0.07769	0.11024			
2008	2.92%	2.50%	0.082%	5.51%			0.07769	0.07769	0.11024			
2009	3.84%	2.50%	0.160%	6.50%	711		0.07769	0.07769	0.11024	0.07870	1.01330	0.11125
2010	4.69%	2.50%	0.221%	7.41%	693	-2.53%	0.07769	0.07769	0.11024	0.07905	1.35984	0.11160
2011	5.49%	2.50%	0.305%	8.30%	675	-2.60%	0.07769	0.07769	0.11024	0.07951	1.82181	0.11206
2012	6.32%	2.50%	0.394%	9.21%	658	-2.52%	0.07769	0.07769	0.11024	0.07997	2.28644	0.11253
2013	7.14%	2.50%	0.497%	10.14%	641	-2.58%	0.07769	0.07769	0.11024	0.08049	2.79967	0.11304
2014	7.98%	2.50%	0.621%	11.10%	625	-2.50%	0.07769	0.07769	0.11024	0.08109	3.39882	0.11364
2015	8.81%	2.50%	0.765%	12.07%	609	-2.56%	0.07769	0.07769	0.11024	0.08175	4.06455	0.11430
2016	9.65%	2.50%	0.928%	13.08%	594	-2.46%	0.07769	0.07769	0.11024	0.08248	4.79139	0.11503
2017	10.49%	2.50%	1.118%	14.10%	576	-3.00%	0.07769	0.07769	0.11024	0.08326	5.57316	0.11581
2018	12.33%	2.50%	1.333%	16.16%	559	-3.00%	0.07769	0.07769	0.11024	0.08410	6.41450	0.11665
2019	14.18%	2.50%	1.572%	18.25%	542	-3.00%	0.07769	0.07769	0.11024	0.08499	7.30102	0.11754
2020	16.029%	2.50%	1.836%	20.37%	526	-3.00%	0.07769	0.07769	0.11024	0.08591	8.22854	0.11847
2021	17.880%	2.50%	2.120%	22.50%	510	-3.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2022	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2023	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2024	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2025	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2026	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2027	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2028	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2029	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2030	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2031	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2032	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2033	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2034	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941
2035	17.880%	2.50%	2.120%	22.50%	510	0.00%	0.07769	0.07769	0.11024	0.08685	9.16691	0.11941

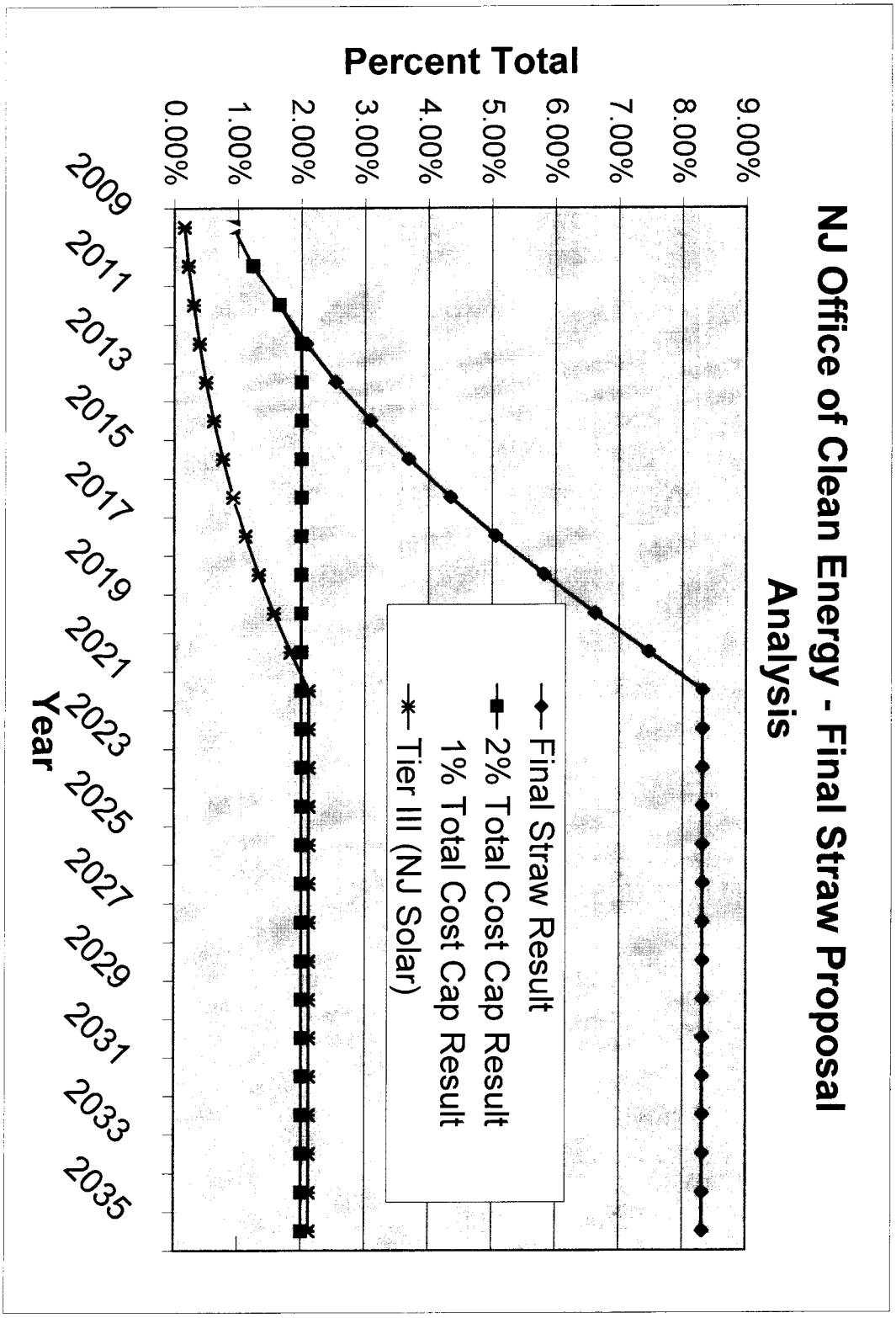
*** Assumes Tier I and Tier II premium costs are negligible in 2006**

Comments: Solar Market Transition, August 24, 2007

PSE&G Secondary Service SBC Rate w/SUT	SBC "Assumed" Renewable Energy
0.5634	30%

	Final Straw Result					2% Total Cost Cap Result		1% Total Cost Cap Result	
Year	SACP Premium Percent of Energy	SACP Premium Percent of Total Cost	SACP Dollars Spent (excluding SBC)	SACP Dollars Spent (including current SBC)	SACP Dollars Spent (including current SBC Less 30% Renewable Allocation)	SACP Premium Percent of Total Cost	SACP Dollars Spent (excluding SBC)	SACP Premium Percent of Total Cost	SACP Dollars Spent (excluding SBC)
						2.00%		1.00%	
Reporting Year ending May	11 / 9 - [1]	13 / 10 -[1]	(12 / [1000]) * [381,740,136]	(12 / [1000] + [0.5634] / [100]) * [381,740,136]	(12 / [1000] + [0.5634] / [100] * ([1] - [0.3])) * [381,740,136]	The lesser of column 15 or 2%	10 * 19 * [381,740,136]	The lesser of column 15 or 1%	10 * 21 * [381,740,136]
Column:	14	15	16	17	18	19	20	21	22
2006									
2007									
2008									
2009	1.30%	0.92%	386,818	2,537,542	1,892,325	0.92%	386,818	0.92%	386,818
2010	1.75%	1.23%	519,107	2,669,831	2,024,613	1.23%	519,107	1.00%	420,827
2011	2.35%	1.65%	695,457	2,846,181	2,200,963	1.65%	695,457	1.00%	420,827
2012	2.94%	2.07%	872,824	3,023,548	2,378,331	2.00%	841,654	1.00%	420,827
2013	3.60%	2.54%	1,068,746	3,219,470	2,574,253	2.00%	841,654	1.00%	420,827
2014	4.38%	3.08%	1,297,465	3,448,189	2,802,972	2.00%	841,654	1.00%	420,827
2015	5.23%	3.69%	1,551,601	3,702,325	3,057,108	2.00%	841,654	1.00%	420,827
2016	6.17%	4.35%	1,829,066	3,979,790	3,334,573	2.00%	841,654	1.00%	420,827
2017	7.17%	5.06%	2,127,498	4,278,222	3,633,005	2.00%	841,654	1.00%	420,827
2018	8.26%	5.82%	2,448,674	4,599,398	3,954,181	2.00%	841,654	1.00%	420,827
2019	9.40%	6.62%	2,787,091	4,937,815	4,292,598	2.00%	841,654	1.00%	420,827
2020	10.59%	7.46%	3,141,163	5,291,887	4,646,670	2.00%	841,654	1.00%	420,827
2021	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2022	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2023	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2024	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2025	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2026	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2027	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2028	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2029	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2030	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2031	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2032	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2033	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2034	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827
2035	11.80%	8.32%	3,499,379	5,650,103	5,004,885	2.00%	841,654	1.00%	420,827

Comments: Solar Market Transition, August 24, 2007


NJ Office of Clean Energy - Final Straw Proposal
Analysis
Percent Total
9.00%
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
2009
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029
2031
2033
2035
Year
Final Straw Result
2% Total Cost Cap Result
1% Total Cost Cap Result
Tier III (NJ Solar)

August 21, 2007

To: Board of Public Utlities

From: Sara Bluhm
Vice President, Energy & Federal Affairs

Re: Comments on Solar Market Transition

On behalf of the over 23, 000 members of the New Jersey Business & Industry Association, I would like to thank the Board for the opportunity to comment on the solar transition currently under consideration. As the Board is aware, the Commercial & Industrial sector purchases over 60 percent of the electricity in the State. Being the State's largest ratepayer, the Commercial and Industrial ratepayer has a vested interest in any changes to the renewables system, as well as potential impacts on rates and the societal benefits charge.

The Office of Clean Energy August 2, 2007 white paper admits that:

> "From 2001 through June 2007, 40 MWdc of solar has been installed. Under the current rebate system this has been installed at a cost of $4.6 million per MWdc. At this rate it would cost $10.9 billion to achieve the solar RPS requirement by 2021."

Since 2001, a majority of these installations have received rebates up to 70 percent from the Board of Public Utilities from money deposited in the Clean Energy Fund, a portion of the Societal Benefit Charge assessed on all ratepayers based on usage. As a result the fund has over allocated money and currently has a queue of eligible projects waiting. In the meantime, BPU staff has been working on alternative proposals besides majority funding through rebates. Currently under consideration are several mechanisms including the staff straw proposal.

Concurrently the Governor's Energy Master Plan team is assessing and developing the energy needs of the State through 2020. This includes a comprehensive evaluation of our energy supply, transmission, and distribution systems. Additionally, the State has entered into a Regional Greenhouse Gas Initiative, which will allow for offsets to be acquired by power generators. Consumer benefit allowances will also be funded through a RGGI auction. And recently the Governor signed the Global Warming Response Act which will require additional policy measures to be considered by the Board. The Board is also entertaining a motion by PSEG regarding a $100 million loan program for solar installations. Given all of these policy measures currently under consideration, NJBIA strongly suggests that the Board postpone consideration of this measure, at a minimum until the Energy Master Plan is adopted.

However, should the Board choose to move ahead before our energy future is clear, NJBIA asks on behalf of the business ratepayer that it consider several things:

1) What ways can the Board decrease the payback period?

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The business community does not view a 10-12 year return on investment as palatable as a 3-5 year investment. Given that the Board needs large scale projects to meet its goals, how can we work to close this gap in timing?

2) How will this impact the rate of electricity given the $10.9 billion price tag?

3) What changes in the size of installations and interconnections to the grid would the Board consider?

4) At what point will the Societal Benefit Charge be reduced to reflect the elimination of the current budget for solar rebates?

5) If a subsidy continues to exist for residential ratepayers, will there be any consideration for small business ratepayers as well?

6) What if any of the money associated with the RGGI consumer benefit allowance will be allocated to renewables - specifically solar? How will this relate to a rate reduction concerning SBC?

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COMMENTS ON THE NJBPU's RENEWABLE ENERGY PROGRAMS

August 21, 2007

The following comments are respectfully submitted to the New Jersey Board of Public Utilities (BPU) on behalf of the New Jersey Sustainable Energy Industries Association. NJSEIA is a coalition of renewable energy businesses, Environmental Organizations, non-for-profit groups, and other interested parties; with the goal of advancing renewable energy implementation in New Jersey in an equitable, cost-effective manner.

Summary:

- The Straw Proposal is an important step forward and a significant improvement over past proposals. The recent proposal did not provide adequate data on the numbers and explain how the IRR's were derived. We believe that the total Ratepayer impact cannot be determined by the data provided.
- Without Securitized Long Term Contracts the Industry will be controlled by a select few companies. This type of market will allow for manipulation and not provide an equitable distribution amongst ratepayer classes. It is imperative that Securitized Long Term Contracts be a part of the current proceeding and not be pushed forward to a later date.
- A Qualification Life cannot be set without considering the form of Securitization or Long Term contacts mechanisms. Setting these types of parameters today would hamper the forms of contracts that could be considered.
- We believe that the target IRR's did not consider various ratepayer classes and what would actually make projects 'go'. A survey of existing customers is in order and should be done.
- Community Based Solar Programs have not been discussed and were 'thrown' in at the last minute. Proper debate of the merits of such a program should be done before they can be considered by the board.
- The REC only Pilot should not move forward into Phase 2 until the entire proceeding has been concluded. The RPS could be over built and this could collapse the REC market we are trying to create. We have also seen only one class of projects dominating Phase 1 (Large Commercial). This would further lead to inequity amongst ratepayer classes.

Recommendations:

1. Delay the Vote until the critical items can be addressed. For example:
    a) Securitized Long Term Contracts
    b) Accurate Model Date to determine Ratepayer Impact
2. Ensure that all program goals are being met rather than focusing on only the lowest cost to the ratepayer. We believe that the economic development goals will fall short if this current program moves forward.
3. Conduct additional Stakeholder Meetings in order to generate more feedback.
   Note: Accurate Data should be provided 1 week before any meeting to allow review.

Tom Pollock
CEO, Trinity Heating & Air, Inc.

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Freehold, NJ 07728

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August 13, 2007

NJBPU – Office of Clean Energy
Attn: Mike Winka - Director
P.O. Box 414
Trenton, NJ 08625-0414

Re: Comments on the "New Jersey Renewable Energy Solar Market Transition, Office of Clean Energy, Discussion Paper" dated August 2, 2007

Dear Mr. Winka & Office of Clean Energy Staff,

Thank you for the opportunity to comment on the "New Jersey Renewable Energy Solar Market Transition, Office of Clean Energy, Discussion Paper" dated August 2, 2007. We believe the proposal establishes a path for the Office of Clean Energy (OCE) to meet its objectives in installing "sufficient solar capacity to meet the RPS requirements, at the lowest cost to ratepayers, taking into account other policy goals".

Our comments are divided into three sections. The first section is related to residential projects (<10 kW) and the second is focused on non-profit projects (>10 kW). The final section provides comments on the specific OCE draft positions.

Residential (<10 kW)

As one of the leading installers of residential solar electric systems in New Jersey, we applaud the direction the Office of Clean Energy (OCE) has taken with regard to the incentives provided to the less than 10 kW projects. There is clearly an understanding that rebates are needed in the near future to ensure residential ratepayers are able to participate in the program and, although not mentioned, that paybacks less than 10 years are critical to ensuring there is sufficient uptake of the program within this segment.

As mentioned in the OCE's overall objective, fairness and equity to all ratepayer classes is a goal. In order to ensure this ratepayer class is treated on equal footing as other classes, we believe the OCE's policies should be aligned to maintain program continuity through 2021 and that growth within this segment is equal to growth in other ratepayer classes. As you are aware, the residential segment is disadvantaged (compared to other classes) as a result of its scale (i.e. it costs more, on a $/W basis, to market, sell, and install a system on a home than on a commercial building) and the lack of meaningful federal incentives available (the 30% federal tax credit being capped for residential at $2000). As such, we agree with the OCE's proposal to establish a rebate level for residential ratepayers until such time that these disadvantages are overcome. However, we would like some clarification on the concept of the "rebate blocks".

Rebate Blocks

The table to the right represents the proposed rebate blocks. We advocate that the rebate blocks perform 3 important functions: (1) Ensure that the residential

OCE Proposed Rebate Levels

Years	Rebates $/W	Rebate Blocks (MW)
2009	3.00	7
2010	2.25	6
2011	1.50	8
2012	0.75	9
	Total MW	30
	Total Rebate RPI	**$ 53,250,000**

ratepayer is treated fairly and equitably compared to other ratepayers in terms of overall incentives available; (2) Ensure program continuity from one block to the next to avoid the starts and stops in business that have plagued the program in the past; and (3) Provide a bridge for the residential ratepayer to reach a "no incentive required" environment (also referred to as grid-parity).

It is widely known that residential ratepayers require a simple payback of less than 10 years. Based on our experience, a simple payback targeted near 8 years will entice residential ratepayers to purchase solar systems. Anything above this number unfairly penalizes this ratepayer class, when compared to others. Anything below this number results in oversubscription of the program. As such, we believe simple payback should be the metric the OCE uses when assessing whether the incentives compare favorably to other ratepayers and whether the residential ratepayer is treated fairly and equitably. Residential ratepayers, typically, do not value their solar system purchase in terms of internal rate of return ("IRR"). In using that metric alone, incorrect assumptions could be made and lead to less than optimal program setup.

In order to promote competition and lowest cost to the ratepayer, the OCE should strive for program continuity. Based on the current state of the CORE program, solar installers that do not currently have residential rate paying customers in the queue cannot start a solar installation business in New Jersey. Further, the lack of program continuity decreases the solar installers' abilities to become efficient in their marketing, sales and installation activities. This ultimately results in higher cost to the ratepayer, decreased competition, and potentially lower quality of service. As such, we strongly advocate the rebate blocks are structured to maintain program continuity and allow easy transition from one block to the next. As one block becomes reserved, rebate applicants automatically move to the next lower block where funding is reserved and their system installation can immediately commence. To ensure rebate blocks are unencumbered with stagnated applications, we recommend moving to a 6-month installation period. If applications within a block are not installed within this time period, the applications (in their respective order) in the next lower block are automatically moved into the higher level block until all funding is reserved to replace the project fallout. In summary, our recommendation is that the OCE establish rebate blocks that are not based on an annual cycle or necessarily on a MW goal, but rather on a budgetary goal, rebate levels are established on a simple payback measure, a 6-month installation period is established and program continuity over the next several years is maintained.

Production-Based Incentives

In theory, we agree with migrating to a production-based incentive program for the less than 10 kW segment. Production-based incentives allow the total dollar amount for each block to be stretched further than if the rebate was solely based on name-plate capacity installed (i.e. MW(dc)). As such, we recommend that the blocks be tied to a budgetary goal and not to name-plate capacity. We also recommend that the limit of 80% system production be removed. If a ratepayer wishes to install a system that only provides 50% of the system name-plate capacity and is willing to install the system at the lesser rebate, the ratepayer should be allowed to do so. The incentive, however, should be reduced accordingly.

We also oppose any burdening of this ratepayer class with additional, unnecessary costs. As an example, we recommend estimated system production be used to calculate SREC generation and relevant rebate payments unless monitoring systems can be installed at no additional cost to the ratepayer.

With this said, we recommend the OCE review the lessons learned from California's production-based incentive program and avoid the pitfalls such a program presents. If not carefully designed, implementing such a program could result in higher overall costs to the ratepayer.

Rebates for Residential Ratepayer only

Because federal tax credits are capped for residential ratepayers, we recommend the OCE allow only residential ratepayers to receive rebates. In order to stretch rebate dollars further, we also recommend capping any rebated system at 10 kW(dc).

<10 kW Growth

We strongly recommend the OCE allocate sufficient budget toward the <10 kW segment for each block to ensure the residential ratepayer is allowed to participate in the CORE program on an equivalent basis annually as other ratepayer classes. Further, we recommend the target growth within this segment be at a rate of at least 20% per year. This is less growth than the national average for solar installations, but provides sufficient growth to entice new competition and promote technological advancements. This, in turn, will result in lowering the overall cost to the residential ratepayer class.

Community-based Solar Programs

We request that the OCE provide additional details on this program. Conceptually, it appears to have merit and could provide many benefits; however, it is a departure from the current method in which solar is deployed and does not provide all the benefits that distributed generation provides.

Non-Profits (>10 kW)

Given that non-profits are unable to take advantage of the federal tax credits and that power purchase agreements with these entities are more difficult to structure as a result of their classification, we propose that non-profits be given a rebate to offset their disadvantaged status. Assuming the SACP is raised to a level that provides commercial a 12% IRR, the proposed rebates for non-profits should be $1.25/W for up to 100 kW, $1.00/W from 101 kW up to 500 kW, and $0.50/W for greater than 500 kW.

OCE Draft Positions

1. ***OCE draft Position – adopt a Competitive, Multiple Year SACP Model with a rebates for smaller systems***
   We agree with and endorse this position.

2. ***OCE draft Position – Based on consideration of the analysis performed by Summit Blue and the comments provided at the hearing the QL range would be 12 to 15 years***
   We agree with and endorse this position.

3. ***OCE Position – 10 to 12% as the range for the assumed IRR for the purpose of setting SREC levels.***
   We agree with and endorse this position.

4. ***OCE draft Position - Utilize a 12 to 15 year SREC qualification life and IRR of 10 to 12% which results in the following SREC levels for greater than 10 kW private projects***
   Our experience has shown that the hurdle rate for investors is 12%. Given that the return is not guaranteed, it is unlikely that investors will pursue riskier projects such as these for a 10% return. The longer qualification life of 15 yrs provides investors, businesses, and individuals the certainty they need

to realize a reasonable return on their project. In addition, an SREC QL of 15 years matches typical home equity loans, thus creating a positive cash flow for customers for the term of the loan. As such, we endorse the 15 yr SREC QL and the 12% IRR.

5. ***OCE draft Position – Set the SACP level at a percentage above the SREC level needed to achieve a 12% IRR which results in the following SACP levels***
   We agree with and endorse this position; however, it was unclear in the proposal what the SACP levels would be. Knowing these values is critical to determining the IRR.

6. ***OCE draft Position – Establish a set timeframe to eliminate all incentives based on PV installed cost reaching parity with the marginal cost of a natural gas fired unit – estimated to be 2015 or sooner.***
   In principal, we agree with the concept that once PV reaches grid-parity, all financial incentives should be eliminated. However, we would like the OCE to provide details on how such calculations and determinations will be made.

7. ***OCE draft position – Provide legacy projects with same QL as non-rebated financed projects but have the start date the EY in which the project received the rebate. In this manner the economic benefit to rebated projects is maintained and the additional profit is minimized.***
   We agree with and endorse this position.

8. ***OCE Recommendation: Two year Trading life.***
   We agree with and endorse this position.

Closing Comments

In general, Trinity is quite optimistic in the direction the OCE is headed. We believe the proposal, with a few changes, will reinvigorate the solar market in New Jersey and help the OCE achieve its RPS goals. We request that the OCE make readily available all models used in their analysis available for the industry to review, analyze, comment and confirm.

Thank you for the opportunity to provide comments. Should you have any questions or need further clarification, please contact us directly. We look forward to assisting in any way we can to make New Jersey the Solar Capital of the World.

Best Regards,

Tom Pollock
CEO - Trinity Heating and Air, Inc.

Tom Pollock
CEO, Trinity Heating & Air, Inc.

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732-780-3779
trinityhna@aol.com

August 20, 2007

NJBPU – Office of Clean Energy
Attn: Mike Winka - Director
P.O. Box 414
Trenton, NJ 08625-0414

Re: Additional Comments on the "New Jersey Renewable Energy Solar Market Transition, Office of Clean Energy, Discussion Paper" dated August 2, 2007

Dear Mr. Winka & Office of Clean Energy Staff,

Thank you for the opportunity to comment on the "New Jersey Renewable Energy Solar Market Transition, Office of Clean Energy, Discussion Paper" dated August 2, 2007. On August 13, 2007, we submitted our initial comments on the proposal. Recent market events have caused us to submit additional comments on the proposal.

Although we agree with the OCE proposal to adopt a Competitive, Multiple Year SACP Model with rebates for smaller systems, we are concerned that an unregulated market for SRECs could lead to market manipulation by a few large sales entities. There does not appear to be any mechanisms in place to prevent a few companies from entering into long-term SREC supply agreements with EDCs and effectively lock-out all other companies (and their respective clients) from accessing the SREC market.

This oligopoly would result in decreased competition, stabilization of solar prices, and eventually higher cost to the ratepayer. As such, we request the OCE develop a mechanism to prevent this potential market manipulation from occurring. The OCE may want to research how Delaware's program is structured whereby all SRECs pass through Delaware's equivalent of the NJBPU on to the EDC. Without such a mechanism, we fear the OCE will not reach its goals in the manner intended, the residential ratepayer would be prevented from selling their SRECs, and many companies would be forced out of or not allowed to enter the solar market.

We would be happy to discuss this further with the OCE if it has any questions or needs further clarification.

Best Regards,

Tom Pollock
CEO - Trinity Heating and Air, Inc.

State of New Jersey
DEPARTMENT OF THE PUBLIC ADVOCATE
DIVISION OF RATE COUNSEL
31 CLINTON STREET, 11TH FL
P. O. BOX 46005
NEWARK, NEW JERSEY 07101

JON S. CORZINE
Governor

RONALD K. CHEN
Public Advocate

KIMBERLY K. HOLMES, ESQ.
Acting Director

August 8, 2007

VIA HAND DELIVERY

Kristi Izzo, Secretary
New Jersey Board of Public Utilities
2 Gateway Center, 8th Floor
Newark, New Jersey 07102

RE: I/M/O the Recommendations for Alternative Compliance Payments and Solar Alternative Compliance Payments for Energy Years 2008, Stakeholder Process regarding Alternative Compliance Payment and Solar Alternative Compliance Payment Levels for Energy Years 2009 and 2010 or Longer, and a Solar REC-Only Pilot
BPU Docket No. EO06100744

Dear Secrectary Izzo:

Please accept this as a formal request from the Division of Rate Counsel ("Rate Counsel") for all the actual spreadsheets and assumptions used to estimate the ratepayer impacts detailed in the July 31, 2007 Summit Blue Consulting Report issued on behalf of the Office of Clean Energy for the above-mentioned docket. Enclosed are (11) copies for filing. Please date/time stamp one copy and return same to Rate Counsel.

As previously requested in this matter from the Office of Clean Energy, Rate Counsel communicated the immediate need for complete workpapers used to justify the analysis of Summit Blue Consulting in their April 25, 2007 report. At the June 6, 2007 public hearing held at the Board, Commissioner Fiordaliso stressed on the record that Summit Blue Consulting assist Rate Counsel in its review of their report by providing any assistance and information needed.

However, the workpapers subsequently supplied to our office appeared to be spreadsheets "stripped" of all calculations and converted to "values only" data. Unfortunately, the workpapers submitted in this fashion caused considerable extra time and unnecessary work for our consultant to try and replicate the calculations. Furthermore, on August 1, 2007, our office requested the workpapers and assumptions used to develop the latest Summit Blue Report. The response from OCE that was circulated through the "renewables" electronic service list stated that any explanations of

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the July 31st report would be posted on the office's webpage within the next few days and Summit Blue Consulting would be made available to respond to questions.

On August 3, 2007 at approximately 6:48 p.m., OCE sent to the service list in this matter summary data to explain the rationale for the latest Summit Blue Report. However, the data distributed to the stakeholders on August 3, 2007 is not responsive to this office's direct request for substantive workpapers and supporting assumptions. Given the estimated costs to ratepayers for adoption of the OCE Strawman proposal (about $2 .4 billion), it is critical that no time is lost waiting for future postings of requested documents.

The Division of Rate Counsel continues to be intimately involved in this process and related clean energy dockets on behalf of New Jersey ratepayers and seeks only to obtain the most complete, relevant and critical data utilized by Summit Blue on an expedited basis. It is of key importance given the brief extension of time granted by the Board at its August 1, 2007 Agenda meeting for stakeholders to analyze the supplemental report for a final decision on September 12, 2007, that an immediate response be given to the requested information so fruitful discussions can be had with Summit Blue Consulting concerning their conclusions. In addition to any and all spreadsheets generated to produce the latest report, our office is also requesting any and all workpapers and workbook calculations used by Summit Blue Consulting. In this manner, our office and retained consultant can properly review the July 31, 2007 report and offer informed and intelligent comments prior to September 12.

Very truly yours,

RONALD K. CHEN
PUBLIC ADVOCATE OF NEW JERSEY

KIMBERLY K. HOLMES, ESQ.
ACTING DIRECTOR

By: *Felicia Thomas-Friel, Esq*
Felicia Thomas-Friel, Esq.
Deputy Public Advocate

cc: Commissioner Joseph Fiordaliso
Kimberly Holmes, Acting Director – Rate Counsel
Paul Flanagan, Litigation Manager – Rate Counsel
Noreen Giblin, Chief of Staff – BPU
Mike Winka, Director – OCE
Renewable Energy Committee Service List
Samuel Wolfe, Esq. - BPU
Elise Goldblat, SDAG

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In the Matter of the Renewable Portfolio Standard	**)**	**Recommendations for Alternative Compliance Payments and Solar Alternative Compliance Payments for Energy Year 2008, A Stakeholder Process Regarding Alternative Compliance Payment and Solar Alternative Compliance Payment Levels for Energy Year 2009 and 2010 or Longer, and a Solar REC-Only Pilot**

Docket Number EO06100744

SUPPLEMENTAL REPLY COMMENTS OF THE DEPARTMENT OF THE PUBLIC ADVOCATE DIVISION OF RATE COUNSEL

1. INTRODUCTION

The Department of the Public Advocate, Division of Rate Counsel ("Rate Counsel") would like to thank the Board of Public Utilities ("Board" or "BPU") for the opportunity to present our supplemental reply comments on the updated and final Strawman proposal provided by the Office of Clean Energy ("OCE") on August 13, 2007 (hereafter "final recommendation"). Rate Counsel is disappointed that the only option that has been left open for consideration and further discussion is a proposal which is only marginally improved from the earlier version submitted by OCE on May 25, 2007 ("original straw").

In our direct comments regarding the OCE's original straw, Rate Counsel noted the following deficiencies that would adversely impact ratepayers including:

- The OCE final recommendation creates regulatory risk that will increase costs to ratepayers for the delivery of solar energy required under the RPS. This risk will be reflected in premiums through higher SREC prices.
- The OCE final recommendation creates regulatory risk that will jeopardize the potential amount of solar energy capacity that needs to be developed to meet the RPS requirements. This places an increased regulatory liability on ratepayers that could result in significant rate shock and loss of rate continuity.
- The OCE final recommendation will result in increased costs to ratepayers due to an inefficient program design that rests too heavily on

administratively-determined prices and micro-regulation of solar installations and not market forces.

Rate Counsel believes that the OCE final recommendation, while reflecting some improvements, suffers from the same deficiencies we noted in our direct and supplemental comments. Rate Counsel continues to recommend that the Board adopt an auction-oriented approach for the future solar market structure for New Jersey.

As we noted in our direct comments, Rate Counsel believes that over the long run, a mechanism like an Auction Model will be the best approach at (a) addressing the securitization issue important to the solar industry and (b) securing least cost resources which are equally important to ratepayers. Rate Counsel also believes that, over the long run, the Auction Model is more likely to generate the most effectively competitive and efficient model under examination.

Rate Counsel's position is not only supported conceptually, but quantitatively. Summit Blue, in its various rate impact analyses, shows that the Auction Model (in addition to the 15-Year Full Tariff) has the least ratepayer impact option of all the models under consideration. Rate Counsel's own quantitative analyses support this conclusion. As we will discuss in detail later, the rate impact analyses supporting the OCE straw are inaccurate and considerably flawed. If the Board chooses the OCE proposal, it should clearly recognize that the basis for making such a choice can only rest on factors other than least ratepayer impact.

Rate Counsel's position on the recent OCE final recommendation is summarized as follows:

- The final recommendation will not result in the least cost ratepayer impacts.
- The final recommendation fails to satisfactorily address the issue of longer term regulatory certainty that all parties acknowledge is important in maintaining the long-run sustainability of this market.
- The use of qualification lives is fraught with a variety of economic and regulatory problems that we believe will prove to create a regulatory nightmare for the Board within the next several years.
- While we agree with the OCE that several additional proceedings need to be conducted over the next year to address many issues left out of the final recommendation, we are frustrated by the degree of equivocating included in these recommendations.

The remainder of our comments will address the concerns we have with the OCE final recommendation.

2. The OCE Final Recommendation Fails to Address Regulatory Certainty

Rate Counsel continues to believe that the OCE final recommendation (like the original and revised versions of their various straw proposals) fails to meaningfully address longer term regulatory certainty. While the OCE's recommendation to have a Phase 2 investigation on securitization is a good suggestion, we would note that it is offered on highly conditioned terms, and raises significant questions about OCE's real commitment to this issue. For instance, the recommendation suggests a proceeding to explore whether longer term market security should be adopted, not one that takes this issue as a given, and explores specific structures to accommodate this apparent regulatory need. Rate Counsel, as well as most all the other parties to this proceeding, have already provided ample evidence supporting securitization. There is little need to "explore" the issue further, and any future investigations should dedicate valuable time and resources to potential implementation.

Rate Counsel believes that OCE's current proposal to use a fixed eight-year SACP schedule is wholly inadequate in providing the certainty the market will need over the longer run for the development of the solar energy goals envisioned by the Board. As we noted in both our direct and reply comments, Rate Counsel believes that an eight-year SACP schedule, like the Board's overall solar energy set-aside, is based upon a regulatory construct: easy to create and equally easy to remove. This longer-run SACP schedule provides no contractual certainty for developers, and as a result, will cause significant discounts on any future SREC revenue streams, like those used in evaluating project economics and financing.

Rate Counsel also noted in our direct comments that setting a multi-year SACP can be an inefficient means of setting both overall rate caps, as well as some schedule intended to influence the direction and movement of overall SREC prices. While OCE has recognized the shortcomings of regulatory determined prices in its critique of the tariff model, it appears to disregard this position when it comes to attempting to set SACP prices, qualification lives, and SREC prices which are based upon the implied IRRs derived from their proposed method.

A good example of the arbitrary nature and shortcomings of using the proposed eight-year SACP schedule to calibrate SREC prices comes from the annual percent changes in the installed costs of solar projects. These annual decreases in SACP prices are based upon a 3.0 percent solar energy installed cost decrease that is not supported by any information in any of the rate impact models provided to date. If this assumed decrease is in error, it will have important implications for solar energy prices, market development, and ratepayer impacts given the OCE proposed model framework.

Summit Blue, for instance, uses the 2.2 percent annual decrease in PV system costs as a conservative measure in estimating the rate impacts from various

different proposed market structures. Yet it is Rate Counsel's interpretation that the purpose of using this cost decrease factor/assumption was not for use as a basis for cost decreases in an actual solar pricing framework. Further, the assumed installation cost decrease factor used by Summit Blue was taken from the Energy Information Administration ("EIA") based upon national survey information, and not on New Jersey specific experiences. Installed costs in New Jersey have decreased at a considerably faster rate that is closer to 4.0 percent.[1]

Rate Counsel would disagree with any rebuttal which would suggest that there is no relationship between SACP and SREC levels. First, SACPs are set as a fixed mark-up of SRECs so the trend and direction established in SACP markets should be reflected in SREC markets. Second, and from a practical perspective, it is likely that if the OCE recommendation is accepted, an increasing share of the market will digress to SACPs. This is likely to occur since SREC prices are already showing an increasing trend towards the SACP amount and the use of qualification lives to constrain SREC revenue streams will likely make this headroom even tighter. This makes OCE's assumptions regarding the appropriate hurdle rates needed to keep market participants in the SREC, as opposed to the SACP, market very important. If they are wrong, then the market will begin to digress to the higher cost SACPs, resulting in higher than necessary costs to ratepayers.

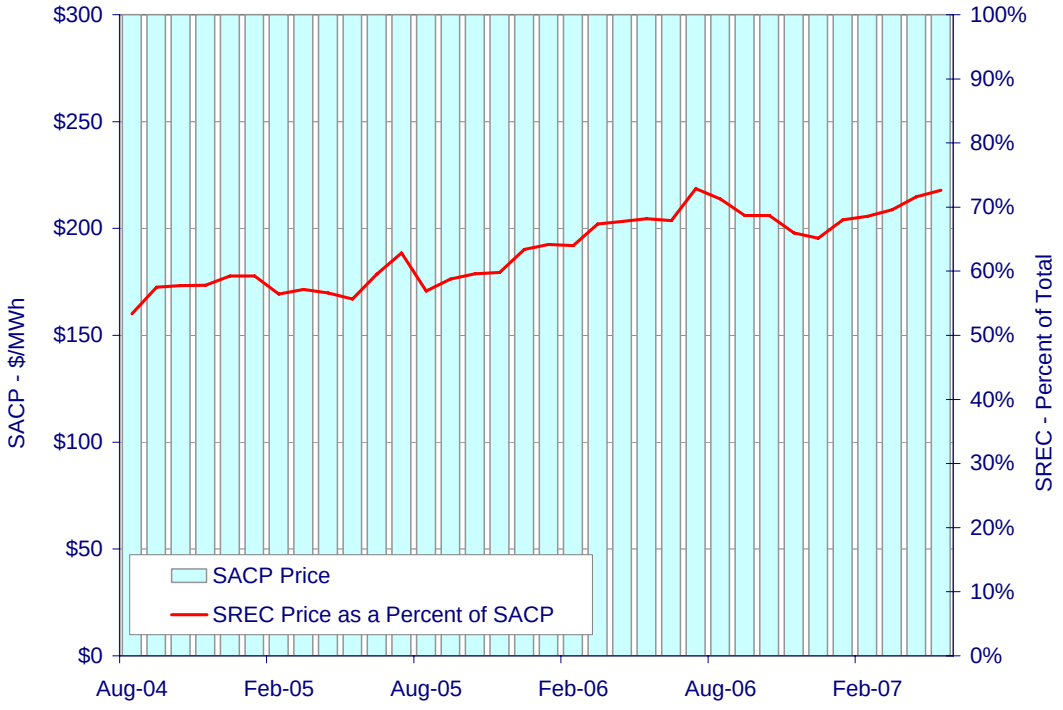

Figure 1: New Jersey SREC Prices as a Percent of SACP Prices

[1] Summit Blue Report, Revised Draft, July 31, 2007, page 24.

3. OCE's Rate Impact Comparisons Are Faulty and Inappropriate

The OCE final recommendation does not result in the least-cost ratepayer impact once all models are put on comparable "apples to apples" terms. It seems that virtually every version of the rate impacts provided by the OCE contains certain omissions that have important implications regarding the rate impacts of their recommendations. As will be seen in the tables below, that correct for some of these omissions, the OCE final recommendation is not the least cost rate impact option that has been examined, even when a generous risk premium discount factor is applied to the implied SREC revenues streams resulting from their proposal.

One of the first inconsistencies between a comparison of OCE's final recommendation to other models is that the rate impacts need to be examined on comparable cost decrease assumptions which OCE has arbitrarily changed to 3 percent. Table 1 provides that analysis.

Table 1: Rate Impact Estimates Using Comparable Cost Decrease Assumptions (All Models Using 3 Percent SREC Discount)

Annual SREC Cost of Straw (million $)						
	2009	2013	2017	2021	2023	Total Cost (NPV)
OCE Final Straw Proposal (August 13, 2007)	$ 42.24	$ 210.24	$ 490.87	$ 904.65	$ 864.37	$ 3,489.70
OCE First Straw Proposal (May 25, 2007)	$ 36.28	$ 180.59	$ 421.65	$ 777.08	$ 742.48	$ 2,997.05
15-Year Auction Model	$ 33.48	$ 166.66	$ 389.12	$ 717.13	$ 685.20	$ 2,765.83
15-Year Tariff Model	$ 33.48	$ 166.66	$ 389.12	$ 717.13	$ 685.20	$ 2,765.83

As shown in Table 1, OCE's final recommendation has the largest overall rate impacts by $700 million on a net present value ("NPV") basis. As we will note later, even this estimate is understated since the final recommendation fails to include the overall costs of program administration and the complete cost of the ongoing rebate program it has also proposed.

For instance, in the public meeting held on August 9, 2007, OCE's consultants acknowledged that administrative costs had been excluded, but noted that since the current OCE proposal was generally consistent with their current processes, that new administrative costs were highly unlikely. This raises two issues. First, in examining the proposed models, there were two that were comparable to the "status quo:" the SREC Only Model and the SREC-Rebate Model. Both of these

models included between $55 million to $60 million (NPV) in administrative costs. In order to be comparable, even if the OCE final recommendation is similar to the status quo, some degree of administrative costs needs to be included.[2] Further, if the OCE final recommendation is so similar to the status quo, and there are questions about the status quo's ability to promote solar energy on a forward going basis, then one is certainly left to wonder how the final recommendation is going to result in any improvement.

In addition, a more important omission in the recent OCE Rate Impact analysis are the costs associated with the rebate program. According to the August 9, 2007 public meeting, Summit Blue indicated that their estimates of the OCE proposal rate impacts only include four years of rebate costs. According to OCE, these costs were not included in the rate impact model, but rather somehow added after the fact in order to derive a total rate impact from the revised straw proposal. In reviewing the revised Summit Blue workpapers, we find no evidence that this has in fact occurred since the total rate impacts included in the model (that exclude rebate costs) exactly match the reported total rate impact implied in the various discussion papers provided by OCE on August 2, 2007 and August 13, 2007.[3] In other words, there is no external calculation.

In its original analysis, Summit Blue estimated that there would be some $2.76 billion (NPV) in rebate costs for small systems under the SREC-Rebate Model. The current OCE estimate is some $50 to $100 million. Based upon Rate Counsel's estimate of the rate impacts for OCE's current proposal, there should be close to $1.1 billion in rebate costs for the duration of the RPS period. These rebates will be needed to provide the support to smaller systems given the assumed SREC prices, qualification lives, and IRRs included in the OCE final recommendation. Given this estimated level of support, there is roughly some $1 billion (NPV) in missing rate impacts that have not been included in the OCE final recommendation. This, compounded with the current $3.4 billion estimated impact on the SREC portion of the model only, results in a total rate impact of some $4.4 billion overall – far higher than either the Auction or Tariff model.

Lastly, Rate Counsel would like to highlight its concerns about the "bouncing ball" of rate impact estimates that have been provided to the stakeholders during the course of this investigation. This is not an insignificant matter since the rate impacts from the various versions released to the stakeholders have been

[2] In our reply comments, Rate Counsel attempted to estimate the rate impacts from the original OCE straw and used the administrative costs found in the SREC-Rebate model as the basis for its estimates.

[3] We note that these rate impacts are implied since OCE rarely presented consistent and clearly understandable rate impact support for any of their proposals in the various discussion papers. In many instances, the numbers provided were incomplete and/or failed to total (or sum), on NPV terms, to the amounts listed in both the discussion paper and the workpaper provided on the renewable energy list server. Further, Rate Counsel did not receive its first workpaper from OCE, that included its detailed rate impact calculations, until August 9, 2007. Prior versions of these workpapers had all the formulas used to make the calculations intentionally removed.

changing by billions per estimate. It is also frustrating to all stakeholders since the workpapers containing the detailed calculations for any of the rate impacts included in this proceeding were not provided, to at least Rate Counsel, until August 9, 2007. Table 2 provides a comparison of the various rate impact estimate changes that have been provided in the reports and discussion papers presented by OCE.

	Results Provided as Total Ratepayer Impacts				
	April 25 Summit Blue Report	July 26 Briefing Paper	Revised April 25 Results	Revised July 31 Draft	August 13 Final Straw*
15-Year Tariff	$ 3,602	$ 3,600	$ 4,220	$ 3,738	
Auction	$ 4,301		$ 4,714	$ 4,001	
OCE Straw		$ 2,400		$ 2,421	$ 3,148

* Note: these results are provided as total SREC costs only. They do not include rebate or administrative costs.

4. Qualification Lives

The OCE final recommendation continues to fundamentally rest upon the use of qualification lives to "fix" the overall financial support that accrues to New Jersey solar projects. It would appear that the intent of creating these qualification lives is to limit overall financial support and minimize potential "windfalls." This is certainly meritorious in principle, however, it suffers from some serious shortcomings that Rate Counsel believes will make the longer run solar market structure unsustainable.

First, the creation of qualification lives is simply a regulatory artifact developed to "regulate" the internal rate of return and payback period of various different types of solar applications. This process is fundamentally no different than attempting to regulate, or administratively determine, prices for solar energy. This is not entirely different in concept than some of the principles of traditional utility regulation.[4] Rate Counsel noted in its direct and reply comments that over the long run, administratively-determined prices are likely to be unsuccessful in developing solar energy markets and will cost ratepayers considerably.

OCE's own comments correctly recognize this same fundamental problem in their August 2, 2007 Discussion Paper (and again in their August 2, 2007 Updated Discussion Paper) when they note that administratively determined prices "…relies on a high degree of confidence in the regulatory fore-sight,

[4] In traditional regulation, prices are fixed with the intent of regulating the allowed rate of return. The OCE proposal operates a little differently by fixing rates of return with the intent of regulating prices (SRECs).

primarily the ability to accurately set future [price] levels at the right level... [This can result in] … a relatively high probability of either over, or under, subsidizing the projects." (page 5)

Defining qualification lives is no different than setting administratively determined prices. If the qualification lives are not adequate, there will be an under-development of solar energy. Further, it is highly likely, as we noted in our earlier comments, that the internal rates of return needed to bring new adopters in the market will increase over time rather than remain constant. The only way to move the market under the OCE framework will be to increase qualification lives thereby creating an administrative nightmare, confusion, and an incredible hassle.

Second, Rate Counsel believes that setting these qualification lives has the possibility of creating a number of unintended consequences that will be deleterious to solar energy development in New Jersey. Qualification lives provide no incentives to maintain the long-run viability of New Jersey's solar energy markets. If a project is only given a fixed 10 or 12 year life, the incentives to maintain the project are reduced and the resource could easily be abandoned or moved to another state where the income earning opportunity is preserved. As we noted before, typical energy projects, like a traditional power plant, do not have qualification lives, and neither do other renewable energy projects like biomass or wind energy. Thus, establishing qualification lives for solar energy projects would represent a considerable inconsistency relative to other types of generation projects in traditional or alternative energy markets. Setting a precedent of this nature is likely to have very important unforeseen consequences in the future if the goals of making renewable energy markets more broad and seamless are realized.

Third, and perhaps most importantly, the use of qualification lives fundamentally changes the nature of solar energy development in New Jersey and would make it explicitly different than anywhere else in the U.S. If regional consistency is an important justification[5] for offering the OCE straw, then the proposal to create qualification lives clearly undermines that rationale. No other state in the U.S. imposes qualification lives on their renewable resources, solar included. Further, proposed federal legislation considering a nation-wide RPS requirement does not include any form of qualification life. Thus, adopting the OCE recommendation could run at odds with regional, as well as possible federal initiatives.

[5]It has been our impression from discussions at the most recent public meeting that one of the motivating factors for OCE's promotion of the straw proposal was that it was an approach that could facilitate the existing policy infrastructure and one that would be generally consistent with neighboring regions. This is simply not the case when it comes to the issue of qualification lives.

The use of qualification lives also raises some fundamental questions about the purpose and definition of SRECs on a forward going basis. Currently, SRECs serve two fundamental purposes, one practical, the other more conceptual.

From a practical perspective, SRECs serve as a mechanism to provide additional market-based financial support for solar development. The SREC, in theory, reflects market expectations about the costs and required returns needed to bring additional solar energy to the market. Those required to fulfill a solar generation requirement must decide, at the margin, whether to develop their own solar energy resource, or purchase a credit from the market where the purchased credit reflects the going trends and market conditions of developing solar energy.

From a conceptual perspective, SRECs reflect the unique attribute of this specific type of energy resource. The value of a SREC, in addition to reflecting overall costs, reflects the premium society is willing to pay (or required to pay) for the development of solar energy. This premium can reflect a number of different benefits and attributes ranging from environmental, to technological, to other factors considered important in public policy like energy independence and security.

Using qualification lives to restrict the ability of SRECs to continue to be earned as long as the resource is in place and generating electricity is tantamount to restricting not only the financial support for solar projects, but also the recognition of all the other benefits for which solar has been promoted. SRECs now just become a regulatory accounting mechanism to ensure projects get their allowed rates of return and nothing more. While Rate Counsel is as sensitive as any party, including OCE, to not wanting to over-subsidize any energy project, we are also reluctant to start restricting the definition of the benefits of a resource which public policy has determined as being important.

5. Conclusions

Rate Counsel thanks the Board for the opportunity to provide its written supplemental reply comments in this important matter. Rate Counsel reiterates its support for a 15-Year Auction Model but recognizes there are other means by which longer term certainty can be brought to the market: the OCE proposal, however, is not one of them. Rate Counsel believes that the OCE proposal, even with its most recent modifications, will not result in longer term benefits for ratepayers. The proposal is nothing more than a slight, and even negative change from the status quo that will result in increased costs over the long run for ratepayers.

The fundamental problem with the OCE proposal is that it does nothing to create market certainty. A fixed schedule of capped solar energy prices (SACP) is not a contract: developers can not take this to any source of capital as proof of a

guaranteed source of revenue that will back a project over its expected life. The problems with the OCE proposal are compounded even further by the creation of a new regulatory concept (i.e., qualification lives) that will place restrictions on the sale of solar energy attributes (SRECs). It is Rate Counsel's belief that this new and untested concept will ultimately prove to be incompatible with other regional and ultimately national renewable energy markets.

Mostly importantly, the OCE proposal will not result in the least cost ratepayer impact relative to the other options available to the Board. The Board should reject this proposal, and direct the OCE and other parties to this proceeding to develop a plan that includes some significant and meaningful commitment to longer term market certainty and sustainability.

Solar Alliance

The PV Industry in Action in the States
3395 Sentinel Drive
Boulder, CO 80301
P: (301) 413-0182

SOLAR ALLIANCE COMMENTS

ON THE NEW JERSEY RENEWABLE ENERGY SOLAR MARKET TRANSITION
OFFICE OF CLEAN ENERGY
REVISED - FINAL STRAW PROPOSAL

AUGUST 21, 2007

The Solar Alliance is an organization of twenty of the largest solar manufacturing and integration firms in the solar industry today.[1]

EXECUTIVE SUMMARY

Solar Alliance members recognize that the Commissioners have made some significant steps toward establishing a predictable framework for the New Jersey solar program. This is critically important so the industry can know what the rules will be for the next ten-fifteen years, and can begin to remobilize the private capital that will be needed to meet the ambitious RPS goals of the State while bringing the values of distributed clean energy to the citizens of New Jersey. While we do not agree with all of the points of the Staff Straw, we recognize that the Staff has listened to stakeholder input and has created a Straw that is a large improvement over the original. While certain critical elements (such as long term revenue securitization) are scheduled for a Phase Two proceeding, the principles in the revised Straw presented on August 13 by Board Staff, present an initial framework that is workable.

[1] **Members:**
BP Solar, Conergy, Energy Innovations, Evergreen Solar, First Solar, Kyocera Solar, MMA Renewable Ventures, SANYO, SCHOTT Solar, Sharp Electronics, Solar Energy Solutions Group, SolarWorld California, SunEdison, SunPower, Suntech America ,American Solar Electric, Mitsubishi Electric, REC Solar, SPG Solar, DT Solar/Turner Renewable Energy

The Solar Alliance members remain committed to working with the Commissioners to fine tune the program details and refine elements such as the Solar Community Based Solar initiative and a method to enable long term SREC contracts. The solar industry is committed to a transition to a market where the costs of solar RECs will track closely the costs of other RECs in the marketplace, reflecting a reduction in solar project installation costs and an increase in fuel based electricity prices. The following summary points are addressed in more detail in the body of our comments.

1. **Assumptions**:
    - The target IRR (12%) shown in the straw is reasonable.
    - The idea of providing some confidence to the market thru an eight year SACP schedule is a good one, although it is a poor substitute for a securitization method that encourages long term contracting by LSE's or LDC's.
    - Although we do not support a limitation on the term during which operating PV systems can produce SRECs, fifteen years is a term that can probably work in the marketplace.
    - An annual reduction of 3% in the SACP level for the first eight years, with possibilities to reduce the SACP at a faster rate in Year Nine and beyond, provide opportunities to get the SREC only market started, while monitoring system costs so total rate payer costs over the life of the program can be minimized.

3. **Rate payer impacts**:
    - We note that the NPV of the rate payer impacts is in line with the OCE goal of providing 2% of New Jersey's electricity over time with New Jersey based solar energy. We believe this is a reasonable rate impact relative to the benefits provided to New Jersey citizens. If solar costs continue to decline in the future, it may be possible to reduce SREC prices more than 3% annually and thus significantly reduce overall ratepayer impacts

4. **Legacy projects**:
    - As noted in previous PV Now comments, the industry believes that the solar market rules should be fair, transparent and consistent over time. Investors will make long term financial commitments only if they believe the rules will not change over time, thereby potentially stranding their investment. Although we have opposed treating installed (legacy)

systems any differently than new installations, the compromise suggested in the current Straw is an improvement over the initial Straw proposal and will probably have a minimal impact on investor confidence.

5. **SREC vintage:**
   - We strongly support the extension of SREC life from one to two years and believe that LSEs, SREC owners and ratepayers will benefit from this change.

6. **Community based solar program**:
   - We support this concept and others that will allow the development of creative business models that empower all citizens of the State to choose solar energy as part or all of their electricity supply.

7. **Grid connected solar:**
   - In order to meet the aggressive RPS and greenhouse gas reduction goals of the State, we will need to have all options available, including production of solar electricity directly into the New Jersey grid.

8. **Rebates for Small Systems**
   - The Solar Alliance believes that all customer segments should have access to the SREC market in New Jersey. Given the cost differential of small versus large system installations, we believe that incremental rebates for small systems will allow all consumers to compete in the SREC market on more equal terms.

9. **Phase II Pilot:**
   - We strongly endorse the expansion of the Phase One pilot now underway to allow project development to continue while the many rule changes that are foreshadowed in this Straw proposal are completed. We believe that solar developers and customers should have the ability to install solar projects and create SRECs without restrictions. Increasing the supply of SRECs will tend to lower SREC prices and therefore benefit New Jersey ratepayers.

10. **Long term monitoring:**
   - The members of the Solar Alliance endorse the idea that incentives for solar electricity should fade out over time. In the New Jersey case, the goal of the industry is to eliminate the need for upfront rebates and, over time to merge the SREC program with the Class One REC program. This will mean that there will eventually be no special class of solar RECs in New Jersey, only Class One RECs, trading at a market based price.
   - We agree that determining a cap on overall incentives for the solar program is appropriate and can best be achieved through an open stakeholder process. The cap should be expressed as an NPV cost that will allow acceleration of the solar RPS program as long as the NPV of the program through 2021 does not increase due to the acceleration. This acceleration of the RPS would be part of the market balancing mechanism (circuit breaker) being proposed by the OCE.

- We agree that the overall cost target of the solar RPS should be to provide (on an NPV basis), two percent of the State's electricity through solar for two percent or less of the total retail electricity bills.

11. Securitization:

- Although we are pleased that the OCE has recognized that securitization of the SREC market is an important issue, we are disappointed by the time frames indicated in the Straw. Based on stakeholder input and the Summit Blue report, it is clear that a securitized SREC market, with long term contracts, will enable SRECs to be sold at a lower price than a non-securitized market. We believe a stakeholder process followed by a BPU proceeding should be initiated immediately (see rule making below) to address the method(s) of encouraging long term contracts that will best fit with the market design as proposed in the Straw.

12. Rule making:

- We agree that many of the elements of the Solar Market Transition will require regulatory updates and revisions. We believe that the Board order of September 12 can provide the necessary guidance to Staff to begin the creation of draft rules. We support the creation of an informal stakeholder process and suggest that a draft rule be presented to the Board by March 1, 2008. The draft rule should include method(s) of enabling long term SREC contracts.

SOLAR ALLIANCE DETAILED COMMENTS

Required IRRs:

- The target IRR (12%) shown in the straw is reasonable. Based on input from customers and numerous installers in the State, the paybacks corresponding to the 12% IRR are enough to motivate buying behavior. The customer adoption rates should be continually monitored with an eye toward further understanding customer behavior vis a vis solar adoption. Are the customers who have chosen solar to date representative of the larger population, or are they early adopters who have lower threshold IRRs? On the other hand, as the technology becomes more widely accepted in the mainstream and global warming becomes more of a consumer motivator, will the necessary IRR be lower than today.

  The advantage of the SREC market as represented in the Straw is that changes in consumer behavior can be monitored through changes in SREC prices. For example, if consumer IRRs go down, there will be increased solar adoption and SREC prices will tend to decrease.

Multi-year SACP schedule:

- As a method of sending a signal to the market that the Board is establishing a stable, long term program, the idea of providing a multi year SACP schedule is a good one. We would prefer to see a ten year schedule, but eight years is a good start. This multi year schedule can be considered a "soft securitization" approach, as opposed to a securitization method that enables long term contracting by LSE's or LDC's. It remains to be seen whether LSE's or financial investors consider this signal from the Board to be sufficient to take on the risk of long term contracts. Our initial feedback has been that this "soft securitization" will be insufficient. We are therefore recommending that a Phase Two proceeding be initiated immediately after the SACP order is issued. For further detail on our recommendation, please see **Securitization** below.

  In order that a strong message be sent to the market, we recommend that the Board Order of September 12 include an annual date certain when the eighth year of the SACP schedule will be updated.

SREC qualification life

- As a general principal, the Solar Alliance believes that SREC creation and value recognition should mirror the amount of solar electricity generated for the life of the system. This structure encourages owners to maintain and operate their systems efficiently and tends to maximize clean energy benefits to the State.
- In addition to a belief in adhering to performance based incentive structures, we believe that the September 12 order will send a signal to the financial markets regarding the willingness of the regulatory body (the BPU) to change the underlying definitions of financial instruments in the

market (i.e. SRECs). Establishing a generation term life is a change in the definition of a financial product that fundamentally affects its value. If the financial markets interpret the September 12 order as a signal that SREC value (as defined by generation term life) is subject to future regulatory tinkering, there is likely to be a negative reaction. That reaction may be to scare certain investors away, or more likely, to increase the future value discounting of SRECs. This discounting is the source of increased ratepayer cost (see the Summit Blue report for a discussion of the topic).

- Although we continue to believe that no term limits should be imposed on system production, we recognize that others see the issue differently. In prior PV Now comments, industry had recommended a minimum twenty year term if one were to be established. Although we continue to endorse that position, we believe that fifteen years is a term that can probably work in the marketplace. Hopefully, if the Board adopts the Staff Straw position on a fifteen year generation term life, it will be made clear that generation term will be fixed at fifteen years for the life of the program. Such a statement will help mitigate potential damage from a retroactive change to SREC value creation within the financial community.

SREC and SACP levels

- Determining the likely trading range of SRECs is a somewhat speculative process. The market ultimately will be driven by supply and demand, which, as in any market will fluctuate on a monthly, annual and multi year basis. It appears that the levels chosen by the Board Staff were guided by the Summit Blue analysis which looked at the SREC prices over time that were likely to yield economic returns that would meet the average customer's financial expectations. They represent the likely SREC revenue needed to support benchmark projects developed today (using 2007 costs). In general, we agree with the economic analysis completed by Summit Blue. However, our analysis leads to likely SREC values that differ somewhat from the SREC values published in the Straw.

  We have only recently received the models that were used by Summit Blue in calculating their SREC values, but our initial read shows that their calculations appear to be based on a twenty year revenue stream with fifteen years of SREC revenues. We believe that the market will probably use a fifteen year IRR calculation that matches the generation term life of projects. Given the above, we believe the initial SREC values will more likely be in the range of $650 rather than $600.

- The question that remains will be whether the multi year SACP schedule presented in the Straw will provide enough assurance of future value to act as a stabilizing factor for long term contracting. Our belief is that additional measures will be required to shore up long term investor expectations. We are urging that an immediate proceeding be established to explore and finalize long term contract mechanisms. Some ideas for implementing such mechanisms are presented in the Section **Securitization**.

- The true cost of the solar program will be determined by the total costs over time of SRECs versus other Class One RECs. The purpose of the SACP is not to set a market price, but rather to provide LSE's with sufficient motivation to enter into SREC transactions rather than pay the SACP penalty. Current experience suggests that a $100 differential between likely SREC values and the SACP should be sufficient. However, based on the above analysis that the likely unsecured SREC price may be closer to $650 than $600, we believe a more layered approach for establishing the eight year SACP schedule is appropriate. If we assume it will take up to two years to agree upon and implement some mechanism(s) to enable long term SREC contracts, the following schedule is suggested:

Proposed 8 Year SACP Schedule- Solar Alliance

Energy Year	2009	2010	2011	2012	2013	2014	2015	2016
SACP	$761	$743	$675	$658	$641	$625	$609	$594

- Our suggested SACP schedule establishes a level $150 in excess of the Straw SREC assumption in order to let the market find its equilibrium during the first two years operating without securitization mechanisms. The remainder of our recommended schedule tracks the Straw proposal with a suggested SACP level that is $100 above the Straw SREC price.

- An annual reduction in the SACP level for the first eight years, with possibilities to reduce the SACP at a faster rate in Year Nine and beyond, provide opportunities to get the SREC only transition started, while monitoring system costs so total rate payer costs over the life of the program can be minimized.

- We would recommend that the SACP values be rounded to the nearest five dollars.

Rate payer impacts:

- We note that the NPV of the rate payer impacts is on line with the OCE goal of providing 2% of New Jersey's electricity over time with New Jersey based solar energy. We believe this is a reasonable rate impact relative to the benefits provided to New Jersey citizens. If solar costs continue to decline in the future, it may be possible to reduce SREC prices more than 3% annually and thus significantly reduce overall ratepayer impacts.
- Without access to the data presented, it is difficult to comment on the specifics of the Straw calculations. We look forward to participating with other stakeholders in an informal process to examine the issue of ratepayer impacts and how to monitor and control maximum solar program costs

Legacy projects:

- Solar Alliance members believe that the solar market rules should be fair, transparent and consistent over time. Investors will make long term financial commitments only if they believe the rules will not change over time, thereby potentially stranding their investment. The initial Staff Straw caused considerable alarm among investors, existing customers and others who were concerned that additional program rules might change in the future and endanger their investments. We applaud the Staff and the Commissioners for listening to industry and consumer concerns and presenting a compromise that will go far in addressing these concerns. Although we have opposed treating installed (legacy) systems any differently than new installations, the compromise suggested in the Straw will probably have a minimal impact on investor confidence. We had expressed a concern that such retroactive changes might encourage consumer lawsuits. We believe that possibility is significantly lessened by adoption of the compromise suggested in the Straw.

SREC vintage:

- We strongly support the extension of SREC life from one to two years and believe that LSE's, SREC owners and ratepayers will benefit from this change. The ability to buffer the annual variances of SREC demand, solar equipment supply issues, weather variations, LSE contracting needs, etc. will provide the State with a more vigorous and vibrant solar market. In order for the two year SREC vintage to work well, it will be incumbent upon the SREC administer, be it Clean Energy Markets or PJM, to provide the BPU and industry with accurate and timely information regarding the supply of SRECs in the market and the number of SRECs retired and banked during the year.

Community based solar program:

- We support this concept and others that will allow the development of creative business models that allow all citizens of the State to choose solar energy as part or all of their electricity supply. The details of the program will require significant work. It would be helpful if the OCE could engage a consultant to write a White Paper exploring the concept, how it might work, legal issues involved, the role of the local distribution utilities, etc. This would enable the discussions to start on a higher level that will facilitate an early proposal that can be submitted to the Commissioners.

Grid connected solar:

- Current RPS rules require that all systems creating SRECs must be net metered. In order to meet the aggressive RPS and greenhouse gas reduction goals of the State, we agree with Staff that we will need to have all options available, including production of solar electricity directly into the New Jersey grid. We continue to support the concept that SRECs should be created within New Jersey in order to bring solar's full value, including distribution deferral value, to the State's citizens. We recommend the approach Maryland used in its new solar RPS legislation as one that protects the distributed and essentially in-state nature of solar projects while meeting Constitutional requirements under the Commerce Clause. Maryland allows any sized distributed project to meet its solar

requirements provided the project does not interconnect with or use the transmission grid for the distribution of power from the solar facility.

Rebates for Small Systems

- The Solar Alliance believes that all customer segments should have access to the SREC market in New Jersey. Given the cost differential of small versus large system installations, we believe that incremental rebates for small systems will allow all consumers to compete in the SREC market on more equal terms. Rebates will allow residential customers to participate in the New Jersey solar program on an equal footing with larger customers. We recommend that the Board consider adding systems up to 50 kilowatts to those eligible for rebates. The rebates should be set at levels that provide an economic equivalency between these smaller systems (with their higher installation costs) and larger projects (with relatively lower installed cost). A program that combines rebates and SRECs for smaller systems and only SRECs for larger systems will create an equitable SREC market that allows both large and small system owners to sell their SRECs into the same market. We will not be recommending specific rebate levels in these comments since this will be covered in more detail during the CRA proceedings regarding the extension of the SBC funds for renewable energy.

- We support the current BPU policy goal of allowing all segments of the market to participate in the solar program. Although this is not a policy that encourages the lowest possible solar program cost, there are larger policy goals at stake. We find continuing public value in a diverse solar market that includes residential customers, public entities, non-profits, etc. as well as larger commercial projects. This diverse solar market can be enabled by providing supplemental rebates for smaller systems with higher installation costs (i.e. residential and small non-profits) to combine with SREC revenue.

- The economic principle that should drive solar policy in New Jersey is that the combination of SREC revenue over the generation life of the project and upfront rebate payments should equal a net present value (NPV) of total support that will enable both types of projects to go forward while allowing the overall and ever expanding RPS goals to be achieved.

Phase II Pilot:

- We strongly endorse the expansion of the Phase One pilot now underway to allow project development to continue while the many rule changes that are foreshadowed in this Straw proposal are completed. We believe that solar developers and customers should have the ability to install solar projects and create SRECs without restrictions. Increasing the supply of SRECs will tend to lower SREC prices and therefore benefit New Jersey ratepayers.

- In previous discussions, Staff has indicated an interest in limiting the number of solar installations that can create SRECs. We believe that customers and solar financial entities are in the best position to direct

their private investment dollars. Since the BPU has indicated an interest in establishing a market based solar program, there is no reason for the OCE to limit the issuance of SRECs to legitimate solar installations. The market will sort out the issue of supply versus RPS demand. There are likely to be periods when the supply of SRECs exceed the market demand. This situation will actually benefit ratepayers by driving down the LSE costs of RPS compliance. Presumably the savings from these lower compliance costs will be passed through to ratepayers.

Long term monitoring:

- The members of the Solar Alliance endorse the idea that incentives for solar electricity should fade out over time. In the New Jersey case, the goal of the industry is to eliminate the need for upfront rebates and, over time to merge the SREC program with the Class One REC program. This will mean that there will eventually be no special class of solar RECs in New Jersey, only Class One RECs, trading at a market based price.
- We agree that determining a cap on overall incentives for the solar program is appropriate and can best be achieved through an open stakeholder process. The cap should be expressed as an NPV cost that will allow acceleration of the solar RPS program as long as the NPV of the program through 2021 does not increase due to the acceleration. This acceleration of the RPS would be part of the market balancing mechanism (circuit breaker) being proposed by the OCE.
- We agree that the overall cost target of the solar RPS should be to provide (on an NPV basis), two percent of the State's electricity through solar for two percent or less of the total retail electricity bills.
- While we lack time and data to properly analyze the information concerning ratepayer impacts presented in the Straw, we look forward to examining the issue in detail during the working group process suggested in the Straw.

Securitization:

- Although we are pleased that the OCE has recognized that securitization of the SREC market is an important issue, we are disappointed by the time frames indicated in the Straw. Based on stakeholder input and the Summit Blue report, it is clear that a securitized SREC market, with long term contracts, will enable SRECs to be sold at a lower price than a non-securitized market. We believe a stakeholder process followed by a proceeding should be initiated immediately (see rule making below) to address the method(s) of securitization that will best fit with the market design as proposed in the Straw.
- As a number of parties have pointed out in the past, and Summit Blue supported in their analysis of ratepayer impacts of various market approaches, overall ratepayer costs will be lower if there is a method of providing long term revenue stability and predictability to the SREC market. The PSEG solar petition recently filed showed that a fifteen year securitized revenue stream can facilitate customer financing of solar generation at a much lower cost than a non-securitized approach. These lower costs (through reducing risk) can be passed through to New Jersey ratepayers.

- By adopting a method of securitizing the SREC revenue stream, solar customers and developers representing all market segments will have the ability to participate in the SREC market. Without a securitization method, smaller customers may find it difficult to trade 5-10 SRECs per year. The LSEs have credit requirements and large company processes that make it difficult if not impossible for small customers to trade with them. The aggregators that have emerged to address this problem are charging fees that substantially reduce the revenue potential of the SRECs. This creates a market disparity wherein a large SREC owner can receive a much higher net income per SREC than a smaller customer. Providing a long term SREC contract or other securitization method that can be accessed by all customers will help level the playing field and promote equity across customer segments.

Voluntary EDC SREC based loans
As noted above, one of the electric distribution companies, PSE&G, has proposed a solar loan program that would offer loans to developers in all market segments, including low income residential consumers, based on an established minimum floor price for fifteen year SREC deliveries.

Mandatory EDC long term SREC contracts
An alternative would be a long-term, standard SREC contract between the EDCs and solar customers, with a levelized, fixed price determined yearly by the BPU in a proceeding. Any customer could take advantage of the annual "tariffed contract price" to enter into a fifteen year contract to sell all SRECs generated over that period. EDCs would be required to enter into the contracts and would be assured of rate recovery of incurred costs. The EDCs would turn over or sell the purchased SRECs to LSEs.

Long term LSE SREC contracts
Either within, or outside of, the BGS auction, LSEs would be rewaded for entering into long term SREC contracts with solar customers. Establishing a 10-15 year renewables tranche within the BGS auction is one approach. A similar mechanism is being developed now for demand response.

Underwriter
A private, financially strong entity such as a Wall Street trading firm or carbon fund would be paid a fee to provide floor price guarantees for SRECs over an extended period in order to introduce more price clarity into the long term SREC market.

Rule making

- We agree that many of the elements of the Solar Market Transition will require regulatory updates and revisions. We believe that the Board order of September 12 can provide the necessary guidance to Staff to begin the creation of draft rules. We support the creation of an informal stakeholder process and suggest that a draft rule be presented to the

Board by March 1, 2008. The draft rule should include method(s) of enabling long term SREC contracts.

CONCLUSION

The members of the Solar Alliance welcome the opportunity to continue our positive dialog with the BPU Staff and Commissioners to ensure that the redesign of the New Jersey solar program is completed expeditiously. We support the basic elements of the latest Staff Straw. While we don't agree with all the details, we believe the Straw is a reasonable compromise that addresses concerns of many stakeholders, including many outside the solar industry. Solar Alliance members support New Jersey solar program modifications that combine a reliance on market forces with a securitized SREC contract feature that will allow the solar program to grow and industry to prosper while delivering high value, clean and reliable electricity to New Jersey ratepayers at a fair price for the foreseeable future. We believe our recommendations will best enable the New Jersey solar program to build on the strong foundation created over the past five years and grow into the future.

SIERRA CLUB
FOUNDED 1892

NEW JERSEY CHAPTER
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www.SierraClub.org/NJ

August 21, 2007

President Jeanne M. Fox
New Jersey Board of Public Utilities
Two Gateway Center, 8th Floor
Newark, NJ 07102

Dear President Fox:

The New Jersey Sierra Club is deeply concerned about the rush to adopt the Office of Clean Energy's Solar Market Transition Straw Proposal. We have had less than a week to try to develop comments on something that is going to have a long-term impact on whether the state's solar program will be successful in increasing the use of clean, renewable energy in New Jersey. Within these time constraints, however, we would like to submit the comments that follow.

The Solar Market Transition Straw Proposal would move the state in the wrong direction, favoring market-driven SRECs while giving only lip services to a rebate program. The proposal never specifies how much money is involved in the rebate program or what percentage the rebates will be. The Sierra Club is disturbed that New Jersey's very successful rebate program could be pushed aside under this plan.

The proposal also fails to allow for up-front grants, as opposed to rebates only. As a result, people of modest means who are not able to front $30,000 or $60,000 and wait for a rebate will be left out of the program entirely. The state should provide the same opportunities to have solar power to all its citizens instead of structuring the program is such a way that solar would belong only to the wealthy in the suburbs. Excluding our middle-class and working-class residents also ignores the potential of the flat roofs of the row homes in Trenton, which could be one of the best places in the state to site solar panels.

The Sierra Club is pleased that the proposal recognizes community-based solar aggregation, but this component needs to be expanded and more details included. Currently there is no mention of whether rebates will apply to community-based solar projects. We believe both that rebates should be offered to community-based solar programs and that the cap on individual rebates should be raised or removed in the case of community-based aggregation to allow for these larger projects.

Another problem we see with the proposal is that it does not explore the possibility of long-term securitized contracts. Such contracts would create certainty in the market, reduce the cost of the program, and make sure the projects actually happen. BPU's own experts allude to this in the Summit Blue Report.

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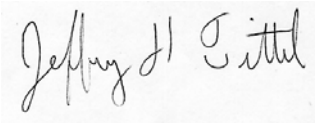
> Given the critical nature of price certainty in the process of financing large-scale renewable energy projects, one of the strongest elements associated with low RPS compliance cost is the ability for renewable energy generators to enter into long-term contracts…[T]his factor plays a defining role in determining the pace of renewable energy project development…States which lack elements to facilitate long-term contracts end up relying on more volatile short-term market pricing. When combined with project development delays and resulting early-phase supply shortages[,]…this drives compliance costs up…[I]t is clear that long-term contracting, coupled with ample resource availability, and limited siting issues, are a recipe for low-cost RPS compliance…Given the relatively short-term BGS contract cycle and given New Jersey's large RPS goals for in-state solar, one of the most expensive resources to develop, it is imperative for New Jersey to address the issue of price certainty in order to keep RPS compliance cost [down]. (Summit Blue Report 50-52)

In addition to these benefits, long-term contracts would also help to address long-term regulatory uncertainty as contracts come up and new auctions happen. We are concerned that if the proposal goes forward as written, the OCE will set the rate of return and payback periods for different types of solar applications, which may undermine the profitability of various projects. By having long-term contracts, more companies would be able to compete, especially for smaller residential projects, because there will be a set rate of return and less uncertainty in market fluctuation. Further, with so many states around us adopting Renewable Portfolio Standards, long-term contracts would prevent a situation where five years from now, out-of-state utilities would be coming into New Jersey and snapping up contracts here to meet the standards in their own states.

For all these reasons, long-term contracts would go a long way toward making sure that New Jersey stays a leader in the nation on solar projects and continuing to expand the market for renewable energy. We would like to see the BPU and its consultants explore a long-term contract of ten to fifteen years to see what the cost would be in comparison to multiple five-year terms. We would also like to see the BGS auction system reformed, with those reforms tied to the changes we need in the solar programs.

We look forward to working with the BPU to ensure that New Jersey adopts a strong solar program that will help us expand our use of renewable energy and build a cleaner, brighter future for everyone.

Sincerely,



Jeff Tittel, Chapter Director
New Jersey Sierra Club

Soltage
RENEWABLE ENERGY PROVIDER

Honorable Kristi Izzo
Board of Public Utilities
Two Gateway Center
Newark, NJ 07101

August 20, 2007

RE: Comments on Revised Straw Proposal for Solar Market Transition

Dear Secretary Izzo:

On behalf of Soltage, Inc, please accept the following comments on the Office of Clean Energy Staff's Revised Final Straw Proposal on the Solar Market Transition.

COMMENTS:

We support the August 13, 2007 Straw Proposal. The currently contemplated structure outlines a favorable New Jersey solar market which will simultaneously maximizes the potential of solar generation within New Jersey while at the same time respecting efficiency mandates with regards to administrative burden and rate-payer expense.

The ACP price as well as the lengthened schedule will give ample assurances to allow the investment community to leverage their cost of capital towards project construction, the SREC vintage will allow for a more dynamic commodity market, and the continued rebates for small systems will ensure that no one segment of the solar market gets left behind.

This most recent iteration of the OCE straw proposal should be commended, and sets the stage for New Jersey to once again assume a position of solar market leadership.

Respectfully submitted,

Jesse Grossman
Chief Executive Officer

Vanessa Stewart
Chief Operating Officer

Final Comments On The Revised Proposal For the Renewable Portfolio Standard Framework, As Requested In The Board Order "In The Matter Of The Renewable Energy Portfolio Standard" (Docket EO06100744)

Originally Published: August 16th, 2007
This Revision: August 21, 2007

Mark Warner
President & CEO
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Executive Summary

The NJ Office Of Clean energy has sponsored a detailed proceeding for evaluating transition strategies of the solar incentive structure, commissioned in December 2006. After extensive analysis and public review, and a series of proposal iterations, staff is now preparing final recommendations for board consideration on September 12, 2007. This document provides final comments on this proceeding, focusing specifically on the staff proposals made in the August 2 draft, as updated in the Revised Final Straw Proposal (Final Straw) released on August 13, 2007.

- The Final Straw is a significant improvement over the original straw proposal, and appropriately reflects a good balance of diverse stakeholder input. Overall, we endorse the Final Straw which – although it does not include everything industry believes is needed – is an admirable and workable compromise.

- We support several components of the Final Straw as proposed, including establishing a competitive SREC market framework as the basic model, adoption of a 2-yr SREC life, continuation of rebates for small systems, establishment of a multi-year SACP schedule, fair treatment for legacy systems (same qualification life as new systems, retroactive to commissioning date), extension of the pilot, support of Community Solar projects, and clarification that the existing rules support Grid Supply SRECs. We strongly support the board commitment to a follow-on proceeding to further address market securitization scheduled to begin November 1, 2007 and reporting back to the Board within 6 months or by May 1, 2008.

- On the critical question of economics, we strongly recommend adoption of policy goals for a 12% IRR and 15 qualification life. Under the original "slow decline" (3% per year) scenario previously considered by staff, this would translate to a targeted SREC market price (in the first year) of about $600/SREC, and an SACP around $780/SREC declining a consistent 2.2%/year.

- The Final Straw proposes setting the SACP $100 above the target SREC value. While the $100 may account for transaction costs, it may not provide enough headroom to incentivize long term contracting, especially in the next several years in which securitization models will be considered. We therefore would recommend setting the SACP at a value at $150-200 above the target SREC value for the first two years, after which time SACP levels could drop to $100 over SREC target value.

- We support the structure of the long term SACP schedule with the consistent decline. However, since staff has expressed interest in exploring ways to flatten out the cost over time, we have modeled a SACP schedule to "start higher, but decline faster". To deliver similar economics in the 12%/15-yr scenario, we recommend a $900 SCAP in the first year, yielding a SREC market price around

$700, with a decline schedule that drops 3% for 4 years, 4% for 4 years, and 5% the remaining 7 years. This accelerating schedule is intended to match the cumulative effects of both increasing power costs the installation cost reductions. This change reduces the rate payer impact to 4.3% of retail sales at its peak. Additionally, a front-end loaded schedule has the advantage of slightly mitigating the discounting effect applied by financers in the out years. We recognize the trade-offs that exist in adopting one schedule over the other. It is primarily a policy decision, and therefore we do not endorse one schedule over the other, ***as long as they remain NPV neural with respect to what has been proposed in the Final Straw.***

- Policy makers have also requested recommendations on "governance controls" for the program. We recommend an integrated package of controls that set total spending caps, establish a trajectory for monitoring system cost improvements, and an additional flexibility mechanism for facilitating market balance.

The Final Straw represents a relatively comprehensive set of changes that will establish a pioneering new framework for solar market development in NJ. This draft includes revisions to our comments originally published on August 16th, responding to several requests for clarification.

Introduction

As commissioned in the board order of December 12th, 2006, the NJ BPU has initiated a proceeding to set the Solar Alternative Compliance Payment (SACP) and address related questions that are material to that decision (Docket EO06100744). Since that time, an extensive process has been undertaken to assess various market models, quantify project economics and rate payer cost through an independent consultant, refine proposals, and collect a wide range of stakeholder comment. An updated proposal has been issued for public review by staff on Aug 2, 2007, with updated versions of supporting analytic documentation. This information was revised again on Aug 8, and published for final review on Aug 13th. The intention is to finalize this extended proceeding on September 12th, with a focus on the basic economic framework being established for an expanded Renewable Portfolio Standard (RPS) market in NJ. This document provides our comments on the Final Straw, including treatment of several additional governance issues that have recently been identified.

These comments are a supplement to the previous comments and white papers we have provided, and we refer the reader to those documents for more detailed treatment of some of these issues. This document is more summary in nature, but reflects "most current thinking" that directly addresses the most recent draft proposal from OCE staff. This draft includes revisions to our comments originally published on August 16th, responding to several requests for clarification

The Need For Urgency

As outlined briefly above, this proceeding was commissioned in December 2006, following more than six months of study and public comment on the proposed transition. Since December, there has been an extensive process that goes far beyond the normal disclosure and comment requirements of a typical board order. We appreciate the transparent approach being taken by the BPU in this matter, and the opportunity for all stakeholders to provide comment – for nearly two years.

Balancing this need for transparency and robust evaluation is the need to meet the RPS in a timely fashion, and to ensure the "orderly conduct of business" for this emerging industry. The NJ solar market has been stalled for the last two years, with particular deterioration since the rationing of rebates began in January 2006. We strongly urge the BPU to deliver on their commitment to finalize key decisions about the new RPS framework at their September 12 board meeting, and to thereby allow the solar industry to restart growth and ensure successful satisfaction of the RPS requirements. Given a decision of this size, it is tempting to consider further analysis or evaluation. But we support staff's recommendation to make key decisions with the pending board order, and we note that the substantially revised straw proposal reflects the considerable impact of an extended, open, and highly inclusive review process. The time to act is now, otherwise other key policy goals of the program will be significantly harmed.

Items Of Merit

The Final Straw represents a substantial improvement over the original straw proposal, and has clearly benefited from the stakeholder review process over the last four months. We applaud the BPU's commitment to an open and transparent process, and their willingness to respond to the substantial consensus represented in the stakeholder feedback gathered throughout the process. While the Final Straw does not support some of the key program elements we believe are important, we recognize the diverse policy goals in the program, and the need to balance needs across a wide and diverse range of stakeholders and policy goals. We believe the Final Straw represents a sound compromise solution – it succeeds in balancing many difficult factors in a fair and well substantiated way, and although not ideal from industry's perspective, we believe this is a workable starting point. We strongly endorse the Final Straw for the enhanced RPS framework, and acknowledge the significant pioneering advancement being made by the state through this new program.

The overall structure of the proposal is sound, and represents a comprehensive solution to the key goal of "meeting the solar RPS at the lowest possible cost", while also balancing other policy goals. Most key elements required to accomplish this market transition are properly included; for some key items that have been left undecided (like stronger securitization), provisions are proposed to allow further consideration of those matters. We believe this is an appropriate approach to decision making since this is an extremely complex issue. There are several aspects of the revised proposal that we have endorsed in previous comments, and which we believe should be included in the final order as proposed. We will not comment on these elements in detail, since there appears to be strong consensus on their inclusion across a wide range of stakeholders. Specifically, we support the following positions proposed by staff:

- **Competitive Market Framework**: The board has communicated their intention to create an open and competitive market in NJ, which we support as a proven way to reduce costs and attract private capital. We support this direction and the underlying economic framework being defined in this proposal, assuming there is a concurrent commitment to further consideration of strong securitization methods.

- **Continued Rebates**: If the board desires participation in this new market by smaller systems (<40KW, both residential and light commercial), modest rebate support will be required after 2008. Although we support staff's recommendation to continue rebates for those systems, there has not been sufficient analysis or public review of those aspects of the current proposal. We therefore agree with the Final Straw which states a) a commitment in principal as part of this proceeding to rebates for small systems (in addition to SRECs) after 2008, and b) agreement to finalize the details through the existing CRA proceeding.

- **Two-Year SREC Life**: We agree with staff's recommendation to migrate the market to a 2-yr SREC life, beginning with the 2009 energy year. This is a significant improvement in the market design that will facilitate market balance and make the NJ market more consistent with regional developments.

- **Multi-Year SACP Schedule**: Staff is proposing introduction of a multi-year SACP schedule. This is a profound change to the current RPS market, and we believe it will have a significant positive impact on all aspects of the market for a variety of reasons (see our previous comments on this topic). We applaud staff's intention that this schedule be "high confidence" (i.e., hard to change) moving forward – the more the market can trust this schedule as "stable and immune to tinkering", the more cost effective and liquid the market will become. We would prefer to see a 10-yr schedule, but believe that the 8-yr schedule being proposed is workable. In consideration of staff's interest in exploring how to levealize cost over time, we will have modeled a "start higher/decline faster" SACP structure for your consideration. We do not endorse one structure over the other so long as they remain NPV neutral with respect to the Final Straw.

- **Fair Treatment Of Legacy Systems**: The treatment of legacy systems has been one of the most difficult aspects of this transition, and we believe that staff has developed a compromise position that provides a good balance. Giving all projects the same qualification life introduces basic "fairness" to the proposal, but starting that "clock" at the point of commissioning automatically bounds the amount of economic benefit that legacy projects might receive. While this approach still represents a degree of "retroactive rule change", no legacy system is being harmed economically. Industry believes that such retro-active rule changes should never be made as a matter of policy, and we believe there should be no limits for legacy systems. We recognize the broader policy implications of that approach, however, and we therefore support the proposed compromise solution for treatment of legacy systems.

- **Securitization**: As noted above, we believe it is absolutely crucial that the board commit (as part of the Sept 12 board order) to an additional proceeding to address stronger securitization. The proposed multi-year SACP schedule is a substantial "confidence booster" for the market (especially investors), especially if the board avoids tinkering and it becomes a trusted baseline. But it is no replacement for "strong securitization" (i.e., documented guarantees that you can "take to the bank"). This additional securitization is motivated by the need to a) reduce the rate-payer impacts of discounting applied by financiers, and b) ensure equal and efficient access to the SREC market by all segments (especially smaller projects). We strongly support staff's recommendation for initiation of a new proceeding to consider additional securitization AS AN ENHANCEMENT of the basic framework being considered for Sept 12. It is CRUCIAL, however, that additional securitization be viewed as an overlay of the established framework, not a "re-write" – otherwise substantial market stall will emerge until the final securitization issues are resolved.

- **Pilot Extension**: We support – and strongly encourage as a virtual requirement – that the current "SREC only Pilot" be extended, including clarification of operating details needed to allow efficient application processing. Establishing the new RPS framework is meaningless without simultaneously creating the opportunity for new projects to apply under that framework.

- **Community Solar**: For reasons previously documented, we strongly support staff's recommendation for consideration of Community Solar projects. We recommend that the staff solicit open proposals for pilot projects to define and test the concept in the market. It should be noted that although there is some precedent for this concept in other states, this innovation represents a huge market leadership opportunity for NJ. It is an entirely new way to conceptualize the deployment of solar, and could be an area where NJ once again leads the nation on creating pioneering commercialization models of solar. The Community Solar concept – if enabled properly – could be as high impact as Net Metering itself.

- **Grid Supply SRECS**: We also support staff's proposed clarification that the existing RPS rules support non-net metered systems connected to the distribution system. This change could allow significant additional cost reductions, additional rate payer equity, and the creation of an entirely new market for solar in NJ. This move, in particular, potentially enables solar to emerge as a direct wholesale alternative to gas-fired peaking generation, which could allow substantial price stabilization of electricity costs for all rate payers.

Key Economics

The Final Straw is significantly improved over the original straw proposal, and has focused on a target IRR of 12% IRR (for commercial) and 15 year qualification life. As a result of these decisions, a SREC market price target can be established, and an associated SACP determined. These three factors (IRR, Qualification Life, and SACP schedule) form the economic foundation of the new framework.

The incentive levels (IRR, or simple payback) have to be set at a level sufficient to ensure customer adoption. Otherwise, ratepayer costs will increase based on SACP payments due to SREC shortfall. Simultaneously, policy goals want to drive the lowest possible incentive cost (i.e., actual cost to the ratepayer) to minimize ratepayer burden. In considering these trade-offs, it is important to note that the board does not actually set incentive level - its sets the SACP, and ACTUAL SREC pricing (and associated rate payer impact) will be set by the market. The process for setting the incentive levels is conceptually based on the following sequence: a) determine the IRR needed for adoption of representative baseline projects, b) determine the SREC price levels (over time) needed to deliver that IRR, c) set the SACP so as to *influence behaviours* to deliver that SREC market pricing, d) count on competition in the market to deliver the lowest possible cost (and rate payer impact) within that environment. Regarding the setting of

the SACP (once a market price target is established), it should be **high enough to motivate market participation by the LSEs, and sufficient to encourage long term contracting.**

Fortunately, there is a substantial amount of data and stakeholder input available to help guide these decisions. The models completed by Summit Blue have provide baseline references for all these issues, with substantial stakeholder review and input. **We believe a project IRR goal of 12% is the ABSOLUTE MINIMUM that will achieve the required capacity deployment, and that a qualification life of 15 years is the ABSOLUTE MINIMUM that can be accepted by the industry.** These two numbers represent the very low end of what industry believes will work – lower numbers would probably not delivered the needed capacity, and higher numbers would be preferable since they would support a broader range of projects and stronger emergence of project financing support (to help serve all rate payer classes). Our previous comments have documented our position on the economics, but we can support a program design based on 12% IRR and 15 qualification life parameters (as an aggressive minimum). Note that the lower the incentive structure, the more likely only larger projects and affluent customers will dominate the future market. The above pricing recommendations have been made with that consideration in mind, and the board's policy goal to ensure a diverse market that serves all rate payers equitably, and the desire to support the emergence of project financing support.

The Final Straw proposes setting the SACP levels $100 above the target SREC value. While the $100 may account for transaction costs, it may not provide enough headroom to incentivize long term contracting, especially in the next several years in which securitization models will be considered. We therefore would recommend setting the SACP at a value at $150-200 above the target SREC value for the first two years, while the market is still in flux. In year one of the "slow decline" schedule proposed in the Final Straw, this would be a SACP of $780.

After two years, the market will better established, benefiting from securitization that emerges from regulatory initiative, or evolving as such that securitization is not required. In either case, in year three, to account for the maturation of the market, the SACP levels could drop to $100 over SREC target value

Most proposals and models to date have focused on modest "first year" SREC prices, with a relatively shallow (2.2 – 3%) decline annually. Staff has raised the possibility of levalizing the costs over the life of the program, and asked what changes to program design could be made to that effect. In response, we present a strategy that starts SACP levels slightly higher, with a faster decline rate. This approach has the advantage of higher incentive levels early on (when the RPS volumes are lower), and achieving lower costs in the out years (when the RPS volume is higher). This strategy also makes sense given that both electricity cost increases and declining solar costs will combine to have a stronger affect further out.

We recognize the trade-offs that exist in adopting one type of schedule over the other. It is primarily a policy decision, and therefore we do not endorse one schedule over the other, ***as long as they remain NPV neural with respect to what has been proposed in the Final Straw.***

Based on those considerations, we present a "higher start/faster decline" approach to the SACP schedule. It is important to note that these SREC pricing levels (and SACP) will appear higher than have been discussed over the last four months, *but that is compensated for by a faster rate of decline over time.* Given the compromise policy goals of 12% IRR (commercial) and 15 year qualification life, we recommend an SACP starting at $900 in the first year, declining by an escalating schedule (3% for the first 4 years, 4% the next 4 years, and 5% the next 7 years (assumed)). We believe this would deliver an approximately $700 SREC market price in the first year (77% SREC/SACP ratio), with actual SREC prices declining thereafter based on declining SACP and market balance factors. This "cost levelization" strategy results in the following recommended economic schedule:

SREC and SACP Schedule – Accelerated Decline
Targeted IRR: 12% (commercial projects)
Qualification Life: 15 Years (all projects)

Energy Year	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SACP	900	879	759	739	720	695	671	648	626	600	575	551	529	507	487
SREC Price Decline		3%	3%	3%	3%	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%
SREC Market Price	700	679	659	639	620	595	571	548	526	500	475	451	429	407	387

Highly cost effective commercial projects installed under this schedule – assuming minimal discounting (which may be optimistic, even with the 8-yr SACP schedule) - will realize approximately a 12% IRR (assuming full tax capture). Smaller or less efficient systems will have a lower IRR, and rebates are required to normalize the economics for those smaller (and less tax advantaged) market segments. Assuming market conditions develop as expected, the SACP could decrease by $25/yr after 2023 resulting in natural sunset of the program around 2035. Those systems being installed in the latter part of the RPS period (2020 and later) are therefore receiving relatively minimal SREC benefit over their 15 year qualification life.

It is important to note that if a 15 year qualification life limit is imposed, the RPS requirements in the out years need to be adjusted downward accordingly. Otherwise there will be "artificial shortfall", or the need to install new capacity to replace those systems that are "retired" each year. We also want to endorse staff's proposal that once a solar system hits is qualification life limit, it reverts to generation of class 1 RECs; this approach softens the impact of the qualification limit, and will help ensure compliance with the class I RPS requirements in the out years.

Governance Controls

As part of the stakeholder review of the evolving BPU proposals, policy makers have asked for recommendations on several "governance aspects" of the program. As articulated at the August 1, 20007 board meeting, there is a desire to ensure that overall program expenditures are properly bounded, and that there are appropriate metrics for tracking whether the program is making progress towards the strategic policy goals that motivated the state's market development investments. Staff has asked for recommendations in these specific areas, which we believe should be addressed in a comprehensive and integrated fashion. These issues are:

1. **Spending Caps**: How can the state ensure that actual spending for the program is not "open ended", and remains within pre-defined limits that bound rate-payer burden?

2. **Monitoring Progress**: How can the state measure whether the strategic goals of this rate-payer investment program are being achieved over time – namely ongoing reductions in the cost of solar power, and the eventual elimination of the need for state subsidies?

3. **Facilitating Market Balance**: As an integrated part of addressing the above issues, we believe it is also appropriate to consider an overall framework for providing additional flexibility in the RPS structure. The need is for a simple mechanism that facilitates market balance, since many of the "worst case" scenarios for the policy are cases where the market goes strongly out of balance. This flexibility was identified as a key policy goal in the original board order for the proceeding, and we believe it should be addressed in a way that is integrated with the other governance issues identified above.

Spending Caps: As part of the proposed September 12th decisions, we believe it is appropriate to set an upper bound to total actual expenditures for the RPS program. This becomes a benchmark against which the program can be managed over the long term. We recommend that this **overall spending cap be set as 2% of total retail electricity sales** over the period from energy year 2009 to 2036[1], on a 10%-NPV basis. We believe the 2% expense-limit is appropriate, since it enables a 2% increase in generation capacity for the state as per the current solar RPS goals. The current program cap should be instituted based on the NPV of current projections about retail electricity trends (as has already been started by Summit Blue), and can be reassessed periodically based on both actual retail sales growth (and costs), and actual program expenditures. We believe it is important to set the spending cap on a "percentage of retail sales basis", since the RPS itself is defined as a percentage. This allows the spending cap to adjust up or down

[1] Considering the program lifetime through 2036 reflects projects being installed in 2021 with a 15 year qualification life. SREC prices for those legacy systems are assumed to drop dramatically through this latter period, and to not be available at all to new projects after 2021 (i.e., no more NJ incentives of any type for projects installed after 2021).

automatically as the actual RPS varies over time with retail volume. It is also crucial to manage this cap on an NPV basis, since by design, in-year capacity deployments/cashflows are not matched in time.

Using the same retail electricity projections as in the Summit Blue analysis, the SACP schedule proposed above (starting at $900 with an accelerated decline) represents a $3.06B NPV over the lifetime of the program, **and a 2% increase in ratepayer burden[2].** The above recommended SACP (and recommended SREC pricing) schedule therefore represent a "2% increase in generation capacity for a 2% increase in retail electricity cost". The analysis supporting this position is included in Attachment A.

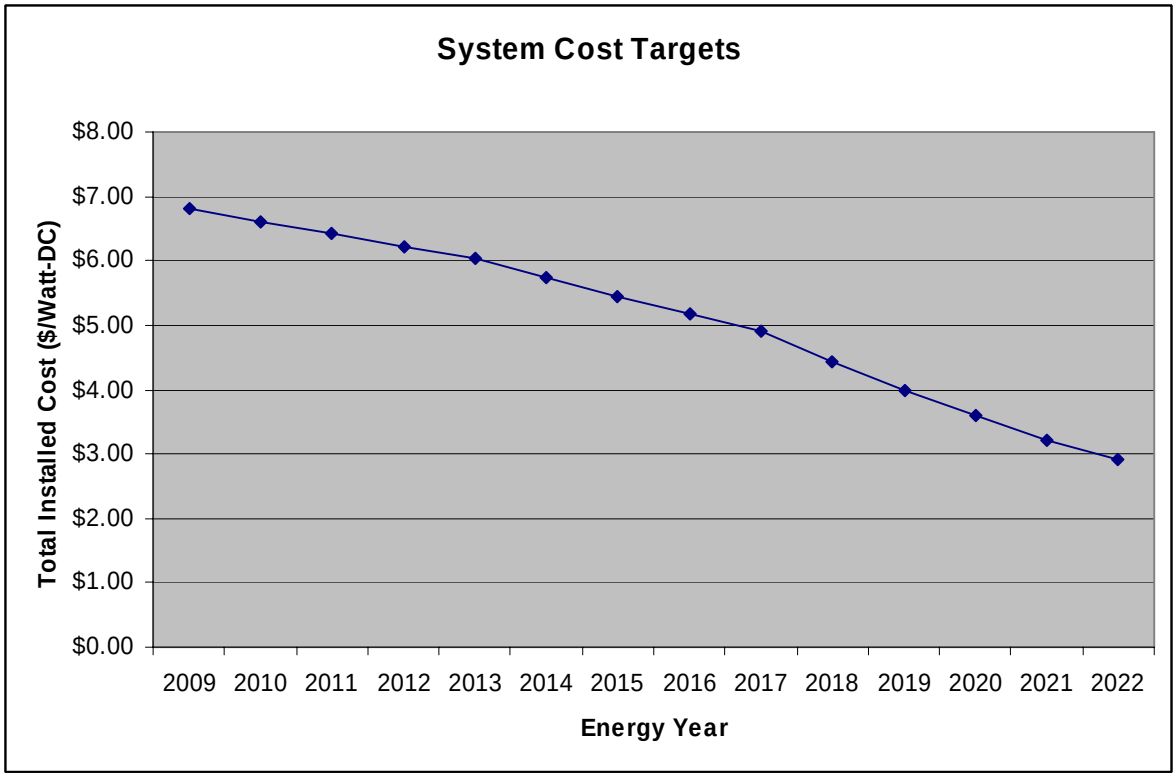
Monitoring Progress: The overall program goal should be the elimination of NJ ratepayer subsidies for systems installed after 2021, consistent with the current planning objectives of the RPS program. This is sometimes referred to as "reaching grid parity". We disagree strongly with staff assertions that grid parity will be fully reached by 2015: while that is possible given extraordinary technology gains, it also depends heavily on numerous other factors like increasing power costs and global market issues. We therefore recommend that the target for eliminating rate payer support be 2021, as per the current RPS trajectory. Should cost objectives be reached sooner, the RPS can be adjusted accordingly to accelerate solar deployment without increasing rate payer burden (see the following section on market balancing mechanisms).

The easiest and most objective way to monitor "grid parity" progress is to establish a reasonable system cost trajectory, and compare that with actual system costs over time. We recommend establishing a 50KW commercial system as the reference baseline, which today is priced at $6.82/watt (as per Summit Blue), and which would have to decline to approximately $3.00/Watt to eliminate the need for NJ rate-payer support. This target assumes the continued availability of federal tax incentives through 2021, that a constant IRR of 12% is sufficient over time to create the desired adoption, and continued increase in the cost of retail utility power. Significant changes in any of these three assumptions should force a reassessment of the "grid parity" target trajectory.

We recommend an accelerating schedule over time to reach this target, similar to the profile used to implement the "cost levelization" strategy defined above. If the actual system costs are not tracking the benchmark by a significant degree for an extended period, a more complete market assessment should be initiated to fully assess market conditions and recommend program changes (if any). Single-year or minor deviations from this trajectory should not be sufficient to trigger a market reassessment, since point-variations from this overall trajectory are a near certainty.

The cost trajectory resulting from these assumptions is as follows:

[2] Uses the retail volume numbers as Summit Blue: 88.9 Million MWHRs in 2009, with volume growing 1.5% per year, and costs increase an average (across both residential and commercial segments) at 3.5% per year, with electricity averaging 12.4 cents/kwhr in 2009.



Facilitating Market Balance: The current RPS program sets a MWHR obligation every year as a percentage of actual retail sales. To be considered fully successful, the market has to hit those objectives nearly exactly or significant negative consequences result. Furthermore, this structure penalizes industry for actually exceeding the state's renewable energy goals, and creates the strong potential for "stop and start" dynamics that are extremely harmful to market development conditions. Given the recent NJ commitments to dramatic CO2 reductions by 2050, we believe it would be beneficial if the NJ solar RPS could be accelerated – as long as it does not increase rate payer cost. Put another way, we should structure the incentive program so that if the market can install the entire RPS faster than 15 years, that would be considered success rather than failure – assuming no increase in rate payer costs.

We believe there is great value in introducing this flexibility into the RPS program so as to facilitate market balance. This is accomplished by either accelerating or decelerating the RPS requirements based on actual market results, in an economically neutral way (to the rate payer). In short, if the industry begins to overbuild, the RPS requirements would be accelerated with a simultaneous reduction in SREC value to keep the ratepayer cost NPV neutral with the current baseline. If the industry is being highly successful deploying capacity, a slight reduction in incentive value would be appropriate. Conversely, if significant shortfall develops the RPS trajectory would be deferred slightly with an associated increase in incentive value (again, in an NPV neutral way). This mechanism introduces a natural regulation mechanism that lets the market self-balance its actual deployment pace with evolving project economics. Most importantly, it lets the

market achieve the RPS goals faster without penalty, or go slower without creating inappropriate rate payer penalties (through excessive SACP payments). This strategy has sometimes been referred to as a "bi-directional circuit breaker", although we believe that not an appropriate reference for this concept. Instead, we believe this should be conceptualized as a mechanism for facilitating market balance under a variety of changing market conditions.

Here are two examples of how it would work. In all cases, the state of the market is easily measured by market balance: the number of actual SRECs generated relative to planned RPS demand. This balance is relatively predictable assuming good data about project commitments and deployment rates.

- Consider the case where the market is persistently short: fewer SRECs actually generated than the RPS requires over a multi-year basis. When this condition is triggered, the RPS increase that was planned for the following year would be deferred, and the target changed to match projected capacity deployment. The RPS requirements for the remainder of the RPS term (through 2021) would be adjusted to account for this change, and to distribute the deferred requirement equally across remaining years. The total capacity required for 2021 remains the same, so this change essentially loads more of the demand on the "back end" of the trajectory. Along with this change in SREC volume requirements per year, the SACP schedule would be increased slightly so that the NPV of the total lifetime program expense remains the same as in the original baseline. Since more of the money is being spent later in time, slightly more money can be spent and remain NPV neutral. This adjustment avoids excessive SACP payments in the event of persistent shortfall.

- Also consider the case where the market is building faster than the RPS requires. This could depress SREC prices significantly and strand legacy investments. More importantly, this condition essentially penalizes the industry for exceeding its construction goals – which is not supportive of NJ CO2 reduction objectives. Encouraging the industry to "build faster" should be allowed, *as long as* it doesn't increase rate payer cost on an NPV basis. In the case where persistent oversupply emerges, the RPS goal for the next year would be changed to match projected capacity deployment. The RPS requirements for the remainder of the RPS term (through 2021) would be adjusted to account for this change, and to distribute the remaining requirements over fewer years. If there were 10 years remaining to 2021 in the original plan, that schedule would be readjusted into a compressed 9-yr version that is NPV neutral with the established baseline. Since the money is being spent slightly faster, it has to be at slightly lower levels to remain NPV neutral – but this is appropriate in the case where the industry is overbuilding. This type of structure could allow the current RPS goals to be met ahead of schedule, without economic penalty.

There are numerous details to establish to make this market balancing mechanism work, and it has to be implemented in a way that strongly tracks actual market conditions and is

not an excuse for "constant tinkering". A most critical question is how and when adjustments get triggered, since over-sensitivity could create significant market chaos. In any event, this adjustment should be coupled with the SACP schedule evaluations done every year by the ACP committee. The feasibility of this strategy is based on other overall governance recommendations being made, and the existence of a clear quantitative baseline for total program costs that (on an NPV basis) can be used as a reference.

Implementing Governance Controls: the package of integrated governance measures proposed are extremely complex, and could potentially have a profound impact on the operation of the market. They have been introduced relatively late in this proceeding, and many details require further consideration. We recommend that as part of the Sept 12 decision, a general commitment to governance controls be made, including agreement on key conceptual foundations. We recommend that those key concepts include:

1. Establish a total lifetime program expense cap, based on "a 2% increase in retail spending based on a 2% increase in generation capacity". This equates to approximately $3B in incentives on an NPV basis under current assumptions.

2. Establish a trajectory for the industry to reach grid parity in 2021, and establish a protocol to trigger a market assessment if actual project cost results deviate *significantly* over an *extended* period.

3. Create additional flexibility in the RPS structure to facilitate market balance. This avoids the significant negative consequences that could result if the market moves into persistent extreme over- or under- supply. The proposed market balancing mechanism allows the RPS to be either accelerated or decelerated in an economically neutral way (for the rate-payer, based on NPV). This market balancing mechanism integrates tightly with the total spending cap and cost monitoring measures also recommended.

With these high level commitments in place, the board should commission a working group to flesh out the details and establish – with stakeholder review – a detailed governance protocol for the program.

Attachment A: Lifetime Program Cost Calculations

Total NJ Electrical Load	86,292,922	MWHRS in EY 2009
Load Growth Escalator	0.015	
Assumed Electricity Cost	$124	$/MWHR in EY 2009
Electricity Cost Escalator	0.032	

Energy Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SREC Market Price	$700	$679	$659	$639	$620	$595	$571	$548	$526	$500	$475	$451
RPS Demand (MWHRs)	121,649	170,548	238,902	313,244	401,060	508,640	635,984	783,067	957,544	1,158,812	1,387,080	1,644,325
Capacity Installed In-Yr (kW)	61,649	48,899	68,354	74,342	87,816	107,580	127,344	147,083	174,477	201,268	228,288	257,245
ADJUSTED RPS Demand	121,649	170,548	238,902	313,244	401,060	508,640	635,984	783,067	957,544	1,158,812	1,387,080	1,644,325
Annual Costs - SREC Price	$85,154,300	$115,802,092	$157,348,024	$200,122,539	$248,538,874	$302,640,800	$363,146,864	$429,120,716	$503,668,144	$579,406,000	$658,863,000	$741,590,575
Annual MWHRs	88,901,126	90,234,642	91,588,162	92,961,985	94,356,414	95,771,761	97,208,337	98,666,462	100,146,459	101,648,656	103,173,386	104,720,986
Electricity Cost ($/MWHR)	$124	$128	$132	$136	$141	$145	$150	$155	$160	$165	$170	$175
Annual Retail Costs (Billion $)	$11.02	$11.55	$12.10	$12.67	$13.27	$13.90	$14.56	$15.25	$15.98	$16.74	$17.53	$18.36
SREC % of Retail Total	0.77%	1.00%	1.30%	1.58%	1.87%	2.15%	2.44%	2.73%	3.20%	3.50%	3.80%	4.00%

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Energy Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
SREC Market Price	$429	$407	$387	$300	$275	$250	$225	$200	$175	$150	$125	$100	$75	$50	$25
RPS Demand (MWHRs)	1,927,156	1,956,063	1,985,404	2,015,185	2,045,413	2,076,094	2,107,235	2,138,844	2,170,927	2,203,491	2,236,543	2,270,091	2,304,142	2,338,705	2,373,785
Capacity Installed In-Yr (kW)	282,831	28,907	29,341	29,781	30,228	30,681	31,141	31,609	32,083	32,564	33,052	33,548	34,051	34,563	35,080
ADJUSTED RPS Demand	1,927,156	1,956,063	1,985,404	1,893,536	1,874,865	1,837,192	1,793,991	1,737,784	1,662,287	1,567,507	1,453,476	1,312,547	1,145,330	951,625	729,460
Annual Costs - SREC Price	$826,749,924	$796,117,641	$768,351,348	$568,060,800	$515,587,875	$459,298,000	$403,647,975	$347,556,800	$290,900,225	$235,126,050	$181,684,500	$131,254,700	$85,899,750	$47,581,250	$18,236,500
Annual MWHRs	106,291,801	107,886,178	109,504,471	111,147,038	112,814,244	114,506,457	116,224,054	117,967,415	119,736,926	121,532,980	123,355,975	125,206,314	127,084,409	128,990,675	130,925,535
Electricity Cost ($/MWHR)	$181	$187	$193	$199	$205	$212	$219	$226	$233	$240	$248	$256	$264	$273	$281
Annual Costs ($Billion $)	$19.23	$20.15	$21.10	$22.11	$23.16	$24.26	$25.41	$26.61	$27.88	$29.20	$30.59	$32.04	$33.56	$35.15	$36.82
SREC % of Retail Total	4.30%	4.00%	3.60%	2.57%	2.23%	1.89%	1.59%	1.31%	1.04%	0.81%	0.59%	0.41%	0.26%	0.14%	0.05%
Total Retail Cost (gross)	$618,764														
Total Retail NPV (10%)	$156,552														

Lifetime: SREC % of Gross	1.63%
Lifetime: SREC % of NPV	2.06%

SUNPOWER COMMENTS

ON NEW JERSEY RENEWABLE ENERGY SOLAR MARKET TRANSITION

OFFICE OF CLEAN ENERGY
REVISED - FINAL STRAW PROPOSAL
OF AUGUST 13, 2007

August 20, 2007

Sunpower (formerly PowerLight) is the world's leading manufacture of high efficiency solar modules, and through its Systems division the nation's leading manufacturer and integrator of large-scale commercial solar electric systems. We work from our East Coast Headquarters located in Trenton, New Jersey. We have installed over 100 MWs of PV worldwide in the last six years. Our New Jersey customers include small and large businesses, schools, and state and federal agencies such Johnson & Johnson, Tiffany's, Middlesex Water, Department of Military Affairs, Homeland Security, New Jersey State Police, and Toms River, Bayonne and Margate Schools. We are an active aggregator of solar RECs and have bought and sold thousands of RECs in the last three years on behalf of our customers – including multi-year contracts with prices below the spot market – highlighting the importance to ratepayers of entering into long-term contracts for RECs.

As part of the ongoing discussion we've had with the OCE and BPU we understand that the August 13 updated Staff Straw is the result of many meetings and communications between the OCE and several key stakeholders and represents a compromise that takes into account the stated goals of the Clean Energy Program, the framework necessary for the solar industry to help meet the RPS requirements, and the sensitivity to the rate payers who both pay for the program and benefit from it. While not perfect, we believe it is a dramatic improvement over the original Straw Proposal and that the conclusions of the Paper, if adopted, will set the stage for the industry to get back to work to help meet the solar goals of the RPS.

We have seen around the country, and indeed around the world, that solar markets don't develop unless several key elements are in place. The program proposed in the Staff's

Final Straw Proposal of August 13, 2007 does that with each element being very important: continued rebates for the residential and small commercial sector, if a limited qualification life is a must then at least 15 years with an appropriate IRR of 12% as recommended is workable, an 8-Year SACP that will help provide some confidence to the financial community in the longevity of the program, a two-year REC life to reduce the penalty for overbuilding in any given year and smooth out end of year REC trading, and fair treatment for legacy systems. Only the uncertainty of long-term contracts is unresolved but we are glad to see the recommendation for a Phase II proceeding to address long-term securitization, and look forward to working with you on it.

Based on our own financial modeling which we are happy to share with you, the numbers for necessary SREC values in order to build projects are approximately in line with the Discussion Paper, and our estimate of the overall NPV cost to the ratepayers of $2.9 billion is close to what we've been hearing from the OCE. It is important to note, that this number sounds like a lot of money, but per ratepayer it's only about $11 a year in 2020 on a net present value basis – less than a 2% increase. And that doesn't quantify all the benefits to the ratepayers of getting 2% of their energy from solar. Furthermore, every poll we've seen around the country indicates that ratepayers overwhelmingly are willing to pay the price for renewable energy, and particularly solar energy.

To conclude, SunPower appreciates the vision and efforts of the OCE and the BPU to craft a transition to the next level of solar deployment in NJ. We all truly want NJ to be the "Solar Capital" of the country and look forward to continue our working partnership to make that happen.

Respectfully submitted,

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From: Crystal Clear Solutions [webmaster@houseofficer.com]
Sent: Thursday, August 16, 2007 3:11 PM
To: OCE
Subject: SREC proposal

As someone who has put my money at risk for a solar system, I think that if the value of the SREC is increased, it should be uniform for all sellers and buyers. Legacy systems should be able to sell SRECs for the same price as newer systems. If there is a two tiered program this will only amount to confusion.

I don't see why I should not be able to sell my SRECs at the same price as those who may not get a rebate.

From: Tom Kuster [mailto:tkuster@dtsolar.com]
Sent: Saturday, August 18, 2007 12:46 AM
To: Hunter, Benjamin
Subject: OCE Straw Comment

Scott:

I would like to propose that the entity cap for the NJ SREC-Only Pilot Program be set at twice the net-metering limit, or 4 MWac in any 12 month period. We strongly believe that any one party cannot control all SRECs, and so agree with the structure of an entity cap. We would like to allow larger electricity users to participate in more than one site, as they strive to reach their greenhouse gas reduction goals. Further, we would like to define the 12 month period to be the time between Commercial Operation Dates (that is, that a given entity may commence SREC production of another 4 MW 12 months later than the previous installation).

There seems to be precedent in that the CORE Program entity cap has been roughly twice the single site limit.

We are supportive of all other aspects of the OCE Straw, and appreciate the good work that you and the OCE team have put forth on this Program. Thank you for considering this entity cap suggestion.

Thomas P. Kuster
Chief Executive Officer
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