# In the Matter of the Petition of Public Service Electric and Gas Company <br> for Approval of a Solar Generation Investment Program and an Associated Cost Recovery Mechanism 

## BPU Docket No.

## VIA ELECTRONIC, HAND-DELIVERY \& REGULAR MAIL

Kristi Izzo, Secretary
Office of the Secretary
Board of Public Utilities
Two Gateway Center
Newark, NJ 07102
Dear Secretary Izzo:
Enclosed for filing are the original and ten (10) copies of the Petition, Testimony and Schedules, and supporting documents of Public Service Electric and Gas Company (Public Service; the Company; PSE\&G) in the above-captioned matter.

Public Service respectfully requests that the Board retain jurisdiction of this matter and not transfer the filing to the Office of Administrative Law. PSE\&G believes evidentiary hearings are not necessary for the Board to approve this Program. The Company will work diligently with all parties in the proceeding in as timely and equitable a manner as is possible.

Electronic copies of certain schedules and work papers are being provided on a CD enclosed herewith, because the files are too large to send via e-mail.

Respectfully submitted,

Gregory Eisenstark, Esq.
c: Attached Service list

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# IN THE MATTER OF THE PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY <br> FOR APPROVAL OF A SOLAR GENERATION INVESTMENT PROGRAM AND AN ASSOCIATED COST RECOVERY MECHANISM 

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DATE: February 10, 2009
Newark, New Jersey

# STATE OF NEW JERSEY BOARD OF PUBLIC UTILITIES 

IN THE MATTER OF THE PETITION OF ) PUBLIC SERVICE ELECTRIC AND GAS ) COMPANY FOR APPROVAL OF A ) SOLAR GENERATION INVESTMENT PROGRAM AND AN ASSOCIATED COST RECOVERY MECHANISM

## PETITION

 )BPU Docket No. $\qquad$ )

Public Service Electric and Gas Company (Public Service, PSE\&G, the Company), a corporation of the State of New Jersey, having its principal offices at 80 Park Plaza, Newark, New Jersey, respectfully petitions the New Jersey Board of Public Utilities (Board or BPU) pursuant to pursuant to N.J.S.A. 48:3:98.1, et seq., as follows:

## EXECUTIVE SUMMARY OF PROPOSED PROGRAM

1. PSE\&G is proposing a utility-owned solar photovoltaic generation program, called the PSE\&G Solar 4 All Program ("Program"), with four distinct segments. Under the Program, PSE\&G will invest approximately $\$ 773$ million in solar photovoltaic generation systems ("Solar Systems"). PSE\&G will finance, own, and operate the Solar Systems. The Solar Systems will be installed in a variety of locations throughout PSE\&G’s electric service territory. The Solar Systems will be grid-connected to PSE\&G's distribution system. In total, PSE\&G will install approximately 120 MW d.c. ${ }^{1}$

[^0]of Solar Systems under the Program. The four Program segments are discussed in more detail in the ensuing sections of this Petition and in the direct testimony of Alfredo Z . Matos, which is attached to the Petition as Attachment A
2. PSE\&G proposes to recover all Program costs through the Regional Greenhouse Gas Initiative ("RGGI") Recovery Charge, or "RRC." PSE\&G proposes to earn a return on its net investment in the Program based on a Weighted Average Cost of Capital ("WACC") of $8.2582 \%$ annually. Including tax effects, the weighted pre-tax cost is $11.97 \%$, as discussed in the pre-filed testimony and schedules of Mark G. Kahrer, which is included with this Petition as Attachment C. A complete discussion of the cost recovery mechanism is provided in the ensuing sections of this Petition and in the prefiled testimony and schedules of Stephen Swetz, which is attached to the Petition as Attachment B.

## BACKGROUND AND RGGI FILING REQUIRMENTS

3. Petitioner is a public utility engaged in the distribution of electricity and the provision of electric Basic Generation Service (BGS), and distribution of gas and the provision of Basic Gas Supply Service (BGSS), for residential, commercial and industrial purposes within the State of New Jersey. PSE\&G provides service to approximately 2.1 million electric and 1.7 million gas customers in an area having a population in excess of 5.5 million persons and which extends from the Hudson River opposite New York City, southwest to the Delaware River at Trenton and south to Camden, New Jersey.
4. Petitioner is subject to regulation by the BPU for the purposes of setting its retail distribution rates and to assure safe, adequate and reliable electric distribution and natural gas distribution service pursuant to N.J.S.A. 48:2-21 et seq.
5. On January 13, 2008, legislation was signed into law ${ }^{2}$ by Governor Corzine which set forth the New Jersey Legislature’s findings that increased use of renewable energy resources must be an essential element of the State's energy future and that greater reliance on renewable energy resources will provide significant benefits to the citizens of New Jersey. The Legislature also found and declared that public utility involvement and competition in the renewable energy industry are essential to maximize efficiencies. The above-referenced legislation is herein referred to as the "Regional Greenhouse Gas Initiative" or "RGGI legislation."
6. Pursuant to Section 13 of the RGGI legislation, an electric or gas public utility may, among other things, provide and invest in energy efficiency and renewable energy programs in its service territory on a regulated basis. ${ }^{3}$ See N.J.S.A. 48:398.1(a)(1). The RGGI legislation also states that electric and gas public utility investment in energy efficiency and renewable energy programs may be eligible for rate treatment approved by the Board, including a return on equity, or other incentives or rate mechanisms that decouple utility revenue from sales of electricity and gas. See N.J.S.A. 48:3-98.1(b). Ratemaking treatment may include placing appropriate technology and

[^1]program cost investments in the utility's rate base, or recovering the utility's technology and program costs through another ratemaking methodology approved by the Board. Id.
7. An electric or gas public utility seeking cost recovery for any renewable energy program pursuant to N.J.S.A. 48:3-98.1 must file a petition with the Board. See N.J.S.A. 48:3-98.1(b). In determining the recovery of such program costs, the Board "...may take into account the potential for job creation from such programs, the effect on competition for such programs, existing market barriers, environmental benefits, and the availability of such programs in the marketplace." Id. The RGGI legislation also provides that unless the Board issues a written order within 180 days after the filing of the petition approving, modifying or denying the requested recovery, the recovery requested by the utility shall be granted effective on the $181^{\text {st }}$ day after the filing without further order by the Board. Id.
8. Within 120 days after enactment of the RGGI legislation, the Board was required to issue an order that allows electric and/or gas public utilities to offer energy efficiency and conservation, and renewable energy programs in their respective service territories on a regulated basis. On May 12, 2008, the Board issued such an Order pursuant to N.J.S.A. 48:3-98.1(c). See BPU Order Pursuant to N.J.S.A. 48:3-98.1 (c) (120-Day RGGI Order), BPU Docket No. EO08030164.

[^2]9. As set forth in the 120-Day RGGI Order, the Board will allow electric public utilities and gas public utilities to offer energy efficiency and conservation and renewable energy programs on a regulated basis provided that the utility files a petition and obtains Board approval for such programs and the mechanism for program cost recovery. See 120-Day RGGI Order at p. 6. The Board also established that certain information be filed with the Petition. This requested information is set forth in the minimum filing requirements attached to the 120-Day RGGI Order as Appendix A (RGGI Minimum Filing Requirements).
10. The RGGI Minimum Filing Requirements set forth specific information that a utility must submit along with its petition. The RGGI Minimum Filing Requirements distinguish between a full or large scale program and a small scale program. For small scale programs and pilot programs, the RGGI Minimum Filing Requirements are reduced, given the limited nature of such programs, to allow for a more accelerated review and approval process. See 120-Day RGGI Order at p. 4. A small scale program is defined as one that would result in either a rate increase of less than one half of one percent to the average residential customer or an additional annual total revenue requirement of less than $\$ 5$ million. Id. Small scale programs are exempted from Section V of the RGGI Minimum Filing Requirement that an up-front cost/benefit analysis be submitted. Id.
11. The 120-Day RGGI Order also requires a utility, contemplating filing a petition for energy efficiency and/or conservation or renewable energy programs and related cost recovery mechanism, to meet with BPU Staff and the New Jersey Division of Rate Counsel (Rate Counsel) at least 30-days prior to filing its petition to discuss the nature of the program and program cost recovery mechanism to be proposed in the petition, as well as, the RGGI Minimum Filing Requirements to be submitted along with the petition. (30 Day RGGI Pre-Filing Meeting). See 120-Day RGGI Order at p. 6. Should a utility seek to file for Board approval of a small scale program, the utility shall so notify BPU Staff and Rate Counsel at the pre-filing meeting. Id. at p. 4. If the utility believes that it is unable to comply with a particular RGGI Minimum Filing Requirement, a detailed explanation for such noncompliance should be discussed at the 30-Day Pre-Filing Meeting. Id. The RGGI Minimum Filing Requirements may be modified by Board Staff as determined on a case-by-case basis if public policy considerations deem specific requirements unnecessary or onerous for a particular program or class of programs. Id.
12. Attached hereto, and incorporated herein by reference, is Appendix A, which identifies where in the instant filing all of the applicable RGGI Minimum Filing Requirements are set forth.
13. PSE\&G convened a 30-Day Pre-Filing Meeting with Board Staff and Rate Counsel on November 24, 2008 at the Company’s offices in Newark, New Jersey.
14. Once a petition has been filed with the Board, Board Staff shall have 30 days, commencing on the date the petition was filed, to determine whether the petition is administratively complete and advise the utility in writing that the petition is administratively complete or that the petition is not administratively complete and set forth the deficiencies and the items required to remedy the deficiencies. Id. at p. 6.
15. PSE\&G has committed significant effort and resources to comply with the Board's minimum filing requirements and requests that the Board Staff find this filing to be administratively complete as expeditiously as possible.

## PSE\&G SOLAR 4 ALL PROGRAM <br> SUMMARY SEGMENT DESCRIPTIONS

## PROGRAM SEGMENTS

16. PSE\&G proposes the following four segments. The size of each segment is described in terms of approximate megawatts below. PSE\&G reserves the right to adjust the segment capacities if necessary, while remaining within the 120 MW total Program size.

## 1. Centralized Solar ( $\mathbf{3 5}$ MW)

Total Investment: Approximately $\$ 221$ million

- PSE\&G will invest in, own, and operate Solar Systems on utility-owned property (approximately 25 MW ) and on brownfields/grayfields and/or sites owned by nonprofit entities, including Urban Enterprise Zones ("UEZs")(approximately 10

MW). The capacity allocations between the utility-owned and third party-owned components of this segment are flexible.

- PSE\&G will select appropriate Company-owned sites.
- Solar developers will propose projects and locations to PSE\&G for the third partyowned sites in accord with PSE\&G's program specifications, including, but not limited to, appropriate interconnection switchgear, metering, and communications to a central monitoring system. If, within the first six months after approval of this Petition, solar developers have not proposed at least 3 MW of qualifying projects for the third-party portion of this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. In each of the second and third annual periods of the Program, if, within six months of the start of each respective annual period, solar developers have not proposed at least three additional MW of qualifying projects for the third-party portion of this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. Finally, in the fourth annual period of the Program, if, within six months of the start of that annual period, solar developers have not proposed at least one additional MW of qualifying projects for the third-party portion of this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. PSE\&G is assuming that the sites will average 2MW per third party-owned site, for a total of 10 MW for this component of Segment 1, although the actual number of sites and
sizes may vary. PSE\&G will pay rents to the host sites in the brownfield, grayfield, and not-for-profit portion of this segment.
- The Solar Systems will either be ground- or roof-mounted.
- The Solar Systems will interconnect with the PSE\&G distribution system.
- PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource.
- PSE\&G will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.
- Subject to a Solar Renewable Energy Certificate ("SREC") "trigger" mechanism described below, PSE\&G will sell any SRECs it receives from the Solar Systems in the SREC Auction that the Board has already approved for the PSE\&G Solar Loan Program. The net revenues PSE\&G receives from selling the SRECs will partially offset Program revenue requirements.
- PSE\&G will use a competitive solicitation to hire third party firms, knowledgeable in solar development, to provide engineering design services, equipment and other materials and services required to execute the projects on Company-owned sites.
- PSE\&G will use its own work force, or hire contractors, to perform the installation on utility-owned property. PSE\&G will contract with third-party solar developers to develop and install the Solar Systems on third party-owned sites. All contracted installation work will be subject to the provisions of the New Jersey Prevailing wage laws, or the equivalent of the prevailing wage for the county where the work is performed.
- PSE\&G will use its own workforce for any necessary interconnection work


## 2. Neighborhood Solar (40 MW)

## Total Investment: Approximately $\$ 264$ million

- PSE\&G will invest in, own, and operate small, pole-mounted Solar Systems in its electric service territory.
- Each pole-mounted unit will be designed to generate approximately 200 watts d.c. PSE\&G expects to install up to 200,000 units.
- PSE\&G will install Solar Systems on distribution metal or wood poles solelyowned by PSE\&G. PSE\&G will also utilize jointly-owned poles, assuming appropriate agreements can be reached with the joint owner. The units will be interconnected with PSE\&G's distribution system at secondary voltage.
- Each unit may not be individually metered. The hourly output of the Solar Systems in this segment will be determined through the use of a calculated load profile, which will be created by metering a sample of these systems with interval meters. However, PSE\&G will explore the feasibility of providing communication with each individual Solar System attached to the utility poles to measure and report the system output.
- PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource.
- PSE\&G will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.
- If PSE\&G is unable to qualify these Solar Systems to sell the output in the PJM energy and/or capacity markets (or if the costs of doing so outweighs the benefits),

PSE\&G will instead apply the following methodology. In the PSE\&G settlement process this solar output will be applied as a reduction to the load to be served by the BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average locational marginal price ("LMP") in the PSE\&G zone, and that value will be debited to the BGS-FP Reconciliation Charge and credited to the RGGI Recovery Charge to offset revenue requirements.

- Subject to an SREC "trigger" mechanism described below, PSE\&G will sell any SRECs it receives from the Solar Systems in the SREC Auction that the Board has already approved for the PSE\&G Solar Loan Program. The net revenues PSE\&G receives from selling the SRECs will partially offset Program revenue requirements.
- PSE\&G will use its own skilled workforce, or contractors, to perform the installation work and to connect the pole-mounted units to its distribution system.
- PSE\&G will use a competitive solicitation to procure the pole-mounted solar units.


## 3. Local Government Solar ( $\mathbf{4 3}$ MW)

## Total Investment: Approximately \$273 million

- PSE\&G will invest in, own, and operate Solar Systems on properties owned by units of local government (municipalities and counties), including public schools.
- Solar developers will propose projects and locations to PSE\&G for local government-owned sites in accord with PSE\&G's program specifications, including, but not limited to, appropriate interconnection switchgear, metering, and communications to a central monitoring system. If, within the first six months after approval of this Petition, solar developers have not proposed at least 3 MW of qualifying projects for this segment, PSE\&G may hire 2 to 4 solar developers
selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. In each of the second through fifth annual periods of the Program, if, within six months of the start of each respective annual period, solar developers have not proposed at least four additional MW of qualifying projects for this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. Finally, in the sixth annual period of the Program, if, within six months of the start of that annual period, solar developers have not proposed at least two additional MW of qualifying projects for this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. The Solar Systems will be connected to PSE\&G's distribution system on the utility side of the meter.
- The Solar Systems will be metered to determine the aggregate kWh output and the SREC values. Hourly or real-time output values will be established for the systems through either installed meters or through the use of load profiles (based on interval meters installed on a sample of the Solar Systems). The customers at the solar locations will continue to have all of their electric usage billed at their current rates. The Solar System output will be fed back into the grid on the utility side of the meter. In consideration for use of the facility, the local government entity will receive a monthly electric bill credit for the electricity the Solar System generates equal to $100 \%$ of the energy value of the solar output priced at the hourly zonal load weighted LMP in the PSE\&G zone. The $100 \%$ factor is
appropriate for this segment because it supports reduced energy costs for units of local government.
- PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource.
- PSE\&G will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.
- If PSE\&G is unable to qualify these Solar Systems to sell the output in the PJM energy and/or capacity markets (or if the costs of doing so outweighs the benefits), PSE\&G will instead apply the following methodology. In the PSE\&G settlement process this solar output will be applied as a reduction to the load to be served by the BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average LMP and that value will be debited to the BGS-FP Reconciliation Charge and credited to the RGGI Recovery Charge to offset revenue requirements.
- Subject to an SREC "trigger" mechanism described below, PSE\&G will receive the SRECs from the Solar Systems and will sell the SRECs in the SREC Auction that the Board has already approved for the PSE\&G Solar Loan Program. The net revenues PSE\&G receives from selling the SRECs will partially offset Program revenue requirements.
- PSE\&G will contract with third-party solar developers to develop and install the Solar Systems on the local government-owned sites. All contracted work will be subject to the provisions of the New Jersey Prevailing wage laws, or the equivalent of the prevailing wage for the county where the work is performed.
- PSE\&G will use its own work force to perform the interconnection work.
- This segment will include a demonstration project in which the Company will provide small Solar Systems attached to existing street lighting poles and small public buildings in Branch Brook Park, Newark.
- As part of the installations of Solar Systems in school districts, PSE\&G will provide solar educational materials for use by students housed by the building where the Solar System has been installed. In addition, a monitor with the Solar System's energy output will be installed in each local government building where a Solar System is installed, to allow the public traffic passing through the building to view actual solar output.


## 4. New Jersey Housing \& Mortgage Finance Agency (HMFA)/ Affordable Housing Solar (2 MW)

## Total Investment: Approximately $\$ 15$ million

- PSE\&G will collaborate with the New Jersey Housing \& Mortgage Finance Agency (HFMA) in this segment.
- PSE\&G will install Solar Systems on the common areas of HMFA-financed affordable housing communities.
- The Solar Systems will be metered to determine the aggregate kWh output and the SREC values. Hourly or real-time output values will be established for the systems through either installed meters or through the use of load profiles (based on interval meters installed on a sample of the Solar Systems). The customers at the solar locations will continue to have all of their electric usage billed at their current rates. The Solar System output will be fed back into the grid on the utility side of the meter. In consideration for use of the facility, the HFMA facility will receive a monthly electric bill credit for the electricity the Solar System generates equal to $100 \%$ of the energy value of the solar output priced at the hourly zonal
load weighted LMP in the PSE\&G zone. The $100 \%$ factor is appropriate for this segment because it supports reduced energy costs for low-income housing developments. PSE\&G's agreement with the HMFA facility will require that the monthly electric bill credit be flowed back to the facility's tenants. The mechanism for this flow-back will be negotiated with the owner of the HMFA facility.
- The HMFA's participation in this Segment is subject to it receiving appropriate authorization to do so, including the approval of its Board. Should the HMFA not participate directly in the Program, PSE\&G will seek to install Solar Systems in the common areas of other affordable housing communities in its electric service territory, under the terms for this segment set forth in this Petition and in Mr. Matos' testimony.
- The Solar Systems will be grid-connected to PSE\&G's distribution system on the utility side of the meter.
- PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource.
- PSE\&G will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.
- If PSE\&G is unable to qualify these Solar Systems to sell the output in the PJM energy and capacity markets (or if the costs of doing so outweighs the benefits), PSE\&G will instead apply the following methodology. In the PSE\&G settlement process this solar output will be applied as a reduction to the load to be served by the BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average LMP and that value will be debited to the BGS-FP


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Reconciliation Charge and credited to the RGGI Recovery Charge to offset revenue requirements.

- Subject to an SREC "trigger" mechanism described below, PSE\&G will receive the SRECs from the Solar Systems and will sell the SRECs in the SREC Auction that the Board has already approved for the PSE\&G Solar Loan Program. The net revenues PSE\&G receives from selling the SRECs will partially offset Program revenue requirements.
- PSE\&G will contract for the Solar System installation work at prevailing wage.
- PSE\&G will use its own workforce to perform interconnection work.
- PSE\&G will use a competitive solicitation to procure the Solar System equipment.


## SREC TRIGGER MECHANISM

17. To provide a level of protection to ensure that PSE\&G-owned solar generation does not create an excess of SRECs above the Renewable Portfolio Standards ("RPS") requirements, PSE\&G proposes that the Board approve a mechanism that may limit the number of SRECs sold under the Program, depending on the state of the SREC market during each year of the Program. Such a "trigger" mechanism will help insure that competition among solar developers continues after the PSE\&G-owned Solar Systems are in place.
18. While there may be several possible mechanisms for such an "SREC trigger," PSE\&G proposes the following approach:

Prior to each periodic auction of Program SRECs, the BPU's Office of Clean Energy ("OCE") will determine whether New Jersey has sufficient solar generation
registered to satisfy the then-applicable RPS requirements. The OCE would notify PSE\&G of its determination. PSE\&G will then offer at auction only the amount of Program SRECs necessary to ensure that the State meets the solar RPS requirements for that energy year. Any Program SRECs in excess of the amount required under this mechanism would not be sold in that auction and would expire at the end of their life. Under this approach, the Board should consider retaining a consultant to assist it in the periodic determinations of installed solar capacity in New Jersey. The cost of such a consultant has been included as a Program administrative cost.
19. PSE\&G is willing to work cooperatively with the OCE and members of the solar industry to establish a mechanism to ensure that the New Jersey solar market remains competitive, while at the same time striving for lower-cost alternatives. However, it bears emphasis that to the extent SRECs are not sold because of an SREC trigger mechanism, there will be less revenues to offset the Program revenue requirements.

## COMPARISION WITH OTHER PROGRAMS AND STATE POLICIES

20. The Program is not similar to any current programs administered by the Office of Clean Energy. The Program, like PSE\&G's solar loan program, seeks to provide incentives to utility customers who are interested in installing Solar Systems. However, whereas the solar loan program focuses on third-party owned systems, this Program will provide utility-owned, grid-connected Solar Systems. Accordingly, the

Program will complement PSE\&G’s solar loan program. In addition, because PSE\&G will sell the SRECs it receives under the Program, it will also complement the Board's efforts in establishing a viable SREC market.
21. The Program directly supports the State's renewable energy initiatives, as outlined in the recently-released Energy Master Plan (EMP). The Program, when fully deployed, will result in 120 MW of additional solar generating capacity in New Jersey. This additional solar capacity is expected to satisfy $6.7 \%$ of the State's RPS requirements through 2020. The Program also supports the carbon-reduction goals of the Global Warming Response Act ("GWRA"), N.J.S.A. 26:2C-37 et seq. and the Department of Environmental Protection's draft GWRA recommendation report. PSE\&G estimates that the 120 MW of solar capacity will eliminate $1,702,321$ tons of $\mathrm{CO}_{2}$ emissions. ${ }^{4}$
22. This Program will support the State's current model for fostering a solar energy industry in New Jersey. The State's model has been built around developing a market for SRECs, which are intended to make above-market solar energy projects competitive in New Jersey's energy market. Under the proposed Program, PSE\&G will be a large investor in solar energy projects that are developed using the SREC model. PSE\&G will put its "patient capital" to work to spur continued growth in New Jersey’s solar energy industry. Mr. Matos’ testimony discusses, in greater detail, the ways in

[^3]
## - 19 -

which the Program will compliment the State's renewable energy policies. See Attachment A.
23. The Program will also have a positive impact on the solar industry in New Jersey. The Program will be encourages growth for the solar industry, by providing capital to build solar capacity in difficult economic times and creating new, "green" jobs. It will also train a pool of skilled workers who will be available for the entire solar industry. The Program is consistent with the State's policies to ultimately transition to a market-based solar industry, by creating competition within the industry to produce lower total cost of installations and maximum solar energy output at a faster pace, to help achieve the RPS requirements.

## DISPUTE RESOLUTION PROCESS

24. Public Service proposes that any disputes related to the Program be resolved through the Board’s established customer complaint process. PSE\&G addresses the dispute resolution process in the testimony of Mr. Matos.

## COST RECOVERY PROPOSAL

25. PSE\&G is requesting that the Board grant approval of recovery of all Program costs. PSE\&G proposes to recover all Program costs via a separate component of the electric RGGI Recovery Charge (RRC) mechanism approved by the Board for the

Company's Carbon Abatement Program. The RRC would be reviewed and modified in an annual filing that PSE\&G would make with the Board. In addition, PSE\&G will consider rolling the net, unrecovered Program investment balance into base rates at the time its electric base rates are next reset. PSE\&G's proposed cost recovery mechanism for the Program, including the estimated rate impacts on customers and proposed initial rates, is fully-described in the pre-filed testimony and schedules of Mr. Swetz. (Attachment B)
26. Pursuant to N.J.S.A. 48:3-98.1(b), PSE\&G requests that it earn a return on its net investment in the Program based on a Weighted Average Cost of Capital ("WACC") of $8.2582 \%$ annually. Mark G. Kahrer testifies to the proper return on the Company's investment in his pre-filed testimony (Attachment C). The derivation of the WACC is shown in Schedule MGK-3 to Mr. Kahrer's testimony. For calculating Revenue Requirements, the corresponding Pre-Tax WACC of $11.9700 \%$ per year or 0.9975\% per month is used (see Schedule MGK-3).
27. The Company also requests that the carrying charge on its deferred balances for this Program be set at the monthly WACC, as described in Mr. Kahrer’s testimony. Any over/under recovery of the actual revenue requirements compared to revenues would be deferred. The monthly WACC would be applicable as the carrying charge rate on any over/under recovered balance on a monthly basis. Mr. Swetz addresses the calculation of carrying charges in his testimony.
28. If any Federal Economic Stimulus Funds that are applicable to this Program
become available and are received by the Company, such amounts will, at that time, be credited against amounts expended. Revenue requirements will be recalculated at that date and deferred accounting will continue to be followed. If the Program investments have been rolled into base rates, any Federal Economic Stimulus Funds received will be utilized for future qualifying investments.
29. Satisfying a cost/benefit analysis is not required under the Minimum Filing Requirements because the Program is a renewable energy program. Nonetheless, PSE\&G will conduct such an analysis and file it with the Board. A cost/benefit analysis of the Program will be provided as an update to Mr. Swetz's testimony and schedules, which PSE\&G anticipates filing shortly.
30. Mr. Daniel M. Furlong testifies to the accounting treatment the Company will use for the Program. He also supports certain financial statements that are required under the Board's Minimum Filing Requirements. Mr. Furlong's prefiled testimony is attached hereto as Attachment D.
31. Contained herein as Attachment E is a draft Form of Notice of Filing and of Public Hearings. This Form of Notice sets forth the requested changes to the electric rates and will be placed in newspapers having a circulation within the Company's electric service territory upon receipt, scheduling and publication of public hearing dates. One public hearing will be held in each geographic area within the Company’s service territory, i.e. Northern, Central, and Southern. Concurrent with this filing with the BPU,
a Notice of this filing will be served on the County Executives and Clerks of all Municipalities within the Company's electric service territory. A subsequent Notice will be served on the County Executives and Clerks of all Municipalities within the Company's electric service territory upon receipt, scheduling and publication of public hearing dates. (See Attachment F). In addition, PSE\&G provides a residential rate impact summary, provided herewith as Attachment G. Proposed tariff sheets (clean and redlined) are provided herewith at Attachment H. Two copies of the Petition and supporting attachments will be served upon the Department of Law and Public Safety, 124 Halsey Street, P.O. Box 45029, Newark, New Jersey 07102 and upon the Director, Division of Rate Counsel, 31 Clinton Street, Newark, New Jersey 07101. A copy will also be sent to the persons identified on the service list provided with this filing.
32. Public Service requests that the proposed rates to recover all of the Program costs be approved by the Board, along with the Program and cost recovery mechanism proposed in this filing, within the timeframe established under N.J.S.A. 48:3-98.1 et seq. Public Service also requests that the Board authorize the Company to implement the proposed rates contemporaneously with the Board's approval of this Petition. Once the proposed RRC rates are in effect, the RRC will operate much like the Company's other rate clauses, subject to deferred accounting and periodic true-up through filings with the Board.

## REQUEST FOR REVIEW AND APPROVAL

33. Public Service requests review and approval of this Petition pursuant to the time frame set forth in N.J.S.A. 48:3-98.1 et seq.
34. Public Service respectfully requests that the BPU retain jurisdiction of this matter and not transfer the filing to the Office of Administrative Law. PSE\&G believes evidentiary hearings are not required for the Board to approve this Program and the proposed cost recovery mechanism. Public Service is confident that these and any issues other parties raise can be resolved through settlement or through written comments filed with the Board prior to its decision.

## COMMUNICATIONS

Communications and correspondence related to the Petition should be sent as
follows:

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## CONCLUSION

For all the foregoing reasons, PSE\&G respectfully requests that the Board retain jurisdiction of this matter and issue an Order approving this Petition, specifically finding that:

1. The Program is in the public interest and that PSE\&G is authorized to implement and administer the Program as a regulated utility service under the terms set forth in this Petition and accompanying Attachments;
2. The cost recovery mechanism proposed herein is just and reasonable, and PSE\&G is authorized to recover all costs requested herein associated with the Program, which will be recovered through a separate component of the electric RGGI Recovery Charge, which will be filed annually;
3. The proposed rates and charges, as set forth herein, are just and reasonable and PSE\&G is authorized to implement the rates proposed herein.

Respectfully submitted,
PUBLIC SERVICE ELECTRIC AND GAS COMPANY

By:


DATED: February 10, 2009
Newark, New Jersey

## STATE OF NEW JERSEY ) COUNTY OF ESSEX )

ALFREDO Z. MATOS, of full age, being duly sworn according to law, on her oath deposes and says:

1. I am Vice President - Renewables and Energy Solutions of Public Service Electric and Gas Company, the Petitioner in the foregoing Petition.
2. I have read the annexed Petition, and the matters and things contained therein are true to the best of my knowledge and belief.


# PUBLIC SERVICE ELECTRIC AND GAS COMPANY 

# DIRECT TESTIMONY <br> OF 

## ALFREDO Z. MATOS <br> VICE PRESIDENT - RENEWABLES AND ENERGY SOLUTIONS

My name is Alfredo Z. Matos and I am the Vice President of Renewables and Energy Solutions at Public Service Electric and Gas Company (PSE\&G, the Company), New Jersey's largest electric and gas utility. My credentials are set forth in the attached Schedule AZM-1.

## SCOPE OF TESTIMONY

I am testifying in support of PSE\&G's proposed Solar 4 All Program ("Program"). The Program is comprised of four segments. I will provide an overview of the Program and its goals, and explain how this Program will support the State's renewable energy and environmental goals. I provide a description of each of the segments. I will also testify in support of PSE\&G's proposal regarding resolution of customer complaints or disputes that may arise regarding the Program. Mr. Stephen Swetz is filing testimony addressing revenue requirements and cost recovery issues. Mr. Daniel M. Furlong testifies in support of the accounting treatment for the Program costs and revenues. Mr. Mark G. Kahrer testifies in support of PSE\&G's proposed return on its investment in the Program.

The electronic version of this filing contains the Program assumptions, including investments, costs, participation, provisions for billing for electric service, and market sizing and impacts, in the electronic work paper labeled WP_AZM 1.xls.

## OVERVIEW OF THE PSE\&G SOLAR 4 ALL PROGRAM

Through this Program, PSE\&G seeks to invest approximately \$773,000,000 to develop 120 MW d.c. ${ }^{1}$ of solar photovoltaic (PV) systems, ("Solar Systems") and thus expand New Jersey's solar infrastructure resources over an approximate five-year horizon, creating hundreds of annual green jobs. The total installed cost is forecast to be $\$ 6.44$ per watt of installed solar capacity, which includes an appropriate rate for installation labor using prevailing wages. This forecasted installed cost compares favorably with the average installed cost of $\$ 8.25$ per watt for non-residential solar systems installed under the Board's rebate program. PSE\&G will invest in, own and operate the Solar Systems and engage various market participants, including solar developers, installers, manufacturers, and other firms, for engineering services, equipment, permitting and construction services, where appropriate. During the preparation of the Petition, PSE\&G issued a Request for Proposals (RFP) to approximately twenty-three solar firms for the

[^4]purpose of obtaining market pricing and proposals to establish cost projections in this petition. The RFP also provides PSE\&G a competitive process to select multiple firms to implement and develop the various solar projects on PSE\&Gowned real estate, using a market based approach.

For Solar Systems developed on non-PSE\&G owned real estate, PSE\&G will invest in, own and operate Solar Systems installed on these host sites, with solar developers making proposals to PSE\&G with the concurrence of the host site owners. Upon PSE\&G acceptance of the proposed project, the developer will be engaged by PSE\&G to fully develop the project and broker the deal with the host site owner to meet all of PSE\&G's requirements for owning and operating the systems. It is expected that these projects will provide market competition amongst solar developers to ensure the best projects are proposed to PSE\&G providing maximum benefit to utility customers.

By selecting solar developers through the RFP process for PSE\&G owned properties and accepting projects on non-PSE\&G sites from competing developers, PSE\&G will not be developing solar projects on its own, but is seeking to collaborate with experienced solar developers, engineers, and construction firms to develop projects, with PSE\&G financing all projects, identifying potential Company-owned sites, and in some cases using its own installation labor for projects on PSE\&G-owned real-estate. PSE\&G will utilize the selected solar developers to fully-develop these projects, including project assessment, land prep, engineering, layout, procurement of equipment, site
permitting and construction. The Solar Systems will be installed in various locations throughout PSE\&G's electric service territory, and shall be gridconnected on the utility side of the billing meter to PSE\&G's electric distribution system, and will be eligible to receive Solar Renewable Energy Certificates ("SRECs").

## THE PROGRAM WILL SUPPORT THE STATE'S RENEWABLE ENERGY AND ENVIRONMENTAL GOALS

This Program will compliment and support the State's current model for fostering a solar energy industry in New Jersey. The State's model has been built around developing a market for SRECs, which are intended to make above-market solar energy projects competitive in New Jersey's energy market. Under the proposed Program, PSE\&G will be a large investor in solar energy projects that are developed relying on the SREC model. PSE\&G will put its "patient capital" to work to spur continued growth in New Jersey's solar energy industry.

The Program will have a significant positive impact on the solar industry in New Jersey. The Program will be an enabling initiative that encourages growth for the solar industry, by providing PSE\&G's significant expertise in the energy industry together with financing and capital to build solar capacity in difficult economic times and creating new, "green" jobs. The Program will increase New Jersey jobs in the solar industry. It will also train a pool of skilled workers who will then be available for the entire solar industry. In addition to creating jobs, the

Program will encourage solar developers to seek system productivity efficiencies in energy output. For these reasons, the Program is consistent with the State's policies to ultimately transition towards a market-based solar industry, by creating competition within the industry to produce lower total cost of installations and maximum solar energy output at a faster pace, to help achieve the Renewable Portfolio Standards’ ("RPS") requirements.

Further, the Program will assist the Board's transition from a rebate-based program to a market-driven, SREC-based one. In its Order in In the Matter of the Renewable Energy Portfolio Standards-Alternative Compliance Payments and Solar Alternative Compliance Payments, Docket No. EO06100744 (December 6, 2007), the Board approved a plan for transitioning the solar renewable energy market from rebates to market-based incentives, while maintaining rebates for smaller solar systems for Reporting Year 2008, with the continuation of rebates for Reporting Years 2009-2012 to be addressed in the ongoing Comprehensive Resource Analysis proceeding (Docket No. EO07030203). To facilitate the change in emphasis from rebates to SRECs, the Board ordered an increase in the Solar Alternative Compliance Payment ("SACP") in reporting year 2009 and a multi-year schedule for SACPs extending out eight years. ${ }^{2}$ However, the Board also found that a capping mechanism on the cost of SRECs should be triggered if estimated solar incentive costs exceed $2 \%$ of estimated retail electricity costs.

[^5]Such a freeze on solar incentives would remain in effect until the aggregate costs drop below the $2 \%$ threshold.

The State of New Jersey and its solar industry will benefit from having PSE\&G make these investments in solar generation. First and foremost, the Program will help New Jersey address the current and future shortfall in meeting the solar RPS requirements. The current shortfall is estimated at 15 MW . PSE\&G's proposal to invest in solar infrastructure resources will help the State catch up to current solar RPS targets, and additional investment by other industry members will continue to help close the gap on a going-forward basis. When this Program is approved and completed, it will comprise less than $7 \%$ of the entire market of solar resources needed to meet the RPS requirements and Energy Master Plan targets by 2020.

The current tightening of the capital markets and the state of the economy has had and will continue to have an impact on the number of projects that get developed. The availability of capital to finance Solar Systems is paramount to building these systems, and we are seeing not only a lack of capital flowing, but also a higher cost of capital in the economy. Utility investment in solar systems, such as in this proposed PSE\&G Program, is therefore essential if the State is to meet the solar RPS requirements and support the development of the industry and create jobs in an ailing economy. Without such utility investment, ratepayers will likely be forced to fund SACPs, without getting all of the environmental and economic benefits of developing solar generation projects.

Second, a major investment in solar energy, such as the one proposed in this Program, will help drive down production costs and spur the market toward price competitiveness. While the economics of solar generation are improving, the cost of solar energy remains well above market. We need bold solar investments to meet the RPS goals and support a sustainable solar industry.

Third, this Program allows the State to help guide solar investment toward sectors in which there are additional societal benefits from such investment. This includes the benefits of converting brownfields and grayfields to productive sites for renewable generation; the benefits of bringing solar into school buildings and low-income housing; and the benefits of putting solar on local government buildings, which, as I explain in greater detail below, will lead to lower utility bills and reduced burdens on the local taxpayer.

The federal government is doing its part to encourage utilities to invest in solar. With the enactment of federal legislation in October 2008 to allow utilities to claim the investment tax credit ("ITC") for solar generation projects, the federal government has encouraged utility participation in solar PV markets. This is an important federal benefit that New Jersey customers will be able to realize through PSE\&G's investment in solar infrastructure. In this Program, PSE\&G proposes to provide its capital to invest in a number of solar projects that will create hundreds of annual jobs in New Jersey, at a time when jobs are needed in the State. PSE\&G's proposal includes a full return on its invested capital, which is necessary to fully compensate the investors willing to invest in PSE\&G for its investment in
the Program. PSE\&G will seek to incentivize New Jersey-based solar manufacturing and fabrication firms, by placing a priority on these firms during the RFP process, which is already underway. Developing these firms in New Jersey helps create additional jobs in our home state, which helps the overall economy and help cement New Jersey as a leader in solar resources in the nation.

The Program will also create environmental benefits to New Jersey by providing carbon-free solar generation to all utility customers and a demand reduction element, since peak solar energy output will be produced near the time of peak demand. In addition, this proposal creates customer value on several fronts by returning benefits and value from:

1) the federal investment tax credit;
2) net revenues received by selling energy and capacity in the PJM markets; and
3) monetizing the value of SRECs received through their sale in the auction that PSE\&G is using for the PSE\&G Solar Loan Program.

The Program is not similar to any current programs administered by the Board's Office of Clean Energy. Importantly, the proposed Program will complement other utility-based solar initiatives, such as PSE\&G's solar loan program and the SREC contract programs that Jersey Central Power and Light Company ("JCP\&L") and Atlantic City Electric Company ("ACE") have proposed. The loan program and SREC contract proposals focus largely on third-
party owned, net metered installations. As filed, the JCP\&L and ACE programs are limited to net metered projects that are 500 kW or less. However, this Program will provide grid-connected Solar Systems that PSE\&G will own. Accordingly, the Program will complement PSE\&G's solar loan program and the State's other solar initiatives. In addition, this Program will not impact PSE\&G's intent to comply with the BPU Solar Securitization Order by making an appropriate filing with the Board by March 31, 2009.

Because PSE\&G will sell the SRECs it receives under the Program in the market, it will also complement the Board's efforts in establishing a viable SREC market and helping reduce the cost of renewable energy to ratepayers. However, to provide a level of protection to ensure that PSE\&G-owned solar generation does not create an excess of SRECs above the RPS requirements, PSE\&G proposes a mechanism that may limit the number of SRECs that PSE\&G will sell under the Program, depending on the state of the SREC market during each year of the Program. This SREC trigger mechanism will help insure that PSE\&G's program does not impact the SREC market in a way that disrupts the continued development of New Jersey's solar industry.

The Program will bring the benefits of solar energy to all of the communities PSE\&G serves. As I describe in detail below, PSE\&G will install Solar Systems on under-utilized utility property throughout its electric service territory. The Company will offer every municipality and public school district in its electric service territory an opportunity to install Solar Systems on their
property. As part of the installations of Solar Systems in school districts, PSE\&G will provide solar educational materials for use by students housed by the building where the Solar System has been installed. In the municipal segment, PSE\&G will implement a demonstration project to provide small Solar Systems attached to existing street lighting poles and the roofs of small public buildings in Branch Brook Park, Newark, to demonstrate how this $21^{\text {st }}$ century solar panel technology can be integrated with existing, decorative antique-looking light poles. The Company will also install Solar Systems on third party-owned brownfields and other under-utilized commercial and industrial sites, including sites in urban enterprise zones (UEZs). The Neighborhood Solar Segment will bring renewable energy to all parts of the Company's service territory, by attaching solar units to utility poles. The HMFA Affordable Housing Segment will bring the benefits of solar energy to low-income residential communities. PSE\&G will install monitoring of installed Solar Systems where appropriate, with access to energy output, status and other characteristics, so that the local project sites and PSE\&G are informed about the energy output. Collectively, all of the Program's installations will focus on under-served markets, which will both improve the environment for all New Jersey residents and further the State's Smart Growth development goals.

The Program directly supports the State's renewable energy initiatives, as outlined in the recently-released Energy Master Plan (EMP). The Program, when fully deployed, will result in 120 MW of additional solar generating capacity in

New Jersey. This additional solar capacity will satisfy $6.7 \%$ of the State's RPS requirements through 2020. The Program also supports the carbon-reduction goals of the Global Warming Response Act ("GWRA"), N.J.S.A. 26:2C-37 et seq. and the New Jersey Department of Environmental Protection's recently-released draft GWRA recommendation report. PSE\&G estimates that the 120 MW of solar capacity will eliminate $1,702,321$ tons of $\mathrm{CO}_{2}$ emissions, or the equivalent of removing 309,513 cars from the roads.

The Program is comprised of four segments that total 120 MW of solar infrastructure projects. Under this Program, a number of solar development and engineering firms will have the opportunity to partake in this deployment of utility capital. All the segments have common elements:

- PSE\&G is financing the investments;
- PSE\&G is the owner and operator of the Solar Systems;
- The net revenues PSE\&G receives from the carbon-free solar electricity will be flowed back to utility customers, as will any monetized value of SRECs ${ }^{3}$ and the recognition of the federal ITC in accord with the Federal Income Tax Law. In addition, in all segments the Solar Systems will be interconnected with PSE\&G's distribution system on the utility's side of the meter - i.e., they will be grid-connected.

[^6]An annual schedule of investment dollars on how these segments are built out is included as Schedules SS-2 through SS-3 to Mr. Swetz's testimony.

## PROGRAM SEGMENTS

PSE\&G proposes the following four segments. The size of each segment is described in terms of approximate megawatts below. PSE\&G reserves the right to adjust the segment capacities if necessary, while remaining within the 120 MW total Program size. The table below shows the anticipated 120 MW capacity build out for this Program. PSE\&G is willing to be flexible in shifting the capacity from one year to another, to the extent doing so is consistent with business commitments and Program requirements.

| Energy Year Install Schedule |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Segment | Total | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- | 2015- 2 |
| Centralized Solar | 35.0 | 4.0 | 10.3 | 10.3 | 10.3 | $\vdots$ | - | -- |
| Neighborhood Solar | 40.0 | 3.7 | 9.6 | 9.9 | 9.9 | 6.3 | 0.5 | - |
| Local Government Solar | 43.0 | 7.2 | 8.0 | 88.0 | 8.0 | 8.0 | 4.0 | - |
| HMFA/Affordable Housing Solar | 2.0 | 0.1 | 0.8 | 0.8 | 0.4 | $\vdots$ | - | $\vdots$ |
|  | 120.0 | $\begin{aligned} & 15.0 \\ & \hline \end{aligned}$ | 28.7: | $\begin{aligned} & \hline 29.0 \\ & \hline \end{aligned}$ | :28.6 | 14.3 | 4.5 | - |

## SEGMENT 1 - CENTRALIZED SOLAR (35 MW)

## Description

This segment makes use of real estate owned by PSE\&G or third parties for the installation of solar PV systems to generate carbon-free electricity. For part of
this segment, PSE\&G will install ground- or roof-mounted solar PV units on land or buildings it owns. Three promising PSE\&G-owned sites have been identified and additional sites are under consideration. PSE\&G anticipates this part of Segment 1 will entail the construction of approximately 25 MW dc of solar capacity on its own real estate.

In addition, upon BPU approval of the Program, PSE\&G will issue announcements that it is seeking qualifying third party-owned host sites on designated brownfields, properties owned by non-profit organizations, and underdeveloped real-estate (typically known as grayfields) in its electric service territory (for approximately 10 MW of solar capacity). As part of these announcements, PSE\&G will also list specific criteria for the Solar Systems on third party-owned sites. Solar developers will propose both sites and identified solar projects to PSE\&G, which will select qualifying projects on a first-come, first-served basis and project criteria basis. This criterion includes elements such as cost per watt, lower interconnection costs and interconnection acceptability, appropriate scale for solar PV systems, as well as other appropriate criteria as determined by PSE\&G. PSE\&G will select the projects after the developer has submitted the project concepts, including cost information and has reached an agreement with the corresponding third party site owner to allow PSE\&G to use the land, and other terms and conditions as outlined in the PSE\&G criteria for these types of projects. Solar developers will compete with each other to develop the site to maximize the solar output and bring the best projects to PSE\&G.

If, within the first six months after approval of this Petition, solar developers have not proposed at least 3 MW of qualifying projects for the thirdparty portion of this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. In each of the second and third annual periods of the Program, if, within six months of the start of each respective annual period, solar developers have not proposed at least three additional MW of qualifying projects for the third-party portion of this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. Finally, in the fourth annual period of the Program, if, within six months of the start of that annual period, solar developers have not proposed at least one additional MW of qualifying projects for the third-party portion of this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. PSE\&G is assuming that the sites will average approximately 2MW per third party-owned site, for a total of 10 MW for this component of Segment 1, although the actual number of sites and sizes may vary.

The level of investment for this 35MW segment is expected to be approximately $\$ 221$ million.

PSE\&G will provide the investment capital for, own, and operate the Solar Systems, which will be interconnected with the PSE\&G distribution system. PSE\&G will sell the electricity generated by the Solar Systems in the applicable PJM markets, and PSE\&G will apply the net revenues it receives from the sales in the PJM markets toward offsetting the revenue requirements of the program, so that customers receive the benefits of the grid-supply solar electricity.

The centralized Solar Systems will not only generate energy but they will also receive SRECs as established by the Board's rules. Subject to an SREC "trigger" mechanism discussed below, PSE\&G will sell any SRECs it receives from the Solar Systems in the SREC Auction approved by the Board for the PSE\&G Solar Loan Program. The net revenues (i.e., revenues less the cost of conducting the auction) PSE\&G receives from selling the SRECs will be returned to customers by offsetting a portion of the Program's revenue requirements. Similarly, federal ITC value will benefit customers by offsetting revenue requirements over the life of the assets in accord with the Federal Income Tax Law. This is described more fully in the testimony of Mr. Stephen Swetz.

## Target Market and Eligibility

This segment is not an offer to any specific customer group, but will benefit all of PSE\&G's electric customers.

PSE\&G has identified the following PSE\&G facilities as potentially appropriate for development of projects:

- Linden SNG Site $\sim 8$ usable acres $\sim 3$ MW dc
- Central Gas Plant $\sim 7$ usable acres $\sim 2.5 \mathrm{MW}$ dc
- Cox's Corner Substation $\sim 5$ usable acres $\sim 1.5$ MW dc

PSE\&G is planning to identify additional sites that could support Solar Systems. For the purpose of modeling these additional sites, PSE\&G has assumed that each such site could support a system of approximately 2 MW to 3 MW.

In addition, as I discussed above, upon BPU approval of the Program, PSE\&G will seek solar developers to identify potential third-party owned host sites, with a focus on brownfields, non-profits and other under developed properties. These properties will be developed by solar developers under contract to PSE\&G, to enhance the economic use of this real estate.

The capacity allocations between the utility-owned and third party-owned components of this segment are flexible.

## Offerings and Revenue Sources

PSE\&G will register the Solar Systems with PJM, and sell the electricity output in the applicable PJM wholesale markets. Net proceeds from the sale of power into PJM, including any available capacity credits or revenues, will be credited to the RGGI Recovery Charge to partially offset revenue requirements.

Further, PSE\&G expects to register the Solar Systems with the BPU to receive SRECs. Subject to the SREC trigger mechanism, any SRECs received by the Company will be sold at auction in a manner similar to the PSE\&G Solar Loan Program to maximize the SREC value to benefit customers. The net proceeds from the sale of SRECs will be credited to the RGGI Recovery Charge to partially offset revenue requirements.

PSE\&G will pay rents to the host sites in the brownfield, grayfield, and not-for-profit portion of this segment. If PSE\&G gas or transmission properties are used for any of the solar installations, PSE\&G will make the necessary accounting entries to compensate PSE\&G's gas and/or transmission businesses for the use of their properties. Mr. Swetz and Mr. Furlong address the ratemaking and accounting treatment of these intra-company accounting entries in their testimonies.

## Program Administration

PSE\&G will perform all program administration and management for this segment, while utilizing solar developers to develop the identified sites.

## Program Delivery Methods

The Company intends to hire third party firms, knowledgeable in solar development, to provide engineering design services, equipment and other materials and services required to execute the projects. PSE\&G intends to utilize
its own skilled workforce for the installation of this segment on utility-owned property, or may hire contractors to perform the installation work. PSE\&G will contract with third-party solar developers to perform the installation work on nonutility owned sites. PSE\&G will use its own workforce for any necessary interconnection work. In the event that subcontractors are utilized for this segment, for those projects that qualify as a "public work" as defined by statute, the service provider will adhere to all aspects of the New Jersey State Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., and will require the same of all subcontractors. For those projects that do not qualify as public works, service providers will be required to pay the equivalent of the prevailing wage for the county in which the work is to be performed, unless the work is performed by union employees, in which case the employees will be paid in accordance with the union contract. Language of this type has been inserted in the Program RFP document as a contract requirement, and will also be a requirement for all installations on third party-owned property. To ensure that the terms for prevailing wage is complied with, PSE\&G would provide a rate analysis upon contract negotiation to ensure the prevailing wage rate is used and will execute a contract under those terms. PSE\&G invoice review and approval processes will ensure that those rates are being charged at time of payment. The Supplier will be legally bound by those terms and will risk termination of contract should the wages paid as per this contract not be in line with the state prevailing wage rates as agreed.

## Procurement of Equipment, Engineering Services and Labor

PSE\&G will utilize a competitive process for the procurement for this segment. A procurement process has already commenced seeking indicative bids, with awards to one or more vendors expected to be executed after BPU approval of this Program for PSE\&G-owned sites. PSE\&G will select third party project sites from solar developers who are competing in the marketplace to bring these types of projects to PSE\&G.

## Impact on Marketplace, Competition, Employment, Economic Development, New Business, and Market Barriers

This Segment will have an overall positive impact on the renewable energy marketplace in New Jersey. Having a new source of capital for the solar marketplace will serve to spur additional economic, employment, and new business opportunities for many sectors of the economy. PSE\&G will use solar developers or contractors for a significant part of this Segment, which will foster competition in the renewable energy sector. Because this Segment focuses on under-utilized property in mostly commercial and industrial areas, including UEZs, it will bring access to renewable energy benefits enjoyed by more affluent markets to urban areas, and will not compete with existing services.

One of the challenges to grid-connected solar is access to suitable sites for large installations. By using existing utility property, along with third party-
owned brownfields, grayfields, and non-profit owned sites, this Segment will directly address this challenge.

## Budget

The proposed budget is set forth in Schedule SS-2a to the testimony of Stephen Swetz (Attachment B).

## SEGMENT 2 - NEIGHBORHOOD SOLAR ( 40 MW )

## Description

PSE\&G will install Solar Systems on distribution metal or wood poles solely-owned by PSE\&G. PSE\&G will also utilize jointly-owned poles, assuming appropriate agreements can be reached with the joint owner. Each pole-mounted unit will be designed to generate approximately 200 watts d.c. and provide leading power factor qualities into the distribution system. PSE\&G expects to install up to 200,000 units over approximately five years. PSE\&G intends to use its own skilled workforce, or contractors, to perform the installation work and connect the Solar System to its distribution system.

These pole attached solar panels will be registered with the BPU to qualify for SRECs. Subject to an SREC trigger mechanism discussed below, SRECs received will be auctioned in the already-approved PSE\&G Solar Loan Program. The net revenues PSE\&G derives from selling the SRECs will go towards offsetting Program revenue requirements. Similarly, ITC value will go towards offsetting the revenue requirements over the life of the assets pursuant to the

Federal Income Tax Law. This is more fully described in the testimony of Stephen Swetz.

The level of investment for this 40MW segment is expected to be approximately $\$ 264$ million.

## Target Market and Eligibility

This segment of the program is not directed to any one market segment, nor is it an offer to end use customers, but rather for the benefit of all customers.

## Offerings and Revenue Sources

Each unit may not be individually metered. The hourly output of the Solar Systems in this segment will be determined through the use of a calculated load profile, which will be created by metering a sample of these systems with interval meters. PSE\&G will explore the feasibility of providing communication with each individual Solar System attached to the utility poles to measure and report the system output.

PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource. PSE\&G
will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.

If PSE\&G is unable to qualify these Solar Systems to sell the output in the PJM energy and/or capacity markets (or if the costs of doing so outweighs the benefits), PSE\&G will instead apply the following methodology. In the PSE\&G settlement process this solar output will be applied as a reduction to the load to be served by the BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average locational marginal price ("LMP") in the PSE\&G zone, and that value will be debited to the BGS-FP Reconciliation Charge and credited to the RGGI Recovery Charge to offset revenue requirements. Further, PSE\&G expects to register the Solar Systems with the BPU to receive SRECs. Subject to a "trigger" mechanism discussed below, any SRECs received by the Company will be sold at auction in a manner similar to the PSE\&G Solar Loan Program in order to maximize the SREC value that will be credited to the RGGI Recovery Charge to partially offset revenue requirements.

## Program Administration

PSE\&G will perform all program administration and management for this segment, while using a solar firm to provide the engineering and equipment for PSE\&G installation.

## Program Delivery Methods

The pole attached systems will be interconnected with PSE\&G's distribution system at secondary voltage and will provide system enhancement. PSE\&G intends to utilize its own workforce for the installation of systems defined in this segment. PSE\&G may also utilize subcontractors as needed. In the event that subcontractors are utilized, for the purposes of this segment, for those projects that qualify as a "public work" as defined by statute, the service provider will adhere to all aspects of the New Jersey State Prevailing Wage Act, N.J.S.A. 34:1156.25 et seq., and will required the same of all subcontractors. For those projects that do not qualify as public works, service providers will be required to pay the equivalent of the prevailing wage for the county in which the work is to be performed, unless the work is performed by union employees, in which case the employees will be paid in accordance with the union contract.

Work will begin as soon as possible after receipt of a written Board Order.

## Procurement of Equipment

PSE\&G will utilize a competitive process for the procurement of equipment and technology for this program. A procurement process has already commenced, with an award to one or more vendors expected to be executed after BPU approval of this petition.

## Quality Assurance Provisions

PSE\&G will explore the feasibility of providing communication with each individual Solar System attached to the utility poles to measure and report the system output. However, in the absence of that, PSE\&G will rely on a wellestablished proxy to determine the output of the pole attached Solar Systems by utilizing the modeling algorithms of PVWATTs. This PV solar modeling tool is widely used by the solar industry and is sanctioned by the BPU for solar development in New Jersey. In order to validate the PVWATTs output model, a statistical sample of output meters will be installed on certain pole attached units. These output meters, coupled with the PVWATTs modeled output on the aggregate, will develop an appropriate supply shape for the generating asset. This statistical sampling methodology will also be used to qualify for SRECs.

## Impact on Marketplace, Competition, Employment, Economic Development, New Business, and Market Barriers

This Segment will have an overall positive impact on the renewable energy marketplace in New Jersey. Having a new source of capital for the solar marketplace will serve to spur additional economic, employment, and new business opportunities for many sectors of the economy. PSE\&G will use a competitive procurement process to acquire a substantial quantity of solar generating equipment for this Segment, which will foster competition, employment opportunities, and new business in the renewable energy fabrication sector. Because this Segment will bring solar installations throughout all of the

Company's electric service territory, it will bring access to renewable energy benefits enjoyed by more affluent markets to urban areas, and will not compete with existing services.

One of the challenges to grid-connected solar is access to suitable sites for large installations. By using existing utility poles, which are available in sufficient quantity to develop a significant amount of solar generation, the Segment will directly address this challenge.

## Budget

The proposed budget is set forth in Schedule SS-2b to the testimony of Stephen Swetz (Attachment B).

## SEGMENT 3 - LOCAL GOVERNMENT SOLAR (43 MW)

## Description

In this segment PSE\&G shall invest in roof-mounted Solar Systems installed on the buildings of municipalities, public schools, and county government (units of local government) located in PSE\&G’s electric service territory.

Upon BPU approval of the Program, PSE\&G will announce to units of local government in its electric service territory and solar developers that PSE\&G is seeking solar projects to be established on such host sites. Sites with the corresponding solar projects will be identified to PSE\&G and selected based on a
first-come, first-served basis and a project selection criterion. This criteria will include elements such as cost per watt, total energy output, lower interconnection costs and interconnection acceptability, capacity equal to or no less than $10 \%$ below the limits defined for that size unit of government, as well as other appropriate criteria as determined by PSE\&G. PSE\&G will select the project after the developer has submitted the project concepts, including cost information, and has obtain an agreement with the corresponding unit of local government site owner to allow PSE\&G to use the roof space, along with the other terms and conditions as outlined in the PSE\&G Program criteria for these types of projects. Solar developer will develop the site to maximize the solar output and compete with one another to bring these types of projects to PSE\&G.

If, within the first six months after approval of this Petition, solar developers have not proposed at least 3 MW of qualifying projects for this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. In each of the second through fifth annual periods of the Program, if, within six months of the start of each respective annual period, solar developers have not proposed at least four additional MW of qualifying projects for this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment
capacity availability. Finally, in the sixth annual period of the Program, if, within six months of the start of that annual period, solar developers have not proposed at least two additional MW of qualifying projects for this segment, PSE\&G may hire 2 to 4 solar developers selected from an RFP process to develop projects for this portion of the segment, but will also still allow developers to bring projects for consideration, subject to remaining segment capacity availability. The level of investment for this 43MW segment is expected to be approximately $\$ 273$ million.

## Target Market and Eligibility

PSE\&G will invest in, own and operate Solar Systems on properties owned by units of local government (municipalities and counties), including public school districts. For a public school district to qualify for the Program, the district must actually own and operate its own school(s) and school building(s). PSE\&G anticipates approximately 450 installations in this Segment. PSE\&G will employ a sliding scale to allow larger municipalities to have larger capacity systems. In addition, units of local government located in UEZs will have the opportunity to have larger capacity systems. Following the process described above, each unit of local government will nominate an appropriate capacity system of solar capacity that meets the design criteria established by PSE\&G, such as ensuring the remaining life of the roof equals or exceeds the life of the Solar System.

## Municipal Demonstration Project

As part of this segment, PSE\&G will implement a demonstration project where the Company will provide small Solar Systems attached to street lighting poles in Branch Brook Park, Newark, to demonstrate how this $21^{\text {st }}$ century solar panel technology and be integrated with existing antique-style light poles. Small Solar Systems will also be installed on the roofs of small public buildings in the park. In this demonstration project, PSE\&G will credit the Park’s electric account with $100 \%$ of the value of the solar energy output in accordance with the terms described in Segment 3

## Offerings, Revenue Sources, and Customer Incentives

The Solar Systems will be metered to determine the aggregate kWh output and the SREC values. Hourly or real-time output values will be established for the systems through either installed meters or through the use of load profiles (based on interval meters installed on a sample of the Solar Systems). The customers at the solar locations will continue to have all of their electric usage billed at their current rates. The Solar System output will be fed back into the grid on the utility side of the meter. In consideration for use of the facility, the local government entity will receive a monthly electric bill credit for the electricity the Solar System generates equal to $100 \%$ of the value of the solar output priced at the hourly zonal load weighted LMP in the PSE\&G zone. The $100 \%$ of LMP factor is an
appropriate bill credit to compensate the governmental entity for the use of their property.

PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource. PSE\&G will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.

If PSE\&G is unable to qualify these Solar Systems to sell the output in the PJM energy and/or capacity markets (or if the costs of doing so outweighs the benefits), PSE\&G will instead apply the following methodology. In the PSE\&G settlement process this solar output will be applied as a reduction to the load to be served by the BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average LMP and that value will be debited to the BGS-FP Reconciliation Charge and credited to the RGGI Recovery Charge to offset revenue requirements.

Further, PSE\&G expects to register the Solar Systems with the BPU to receive SRECs. Subject to an SREC "trigger" mechanism discussed below, any SRECs received by the Company will be sold at auction in a manner similar to the PSE\&G Solar Loan Program in order to maximize the SREC value that will be credited to the RGGI Recovery Charge to partially offset revenue requirements.

Similarly, federal ITC value will benefit customers by offsetting revenue requirements over the life of the assets in accord with the Federal Income Tax Law.

## Program Administration

PSE\&G will perform all program administration and management for this segment, while utilizing solar developers to develop projects selected by PSE\&G based on established criteria for this segment.

As part of the installations of Solar Systems in school districts, PSE\&G will provide solar educational materials for use by students housed by the building where the Solar System has been installed.

## Program Delivery Methods

PSE\&G plans to use third party solar developers for this segment to provide engineering design services, equipment, installation, and other materials and services required to execute the projects PSE\&G will use its own workforce for any necessary interconnection work. For those projects that qualify as a "public work" as defined by statute, the service provider will adhere to all aspects of the New Jersey State Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., and will require the same of all subcontractors. For those projects that do not qualify as public works, service providers will be required to pay the equivalent of the prevailing wage for the county in which the work is to be performed, unless the
work is performed by union employees, in which case the employees will be paid in accordance with the union contract. To ensure that the terms for prevailing wage is complied with, PSE\&G would provide a rate analysis upon contract negotiation to ensure the prevailing wage rate is used and will execute a contract under those terms. PSE\&G invoice review and approval processes will ensure that those rates are being charged at time of payment. The Supplier will be legally bound by those terms and will risk termination of contract should the wages paid as per this contract not be in line with the State prevailing wage rates as agreed.

## Procurement of Equipment, Engineering Services and Labor

PSE\&G will utilize a market-based, competitive process for the procurement for this segment, with solar developers providing a conceptual project and understanding from the unit of government to make the roof space available for the proposed project.

## Quality Assurance Provisions

PSE\&G will monitor and supervise construction of the projects. It will also provide for Operation and Maintenance throughout the life of the project. PSE\&G will enter into an appropriate arrangement with the host units of government that defines the responsibilities and defines the treatment of electricity billing.

## Impact on Marketplace, Competition, Employment, Economic Development, New Business, and Market Barriers

This Segment will have an overall positive impact on the renewable energy marketplace in New Jersey. Having a new source of capital for the solar marketplace will serve to spur additional economic, employment, and new business opportunities for many sectors of the economy. PSE\&G will contract with solar developers for this Segment, which will foster competition in the renewable energy sector. Because this Segment focuses on local governmentowned sites and facilities, it will bring access to renewable energy benefits enjoyed by more affluent markets to urban areas, and will not compete with existing services. In addition, by providing a credit to the local government entity’s electric bill, this Segment will help mitigate the local property tax burden, another positive economic development.

One of the challenges to grid-connected solar is access to suitable sites for large installations. By using existing government-owned property, the Program will directly address this challenge.

## Budget

The proposed budget is set forth in Schedule SS-2c to the testimony of Mr. Stephen Swetz (Attachment B).

## SEGMENT 4 - HMFA/AFFORDABLE HOUSING SOLAR (2 MW)

## Description

In Segment 4, PSE\&G will invest in grid-connected, roof mounted Solar Systems installed in New Jersey Housing \& Mortgage Finance Agency (HMFA)financed affordable housing communities, or other affordable housing communities. HMFA will nominate, in priority order, their inventory of HMFA units located in PSE\&G's electric service area and each facility must meet roof condition criteria to be eligible. The HMFA's participation in this Segment is subject to it receiving appropriate authorization to do so, including the approval of its Board and possibly other appropriate authorizations. Should the HMFA not participate directly in the Program, PSE\&G will seek to install Solar Systems in other affordable housing communities in its electric service territory.

The level of investment for this 2MW segment is expected to be approximately $\$ 15$ million.

## Target Market and Eligibility

PSE\&G anticipates that Solar Systems for this segment will average 50 kW each with an estimated 40 HMFA units, for a total segment capacity of approximately 2 MW .

## Offerings, Revenue Sources, and Customer Incentives

The Solar Systems will be metered to determine the aggregate kWh output and the SREC values. Hourly or real-time output values will be established for the systems through either installed meters or through the use of load profiles (based on interval meters installed on a sample of the Solar Systems). The customers at the solar locations will continue to have all of their electric usage billed at their current rates. The Solar System output will be fed back into the grid on the utility side of the meter. In consideration for use of the facility, the HFMA facility will receive a monthly electric bill credit for the electricity the Solar System generates equal to $100 \%$ of the value of the solar output priced at the hourly zonal load weighted LMP in the PSE\&G zone. The $100 \%$ factor is appropriate for this segment because it supports reduced energy costs for low-income housing developments. PSE\&G's agreement with the HMFA facility will require that the monthly electric bill credit be flowed back to the facility's tenants, under a mechanism that will be negotiated with the owner of the HMFA facility.

PSE\&G will sell the energy generated by the Solar Systems in the applicable PJM markets. PSE\&G will also seek to receive capacity payments from PJM for the Solar Systems, and will do so if these systems qualify for capacity payments, and if the benefits of receiving such capacity revenues exceeds the cost of PJM interconnection and qualification as a capacity resource. PSE\&G will apply the net revenues it receives from the sales in the PJM markets to partially offset the Program revenue requirements.

If PSE\&G is unable to qualify these Solar Systems to sell the output in the PJM energy and/or capacity markets (or if the costs of doing so outweighs the benefits), PSE\&G will instead apply the following methodology. In the PSE\&G settlement process this solar output will be applied as a reduction to the load to be served by the BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average LMP and that value will be debited to the BGS-FP Reconciliation Charge and credited to the RGGI Recovery Charge to offset revenue requirements.

Further, PSE\&G expects to register the Solar Systems with the BPU to receive SRECs. Subject to an SREC "trigger" mechanism discussed below, any SRECs received by the Company will be sold at auction in a manner similar to the PSE\&G Solar Loan Program in order to maximize the SREC value that will be credited to the RGGI Recovery Charge to partially offset revenue requirements. Similarly, federal ITC value will benefit customers by offsetting revenue requirements over the life of the assets in accord with the Federal Income Tax Law.

PSE\&G will design a plan to qualify potential sites and will design program marketing materials to interest developers of affordable housing projects.

## Program Administration

PSE\&G will perform all program administration and management for this segment.

## Program Delivery Methods

The Company intends to hire third party firms, knowledgeable in solar development, to provide engineering design services, equipment, installation, and other materials and services required to execute the project. PSE\&G will use its own workforce for any necessary interconnection work. For those projects that qualify as a "public work" as defined by statute, the service provider will adhere to all aspects of the New Jersey State Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., and will require the same of all subcontractors. For those projects that do not qualify as public works, service providers will be required to pay the equivalent of the prevailing wage for the county in which the work is to be performed, unless the work is performed by union employees, in which case the employees will be paid in accordance with the union contract. Language of this type has been inserted in the Program RFP document as a contract requirement and will be a requirement for all installations. To ensure that the terms for prevailing wage is complied with, PSE\&G would provide a rate analysis upon contract negotiation to ensure the prevailing wage rate is used and will execute a contract under those terms. PSE\&G invoice review and approval processes will ensure that those rates are being charged at time of payment. The Supplier will be legally bound by those terms and will risk termination of contract should the wages paid as per this contract not be in line with the State prevailing wage rates as agreed.

## Procurement of Equipment, Engineering Services and Labor

PSE\&G will utilize a competitive process for the procurement for this segment. A procurement process has already commenced, with awards to one or more vendors expected to be executed after BPU approval of this petition.

## Quality Assurance Provisions

PSE\&G will monitor and supervise construction of the projects. It will also provide for Operation and Maintenance throughout the life of the project. PSE\&G will enter into an appropriate arrangement with the HMFA facility that spells out responsibilities and defines the treatment of electricity billing.

## Impact on Marketplace, Competition, Employment, Economic Development, New Business, and Market Barriers

This Segment will have an overall positive impact on the renewable energy marketplace in New Jersey. Having a new source of capital for the solar marketplace will serve to spur additional economic, employment, and new business opportunities for many sectors of the economy. PSE\&G will use contractors for a significant part of this Segment, which will foster competition in the renewable energy sector. Because this Segment focuses on affordable housing developments, it will bring access to renewable energy benefits enjoyed by more affluent markets to lower-income communities, and will not compete with existing services.

One of the challenges to grid-connected solar is access to suitable sites for large installations. By using the roofs of existing affordable housing communities, the Program will directly address this challenge.

## Budget

The proposed budget is set forth in Schedule SS-2d to the testimony of Stephen Swetz (Attachment B).

That completes the description of the four segments of the Solar 4 All Program.

## SREC TRIGGER MECHANISM

To provide a level of protection to ensure that PSE\&G-owned solar generation does not create an excess of SRECs above the RPS requirements, PSE\&G proposes that the Board approve a mechanism that may limit the number of SRECs sold under the Program, depending on the state of the SREC market during each year of the Program. Such a "trigger" mechanism will help insure that competition amongst solar developers continues after the PSE\&G-owned Solar Systems are in place.

While there may be several possible mechanisms for such an SREC "trigger", PSE\&G proposes the following approach:

Prior to each periodic auction of Program SRECs, the BPU's Office of Clean Energy ("OCE") will determine whether New Jersey has sufficient solar generation registered to satisfy the then-applicable RPS requirements. The OCE would notify PSE\&G of its determination. PSE\&G will then offer at auction only the amount of Program SRECs necessary to ensure that the State meets the solar RPS requirements for that energy year. Any Program SRECs in excess of the amount required under this mechanism would not be sold in that auction, and would expire at the end of their life.

Under this trigger mechanism, the Board should consider retaining a consultant to assist it in the periodic determinations of installed solar capacity in New Jersey. The cost of such a consultant is included as a Program administrative cost.

While PSE\&G believes that above described "trigger" mechanism should satisfy any concerns with respect to PSE\&G's Solar Systems' impact on the SREC market, PSE\&G is willing to work cooperatively with the OCE and members of the solar industry to establish a mechanism to ensure that the New Jersey solar market remains competitive, while at the same time striving for lower-cost alternatives. However, it bears emphasis that to the extent SRECs are not sold because of any type of SREC trigger mechanism, there will be less revenues to offset the Program revenue requirements. In addition, with less SREC revenue to
offset Program costs, the possibility of reaching the $2 \%$ cap I discussed earlier in this testimony would also increase.

## DISPUTE RESOLUTION PROCEDURES

Customer complaints relating to the design, delivery, or administration of the Program segments potentially could be received through two means: directly to various PSE\&G customer contact personnel and departments or directly to the NJBPU. In both instances the immediate issue would be referred to the appropriate PSE\&G management personnel to investigate and resolve. PSE\&G will utilize the same complaint resolution procedures in the Solar 4 All Program that were approved for use in the Solar Loan Program.

PSE\&G will attempt to resolve disputes with its customers informally in the first instance. See Schedule AZM-2 for a flow chart on how customer complaints will be processed. Disputes that involve PSE\&G's administration of the Program that cannot be resolved informally will be resolved through the BPU's existing process for customer complaints within the appropriate Division. Disputes between PSE\&G and its sub-contractors will be resolved in accordance with contract provisions. Disputes under the Program that involve monetary claims or civil damages that cannot be decided by the NJBPU will be resolved in an appropriate court of law.

## CONCLUSION

This concludes my testimony at this time, but allow me to end with remembering one of the most widely respected historians of our time, Professor Bernard Lewis of Princeton University. Professor Lewis recently said, "...there are times in the long history of the human adventure when we have a real turning point, a major change - the end of an era, the beginning of a new era." Professor Lewis went on to say, "I am becoming more and more convinced that we are in such an age at the present time."

Think about the revolutionary changes during your lifetime. Who had heard of the Internet twenty years ago? Or cell phones? Or Blackberries? We, collectively, are about to embark on a historic journey to bring the power of the sun into customers’ homes and businesses. The State of New Jersey and PSE\&G are committed to providing energy efficiency investments and renewable energy through the newly enacted RGGI legislation, with rate recovery and equitable full return for the utility.

Although there is a significant business challenge to implement the Program, there is also the opportunity to effect global climate change, allow all customers access to solar power, and create hundreds of direct jobs, and perhaps thousands of indirect jobs, which are needed in New Jersey. I believe we must forge ahead as other innovators have in the past and accomplish this visionary Solar 4 All work through the collaboration of PSE\&G, the BPU, the Division of

1 Rate Counsel, the solar developers and installers, and all stakeholders for the 2 benefit of New Jersey.

3 Thank you.

4

# QUALIFICATIONS <br> OF <br> ALFREDO Z. MATOS VICE PRESIDENT RENEWABLES AND ENERGY SOLUTIONS 

## Work Experience

I am the Vice President Renewables and Energy Solutions at Public Service Electric and Gas Company in New Jersey with over 27 years of diverse experience in the energy industry. In my current position, I help the utility explore and implement new opportunities in the renewable energy and energy efficiency markets. Under my direction, PSE\&G recently obtained approval for the Solar Loan Program and the Carbon Abatement Program, designed to support New Jersey's Energy Master Plan. My work in the community has been focused on education, as an elected Board of Education Member, leadership roles in parks and recreation programs, coaching and High School Fundraising. I am also a Eucharistic Minister.

I joined PSE\&G in 1981 as part of the Hope Creek nuclear plant engineering team through construction and start-up activities and progressed to domestic and international electric distribution including regional and field management responsibility in gas and electric distribution. My experience in electric distribution business includes managing field operational resources, network planning, project management, engineering and construction.

My responsibilities in the past 12 years have included Business Development and Asset Management of international investments in Latin America and as part of my responsibilities, I was engaged as V.P. of Operations in managing several utility companies and had the following corporate governance responsibilities:

- Chairman of the Board of Directors - LUZ DEL SUR S.A.A., LIMA, PERU
- Chairman of the Board of Directors - TECSUR S.A., LIMA, PERU
- Vice-Chairman of the Board of Directors - CHILQUINTA ENERGIA S.A., SANTIAGO/VALPARAISO, CHILE
- Chairman of the Board of Directors - SOCIEDAD AUSTRAL DE ELECTRICIDAD S.A., OSORNO, CHILE
- Member of the Board of Directors - DHOFAR POWER COMPANY S.A.O.C., MUSCAT, OMAN


## Educational Background

I hold a Master of Business Administration degree from Fairleigh Dickinson University in New Jersey, where I also earned a Masters and a Bachelor of Science degree in electrical engineering. I have also successfully completed Finance for Senior Executives at Harvard University and I am bilingual English-Spanish.

## COMPLAINT PROCESS FLOW CHART



## PUBLIC SERVICE ELECTRIC AND GAS COMPANY DIRECT TESTIMONY OF <br> STEPHEN SWETZ MANAGER - RATES AND REGULATION

My name is Stephen Swetz and I am the Manager - Rates and Regulation for Public Service Electric and Gas Company (PSE\&G, the Company). My credentials are set forth in the attached Schedule SS-1.

## SCOPE OF TESTIMONY

The purpose of my testimony is to support the Company's proposed methodology for recovery of the costs related to PSE\&G's solar generation investment program, called the Solar 4 All Program ("Program"), including projected rate and bill impacts. My testimony provides details of the proposed calculations and recovery mechanisms.

## COST RECOVERY MECHANISM

## General

PSE\&G is proposing to recover the revenue requirements associated with the direct costs of the Program. Direct costs include all costs related to Program capital expenditures, and Operations and Maintenance costs including the administrative costs of running the Program. These costs would be offset by the net
benefits derived from the program including but not limited to the solar electrical output, the net SREC revenue as well as the amortization of the investment tax credit (ITC) utilized by the Company. PSE\&G is proposing that the Board authorize the recovery of the revenue requirements of the Program in accordance with the Regional Greenhouse Gas Initiative (RGGI) legislation, N.J.S.A. 48:3-98.1 et seq. The details of the costs proposed to be recovered, as well as the mechanism for such recovery, are described in the following sections of this testimony.

## Calculation of the Revenue Requirements of Direct Costs

The Program investments are proposed to be treated either as separate classes of utility plant, and depending on the type of investment, depreciated or amortized as described in the corresponding section below. The revenue requirements associated with the direct costs of the Program would be expressed as:

> Revenue Requirements $=($ Pre-Tax Cost of Capital $*$ Net Investment $)+$ Amortization and/or Depreciation + Operation and Maintenance Costs Revenues from Solar Output - ITC Amortization w/ Tax Gross Up + Tax Associated from ITC Basis Reduction

The details of each of the above terms are described as follows:
Pre-Tax Cost of Capital - The weighted average cost of capital (WACC) for the Program is described in the Direct Testimony of Mark Kahrer. The

| Asset Class | Book Recovery | Tax <br> Depreciation |
| :--- | :---: | :---: |
| Solar Panels, acquisition and installation <br> costs (Centralized, Neighborhood, HMFA) | 20 year dep. |  |
| Solar Panels, acquisition and installation <br> costs (Local Government) | 15 year dep. | 5 year MACRS |
| Inverters | 5 year dep. |  |
| Communications Equipment | 20 year dep. | 20 year MACRS |
| Meters (Centralized, Neighborhood, <br> HMFA) | 15 year dep. |  |
| Meters (Local Government) |  |  |

calculation deriving this current value, which is equal to $8.2582 \%$ per year, is shown in Schedule MGK-3. For calculating Revenue Requirements, the corresponding Pre-Tax WACC of $11.9700 \%$ per year or $0.9975 \%$ per month is used (See Schedule MGK-3).

Net Investment - This is the Program investments less their associated accumulated depreciation and / or amortization less their Accumulated Deferred Income Tax (ADIT). The assumptions supporting the capital expenditures related to the Program are found in the direct testimony and work papers of Alfredo Z. Matos.

Depreciation/Amortization - The depreciation or amortization of the Program assets will vary depending on its asset class. The table below summarizes the book recovery and associated tax depreciation applied to the corresponding asset classes.

The amortization/depreciation would be based on a monthly vintaging methodology instead of the mass property accounting typically used for utility property.

Operations and Maintenance Costs - Operations and Maintenance Costs would include:

- PSE\&G labor and other related on-going costs required to manage the physical assets.
- Administrative costs related to the management of the Program.
- Rent payments or bill credits made to non-PSE\&G host sites / facilities and the fair values of rents for use of gas and electric transmission sites / facilities.
- Insurance Expense

The assumptions supporting the estimated Operations and Maintenance costs are described in the Direct Testimony and work papers of Mr. Matos. Investment Tax Credit (ITC)

As indicated in the Direct Testimony of Mr. Matos, utilities are now eligible for the federal ITC for solar investments. The ITC is thirty percent of the solar investment. The Company will return all of the ITC it utilizes to ratepayers in accordance with Federal Income Tax Law. The return of the ITC to ratepayers must be amortized over the book life of the assets.

The ITC benefit is partially offset by the tax impact associated with the tax basis reduction equal to fifty percent of the ITC. This tax basis reduction is prescribed by Federal Income Tax Law governing the ITC. This impact is generated by applying the book depreciation method to the difference between the book basis and the tax basis times the tax rate, and then multiplied by the revenue conversion factor.

The monthly detailed calculations of the Revenue Requirements through December 2013 for each of the four Program segments are shown in Schedules SS-2a through SS-2d. The aggregate summary of these monthly revenue requirements for the four segments is shown in Schedule SS-2. The annual revenue requirements for each segment through the year 2028 are shown in Schedules SS-3a through SS-3d. The aggregate annual revenue requirements are shown in Schedule SS-3. The expected revenue requirement for the Program is $\$ 11,496,697$ for the initial period ${ }^{1}$. The peak revenue requirement in the first five subsequent annual periods is \$25,652,769 and occurs in 2013 based upon Program assumptions.

## Method for Recovery of Direct Cost

PSE\&G will recover the net Revenue Requirements associated with this Program through a separate component of the electric RGGI Recovery Charge (RRC).

[^7]The electric RRC was established via the BPU's order approving the Company's Carbon Abatement Program (Docket No. EOO8060426) issued on December 16, 2008. The Solar 4 All component will be added to the electric RRC in the Company's electric tariff and be applicable to all electric rate schedules on an equal cents per kilowatt-hour. PSE\&G is proposing to implement the Solar 4 All component of the electric RRC simultaneously with Board approval of this Program based upon forecasted expenditures and usage. Since board approval is anticipated during the first six months of 2009, the initial period for determining rates will be from July 1, 2009 through December 31, 2010. If Board approval is received prior to July 1, 2009, rates will still go into effect July 1, 2009 as filed for the initial rate period. All programs costs incurred prior to July 1, 2009 will be deferred. If Board approval is received after July 1, 2009 but prior to December 31, 2009 the proposed initial rate period charge will still be implemented for the remaining months of the initial eighteen month rate period. Thereafter, rates for all subsequent rate periods will be based upon a calendar year.

For all subsequent rate periods, an annual filing will be made by October $1^{\text {st }}$ of each year to set forth a calculation of the Solar 4 All component of the electric RRC for estimated revenue requirements for the subsequent year plus the projected over/under deferred balance as of December $31^{\text {st }}$ for the current year. The charges proposed in the annual filings made by October $1^{\text {st }}$ of each year will go into
effect provisionally or as final rates, on January $1^{\text {st }}$ of the subsequent year, upon issuance of a Board Order authorizing these provisional or final rates. If an Order is not received and the provisional or final rates are not effective on January 1, the Company is under no obligation to begin the subsequent year's programs. Upon review by the Board regarding the proposed provisional or final rates, should a suspension occur because of the lack of issuance of if Board Order authorizing these provisional or final rates, any such suspension shall not be deemed imprudent. In addition, PSE\&G will consider rolling the net, unrecovered Program investment balance into base rates at the time its electric base rates are next reset.

The calculation of the proposed Solar 4 All component of the electric RRC is shown in Schedule SS-4. The Revenue Requirements, for the initial and all subsequent rate periods, are divided by the current forecasted kilowatt-hours sales to determine the Solar 4 All component of the electric RRC without the New Jersey Sales and Use Tax (SUT) applied. The forecasted kilowatt-hours sales used for this analysis are consistent with those filed in the Company's 2009 SBC filing. This same level of sales is held constant for all subsequent annual periods for illustrative purposes only (See Schedule SS-4). The proposed Solar 4 All component of the electric RRC for each period is then applied to all the existing class average rates and the percentage change is calculated. In addition, the annual bill impacts for the typical RS customer are calculated for each period through 2028. The first full year's
change to the RS typical annual bill is $\$ 1.24$, or $0.098 \%$. The maximum impact to the RS typical annual bill in the first five years of the program occurs in 2013 and is $\$ 4.24$ or $0.334 \%$. The electronic version of this filing contains the supporting detailed assumptions and calculations for Schedules SS-2 through SS-4 in electronic work papers labeled WP_AZM 1.xls, WP_SS 1.xls, WP_SS 2.xls and WP_SS 2a.xls through WP_SS 2d.xls.

The cumulative rate impacts of this Program along with the Company's Solar Loan Program and its Carbon Abatement Program through 2013 can be found on Schedule SS-5. The supporting detailed calculations can be found in the electronic work paper WP_SS 1.xls.

Under the Company's proposal, any over/under recovery of the actual revenue requirements compared to revenues would be deferred. The monthly WACC would be applicable as the carrying charge rate on any over/under recovered balance on a monthly basis and computed as indicated below.

$$
\begin{aligned}
& \text { Monthly Carrying Charge }=\text { Monthly Pre-Tax WACC * (Beginning Deferred } \\
& \text { Balance + Ending Deferred Balance) } / 2 *(1-\text { Tax Rate })
\end{aligned}
$$

The monthly carrying charge on the over/under recovery balance would be added to the month ending deferred balance to create the month ending deferred balance with carrying charge. The ending deferred balance with carrying charge becomes the beginning monthly balance for the subsequent month. The method of

1 including the deferred balance in setting the Solar 4 All component of the electric 2 RRC for all subsequent periods is described in the second paragraph of this section.

The Board’s Order pursuant to N.J.S.A. 48:3-98.1, Appendix A, section
4 I(a), BPU Docket No. EO08030164, requires three years of a pro-forma Income

5 Statement and Balance Sheet showing the incremental impacts from the Program. We 6 have prepared the projected Income Statement and Balance Sheet for the Solar 4 All

7 Program from 2009 to 2028. See Schedule SS - 6. The supporting detailed 8 calculations can be found in the electronic work papers WP_SS 1.xls and WP_SS

## Schedule Index

Schedule SS - 1............ Qualifications of Stephen Swetz
Schedule SS - 2............ Monthly Revenue Requirements Summary
Schedule SS - 2a.......... Centralized Segment Monthly Revenue Requirements Calculation

Schedule SS - 2b.......... Neighborhood Segment Monthly Revenue Requirements Calculation

Schedule SS - 2c.......... Local Government Segment Monthly Revenue Requirements Calculation

Schedule SS - 2d.......... HMFA/Affordable Housing Segment Monthly Revenue Requirements Calculation

Schedule SS - 3............ Annual Revenue Requirements Summary
Schedule SS - 3a.......... Centralized Segment Annual Revenue Requirements Summary

Schedule SS - 3b.......... Neighborhood Segment Annual Revenue Requirements Summary

Schedule SS - 3c.......... Local Government Segment Annual Revenue Requirements Summary

Schedule SS - 3d.......... HMFA/Affordable Housing Segment Annual Revenue Requirements Summary

Schedule SS - 4............ Solar 4 All Program - Rate Impact Analysis
Schedule SS - 5............ Cumulative Rate Impact Analysis - Solar Program Recovery Charge (SPRC) \& Electric RGGI Recovery Charge (RRC)

Schedule SS - 6............ Solar 4 All Program Income Statement and Balance Sheet

## Electronic Work Paper Index

WP_AZM 1.xls ............ Detailed Program Assumptions
WP_SS 1.xls................. Revenue Requirements Summary and Rate Analysis

Calculations

# QUALIFICATIONS <br> OF <br> STEPHEN SWETZ <br> MANAGER - RATES AND REGULATION 

My name is Stephen Swetz and I am the Manager - Rates and Regulation for Public Service Electric and Gas Company (PSE\&G, the Company).

## EDUCATIONAL BACKGROUND

I graduated from Worcester Polytechnic Institute with a Bachelor of Science degree in Mechanical Engineering. I also earned the degree of Master of Business Administration from Fairleigh Dickinson University.

## WORK EXPERIENCE

I have over 20 years experience in Rates, Analysis, and Operations for three Fortune 500 companies. Since 1991, I have worked in various positions at PSE\&G and affiliates of PSE\&G. I have held positions in Rates \& Regulation, Pricing, Corporate Planning \& Finance with over thirteen years of direct experience in Northeastern retail and wholesale electric and gas markets. I am presently the Manager - Rates and Regulation and contribute to the development and implementation of the Company's electric and gas rates. I have contributed to the Company's filings to the New Jersey Board of Public Utilities; including the Capital

1 Economic Stimulus Infrastructure Investment, Economic Energy Efficiency Stimulus, 2 Solar Loan, and Carbon Abatement Programs as will as unbundling electric rates, and 3 Off Tariff Rate Agreements. I have led in various economic analyses, asset 4 valuations, rate design and pricing efforts and participated in electric and gas marginal 5 cost studies

7 Strategic Issues Committee and the Economic Regulation and Committee of the 8 Edison Electric Institute.
$\underset{\text { Program }}{\substack{\text { Program } \\ \text { Assumption } \\ \text { Assumption }}}$ wp_ss $2 \mathrm{tax\mid x}$
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BS" Worksheet

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Refer to
WP_ss 2a.xis
to


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\text { BS" Worksheet BS" Worksheet } \\
\text { Row } 116 \\
\text { Row } 124
\end{gathered}
$$

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$*$ Montly
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Assumption $\begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered} \begin{gathered}\text { Program } \\ \text { Assumption }\end{gathered}$
$\begin{array}{llll}\text { (1) } & \text { (2) } & \text { (3) } & \text { (4) }\end{array}$

$\xrightarrow{\text { Procram }}$ Investment $G$ cross Plant $\begin{array}{ll}\text { Depreciation } \\ \text { Expense } & \frac{\text { Accumulated }}{\text { Depreciation }} \text { Net Plant }\end{array}$

| (6) | (7) | (8) |
| :---: | :---: | :---: |
|  | $\frac{\text { Pax }}{}$ | Plant | (9)


$\left.\begin{array}{l}\text { Accumula } \\ \text { Deferred } \\ \hline\end{array}\right]$ (9) (10) (11) | (12) | (13) | (14) | (15) | (16) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Expenses |  |  |  |
|  | Administrative. | Rent. | Insurance. | Other |  |
|  |  |  |  |  |  | N 解 | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |
| :---: | :---: | :---: | :---: | :---: |
| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |
| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | Deferred Tax Net Investment Requirement


| (11) | (12) | (13) | (14) | (15) | (16) | (17) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Expenses |  |  |  |  |  |
| Reuum | O\&M | Administrative | Rent | Insurance | Other | Enera |
|  |  |  |  |  |  |  |
| $:$ | : | - | : | : | - |  |
| - | - | - | . | . | . |  |
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| - | - | - |  |  | - |  |
| 8 |  | 152 | . | 1 |  |  |
| 25 | 5 | 152 | . | 3 |  |  |
| 41 57 57 | ${ }_{6}$ | 152 152 152 | - | ${ }_{5}^{4}$ | : |  |
| 57 127 | ${ }_{14}^{6}$ | 152 |  | 5 |  |  |
| 127 250 | 14 18 | 113 113 | ${ }_{23}^{11}$ | 10 15 | , |  |
| 434 | 49 | 136 | 44 | 22 |  |  |
| 614 | 53 | ${ }^{136}$ | 57 | 26 |  |  |
| 793 | 75 | 168 | 80 | 33 | - |  |
| 974 | 79 | 168 | 90 | 38 | . |  |
| 1,102 | 87 | 168 | 99 | 44 |  |  |
| ${ }_{1,236}^{1,14}$ | 94 | 168 | 106 | 51 |  |  |
| 1,369 | 99 | 168 | 112 | 57 |  |  |
| 1,499 | 102 | 168 | 106 | 64 |  |  |
| 1,626 1 1 | ${ }^{86}$ | 168 | ${ }^{83}$ | 70 | - |  |
| 1,752 | 88 | 168 | 85 | 76 |  |  |
| 1,875 | 109 | 159 | 105 | 85 |  |  |
| ${ }^{1,997}$ | 121 | 159 | 119 | 92 |  |  |
| 2,117 | 147 | 159 | 150 | 98 | - |  |
| 2,235 | ${ }^{153}$ | 159 | 155 | 105 |  |  |
| ${ }_{2,352}^{2,17}$ | 173 | 159 | 178 | 111 |  |  |
| 2,468 | 172 | 159 | 190 | 118 |  |  |
| ${ }^{2,581}$ | ${ }^{181}$ | 159 | 200 | 125 |  |  |
| 2,694 | 188 | 159 | 206 | 131 | - |  |
| 2,804 | 191 | 159 | 209 | 138 |  |  |
| 2,913 | 189 | 159 | 191 | 144 |  |  |
| 3,021 | 148 | 159 | 146 | 151 |  |  |
| ${ }^{3,126}$ | 148 | 159 | 146 | 157 | - |  |
| 3,230 <br> 130 | 183 | 164 | 177 | 169 | - |  |
| 3,333 | 200 | 164 | 218 | 176 | - |  |
| 3,435 | 244 | 164 | ${ }^{271}$ | 183 |  |  |
| 3,535 | 247 | 164 | 276 | 189 |  |  |
| ${ }^{3,635}$ | 278 | 164 | 314 | 196 |  |  |
| 3,733 <br> 3,830 | ${ }^{271}$ | 164 | 328 | 203 | - |  |
| 3,830 3,926 | ${ }^{281}$ | 164 | 342 | 210 | - |  |
| 3,926 4,021 | 287 287 | 164 164 | $\begin{array}{r}350 \\ 352 \\ \hline\end{array}$ | 216 223 |  |  |
| ${ }_{4,114}^{4,21}$ | 280 | 164 | 322 | 230 |  |  |
| 4.206 | 213 | 164 | 224 | ${ }_{237} 23$ |  |  |
| 4,295 | 206 | 164 | 241 | 243 |  |  |
| 4,380 | 256 | 170 | 291 | 258 | - |  |
| 4,465 | 279 | 170 | 319 | 264 |  |  |
| ${ }^{4,548}$ | ${ }^{340}$ | 170 | 392 | ${ }^{271}$ |  |  |
| 4.630 | 342 | 170 | 395 | 278 | - |  |
| 4,711 | ${ }^{383}$ | 170 | 444 | 285 | - |  |
| 4,765 | ${ }^{361}$ | 170 | 458 | 291 | - |  |
| 4,781 | 367 | 170 | 471 | 295 |  |  |
| 4,787 4,792 | 366 360 | 170 <br> 170 <br> 10 | ${ }_{473}^{476}$ | ${ }^{299}$ |  |  |
| 4,798 | 343 | 170 | 428 | 306 | . |  |
| 4,804 4.810 | 253 | 170 | 320 | 310 |  |  |
| 4,810 | 245 | 170 | 313 | 314 |  |  |

 ITC" Worksheet
Row 791

| 48 95 | 9 |
| :---: | :---: |
| 95 | 17 |
| ${ }^{143}$ | ${ }^{26}$ |
| 192 | 35 |
| 554 | 104 |
| 913 | 172 |
| 1,636 | 294 |
| 1,995 | 362 |
| 2,725 | 485 |
| 3,113 | 551 |
| 3,554 | 627 |
| 3,994 | 703 |
| 4,416 | 779 |
| 4,838 | 855 |
| 5,259 | ${ }^{931}$ |
| 5,680 | 1,007 |
| 5.976 | 1,083 |
| 6,273 | 1,159 |
| 6,424 | 1,234 |
| 6,721 | 1,310 |
|  | 1,386 |
| 7,155 | 1,462 |
| 7,419 | 1,538 |
| 7,684 | ${ }_{1,614}$ |
| 7,936 | 1,690 |
| 8,189 | 1,766 |
| 8,442 | 1,842 |
| ${ }^{8,694}$ | 1,917 |
| ${ }^{8,872}$ | 1,993 |
| 9,050 | 2,069 |
| 9,140 | 2,145 |
| 9,318 | 2,221 |
| 9,407 | 2,297 |
| 9.578 | 2,373 |
| 9,737 | 2,448 |
| 9,895 | 2,524 |
| 10,049 | 2,600 |
| 10,203 | ${ }^{2,676}$ |
| 10,357 | 2,752 |
| 10,498 | 2,825 |
| 10,612 | 2,899 |
| 10.804 | ${ }^{2,045}$ |
| 10,916 | 3,119 |
| 10,995 | ${ }_{3,192}$ |
| 10,951 | 3,243 |
| 10,843 | 3,283 |




| Program Assumption | Program Assumption | Refer to <br> WP_SS 2a.xls "Bk Depr" Worksheets | Prior Month $+\mathrm{Col} 3$ | $\begin{gathered} \text { Col } 2 \\ -C^{2} 4 \end{gathered}$ | Refer to <br> WP_SS 2a.xls "Sched--IS Worksheet Row 116 | Refer to WP_SS 2a.xls Sched--IS and BS" Workshee Row 124 | ${ }_{\text {(Col } 6-}$ Col7) Tax Rate] | $\begin{gathered} \text { Pior } \\ + \text { Coir } \\ 8 \end{gathered}$ | Col 5 -Col 9 | (Prior Col $6+$ * Monthly Pre Tax WACC | Program Assumption | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Refer to WP_SS 2a.x/s "State Rebate and ITC" Worksheet Row 791 | Col 21 * [Tax Rate] * [Rev. Conv. Fac.] Conv. Fac | (Col 3-Col 7) * [Tax <br> Rate] * [Rev. Conv. Fac.] | Col $3+$ Col 11 <br> + Col $12+$ Col 13 <br> + Col 14 + Col 15 <br> + Col 16 - Col 17 <br> - Col 18 - Col 19 - Col 20 - Col 21 <br> - Col $22+$ Col 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) |
|  |  |  |  |  |  | Plant |  |  |  |  |  |  | xpens |  |  |  | Revenue fror | Sale |  |  |  |  |  |
| $\xrightarrow{\text { Program }}$ | Gross Plant | Depreciation <br> Expens | $\frac{\text { Accumulated }}{\text { Depreciation }}$ | Net Plant | $\frac{\text { Tax }}{\text { Depreciation }}$ | $\frac{\text { Book Deprec }}{\text { Tax Basis }}$ <br> Tax Basis | $\frac{\text { Deferred }}{\text { Tax Exp }}$ | $\frac{\text { Accumulated }}{\text { Deferred Tax }}$ | $\underset{\text { Investment }}{\frac{\text { Net }}{}}$ | $\begin{aligned} & \text { Return } \\ & \text { Requirement } \end{aligned}$ | O\&M | Administrative | Rent | Insurance | Other | Energy | Capacity | SRECS | Other | Amortizion | $\underline{\text { Tax Gross-up }}$ | $\frac{\text { Tax Assoc. } \mathrm{W} / 50 \% \text { ITC }}{\text { Basis Reduction }}$ | $\begin{gathered} \text { Revenue } \\ \text { Requirements } \end{gathered}$ |
|  |  |  | - | - |  | - | - | - | . | - |  |  |  |  |  |  |  |  |  |  | - |  |  |
| - | - | - | - | , | - | - |  | - | , | - | , |  |  |  |  | - |  |  |  |  |  |  |  |
| - |  |  |  |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | - |  | - | . | . |  | - | - |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |
| . | . | . | . | . | . | . | : | . | . | . |  |  |  | . |  | . |  |  |  |  |  |  |  |
| 120 | . | - | - | - | - | - | - | - | - | - | - |  |  | - |  | . |  |  |  |  |  |  |  |
|  | - | - |  | - | - | - | - | - |  | - |  |  |  |  |  | - |  |  |  |  |  |  |  |
| 120 12.606 |  |  |  |  |  |  | 127 | 127 | 12.656 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12,606 | ${ }_{12,847}^{12,847}$ | 63 | ${ }^{63}$ | 12,784 | 364 364 | 54 54 | 127 | 127 | 12,656 | ${ }^{63}$ | 25 | 22 | 2 | 2 |  | 19 |  |  |  | 18 |  | 7 | ${ }_{137}$ |
| 12,547 | 25,459 | 125 | 251 | ${ }_{25,208}^{12,20}$ | ${ }_{721}$ | ${ }_{106}$ | ${ }_{253}^{127}$ | 508 | 24,700 | ${ }_{185}^{185}$ | ${ }_{35}^{25}$ | ${ }_{22}^{22}$ | ${ }_{3}$ | ${ }_{4}^{2}$ | - | ${ }_{42}^{19}$ |  | 128 |  | ${ }_{37}^{18}$ | 13 26 | 13 | 68 284 |
| 5,439 | 30,898 | 151 | 403 | 30,495 | 875 | 129 | 307 | 814 | 29,681 | 271 | 38 | 22 | 4 | 5 |  | 52 |  |  |  | 44 | ${ }^{31}$ | 16 | 380 |
| 5,439 | ${ }^{36,337}$ | 178 | 581 | 35,756 | 1,030 | 151 | ${ }^{361}$ | 1,175 | 34,581 | 321 | ${ }^{42}$ | 22 | 4 | ${ }_{7}$ |  | ${ }_{71} 62$ |  | 719 |  | 52 | ${ }_{42}^{36}$ | 19 | (277) |
| 5,439 | 41,776 | 204 | 785 | 40,991 | 1,184 | 174 | 415 | 1,590 | 39,401 | 369 | 46 | 22 | 5 | 7 |  | 71 |  |  |  | 60 | $\stackrel{42}{47}$ | 21 | 502 |
| 5,439 | ${ }^{47,215}$ | ${ }^{231}$ | ${ }^{1,016}$ | 46,199 | 1,338 | 196 | 469 | 2,059 | ${ }^{44,140}$ | ${ }^{417}$ | 49 | ${ }^{22}$ | 6 | 8 |  | ${ }^{78}$ |  |  |  | ${ }_{6}^{68}$ | ${ }^{47}$ | ${ }^{24}$ | (643) |
| 5,439 | 52,654 | ${ }^{257}$ | 1,273 | ${ }^{51,381}$ | ${ }^{1,492}$ | 219 | 523 | 2,582 | ${ }^{48,799}$ | 464 510 | 51 | 22 | ${ }_{7}$ | 10 |  | 76 59 |  | 1,276 |  | 76 84 | 53 <br> 58 | 27 30 | (643) |
| 5,439 5.439 | 58,093 63,532 | 284 311 | 1.557 1.888 | 56,536 61.664 | 1,646 1.800 | 241 264 | 577 631 | 3,159 3,790 | 53,376 57.874 | $\begin{array}{r}510 \\ 555 \\ \hline\end{array}$ | 43 45 | ${ }_{22}^{22}$ | 7 8 | 10 11 |  | 59 <br> 62 |  |  |  | 84 <br> 91 | 58 <br> 64 <br> 8 | 30 32 | 705 766 |
| 5.439 5.437 |  | 331 | 1,868 $2_{2,205}$ | 61,664 <br> 66,764 <br> 1 | 1,800 1,954 | ${ }_{287}^{264}$ | 631 685 | 3,790 4.455 | 57,874 62.289 | 555 599 | 45 <br> 55 | 22 14 | ${ }_{9}^{8}$ | 11 12 |  | 62 81 | . | 1,277 |  | ${ }_{99}^{91}$ | 64 69 69 | 32 35 | 7665 $(465)$ |
| 5,437 | 74,407 | 364 | 2,569 | 71,838 | 2,108 | 309 | 739 | 5,215 | 66,623 | 643 | 61 | 14 | 9 | 13 |  | 93 |  |  |  | 107 | 75 | 38 | 867 |
| 5,437 | 79,844 | 390 | 2,959 | 76,885 | 2,117 | ${ }^{332}$ | ${ }^{733}$ | 5,948 | 70,937 | 686 | 74 | 14 | 10 | 14 |  | 121 |  |  |  | 115 | 80 | 41 | 913 |
| 5,437 | 85,281 | 417 | ${ }^{3,376}$ | ${ }^{81,906}$ | 2,271 | 354 | ${ }_{783}^{787}$ | ${ }^{6.735}$ | ${ }^{75,170}$ | 772 | 77 | 14 | 11 | 15 |  | 127 |  | 1,929 |  | ${ }^{123}$ | ${ }_{8}^{86}$ | ${ }^{44}$ | (958) |
| 5,437 5.437 | 90,719 | 443 | 3.819 | ${ }^{86,900}$ | 2,282 | 377 | 783 811 | 7.518 | ${ }_{83}^{79,382}$ | ${ }_{813}^{771}$ | 88 | 14 | 12 | 16 | - | 149 |  | - |  | 131 138 | ${ }_{97}^{91}$ | 46 49 | 1,019 |
| 5,437 5,437 | 96,156 101,593 | 496 | 4,7895 | 91,867 | 2,367 | 392 | 880 | 8,172 | 88,538 87,639 | 813 854 | 92 | 14 | 13 | 17 |  | 161 |  | 2,781 |  | 138 | $\begin{array}{r}97 \\ 102 \\ \hline\end{array}$ | 59 | ${ }_{(1,663)}^{(1,066}$ |
| 5,437 | 107,030 | 523 | 5,308 | 101,723 | 2,559 | 444 | 869 | 10,038 | 91,684 | 894 | 95 | 14 | 14 | 19 |  | 180 |  |  |  | 154 | 107 | 55 | ${ }_{1,173}$ |
| 5,437 | 112,468 | 549 | 5,857 | 106,611 | 2,651 | 467 | 897 | 10,936 | 95,675 | 934 | 97 | 14 | 14 | 20 |  | 183 |  |  |  | 162 | 113 | 57 | 1,228 |
| 5,437 | ${ }^{117,905}$ | 576 | 6,433 | 111,472 | 2,744 | 489 | 926 | 11.862 | 99,610 | 974 | 96 | 14 | 15 | ${ }^{21}$ |  | 167 |  | 3,226 |  | 170 | 118 | 60 | $(1,926)$ |
| 5,437 | 123,342 | 602 | 7,035 | 116,307 | 2,836 | 512 | 955 | 12,817 | 103,490 | 1,013 | 76 | 14 | 16 | 22 |  | 125 |  |  |  | 178 | 124 | 63 | 1,379 |
| 5,437 <br> 5.438 | 1288779 134,217 | 629 655 | 7,664 8,320 | [121,115 | 2,929 3,021 3,14 | 535 557 | $\begin{array}{r}984 \\ 1.012 \\ \hline\end{array}$ | 13,800 14.813 | 107,315 111,085 | 1,051 1,089 1 | ${ }_{94}^{76}$ | 14 | 16 18 18 | 23 24 | - | 125 |  | 2,680 |  | 185 193 | 129 135 138 | 66 69 | ${ }_{\text {(1,198) }}^{1,436}$ |
| 5,438 | ${ }_{139,655}^{134,27}$ | ${ }_{682}$ | ${ }_{9}^{8,002}$ | 130,653 | 3,021 3,114 | 580 | 1,041 | ${ }_{1514,854}^{14,13}$ | 114,799 | ${ }_{1,127}^{1,089}$ | 103 | 15 | 18 18 | 24 25 |  | 155 173 |  | 2,680 |  | ${ }_{201}^{193}$ | 135 <br> 140 | ${ }_{71} 69$ | ${ }_{1,528}^{(1,198)}$ |
| 5,438 | 145,092 | 709 | 9,710 | 135,382 | 3,119 | 602 | 1,034 | 16,888 | 118,495 | 1,164 | 125 | 15 | 19 | 26 |  | 218 |  |  |  | 209 | 146 | 74 | ${ }_{1}^{1,560}$ |
| 5,438 5,438 | ${ }_{150,530}^{155,968}$ | 735 | 10,445 11,207 | 140,085 | 3,211 3,218 | 625 | ${ }_{1}^{1,063}$ | $\frac{17,950}{19.006}$ | 122,135 | 1,200 <br> 1,236 | $\frac{127}{143}$ | 15 | 20 | 27 |  | $\frac{222}{253}$ |  | 3.543 |  | 217 | 151 <br> 157 <br> 1 | 87 | $\frac{(1,931)}{1,650}$ |
| 5,438 | 161,405 | 788 | 11,995 | 149,410 | 3,273 | 670 | 1,070 | 20,076 | 129,335 | 1,272 | 139 | 15 | 21 | 29 |  | 268 |  |  |  | 232 | 162 | 82 |  |
| 5,438 | 166,843 | 815 | 12,810 | 154,033 | 3,329 | 692 | 1,083 | 21,159 | 132,874 | 1,308 | 144 | 15 | 22 | 30 |  | 279 |  | 4,691 |  | 240 | 168 | 85 | $(2,958)$ |
| 5.438 | ${ }^{172,281}$ | ${ }^{841}$ | 13,651 | 158,630 | 3,384 | 715 | 1,097 | 22,256 $\substack{2,366}$ | 136,374 13,834 | 1,343 | 147 | 15 | ${ }_{23}^{23}$ | 31 | - | ${ }_{287}^{286}$ |  |  |  | ${ }_{256}^{248}$ | 173 | ${ }_{91} 8$ | ${ }^{1,782}$ |
| 5,438 5 5438 | 177,7718 |  | 14.519 | 163,200 | 3,440 | 738 | 1,110 | 23,366 | 139,834 | 1,378 |  |  |  |  |  |  |  |  |  | 256 |  | 91 | 1,834 |
| 5,438 5 5 | 183,156 188.59 | ${ }_{921}$ | 15,413 16,34 | 167,743 <br> 172,260 <br> 1 | 3,495 3,551 | 780 789 | 1,124 1,137 | 24,489 25.627 | 143,254 146,634 | 1,412 1,446 1 | 114 | 15 15 | 24 25 | ${ }_{34}^{33}$ |  | ${ }_{188}^{257}$ |  | 5,096 |  | ${ }_{272} 27$ | 184 189 | ${ }_{96}^{94}$ | $(3,184)$ 1,998 |
| 5,438 | 194,031 | 947 | 17,281 | 176,750 | 3,606 | 805 | ${ }_{1,151}^{1}$ | 26,777 | 149,973 | ${ }_{1,479}$ | 109 | 15 | 25 | 35 |  | 186 |  |  |  | 279 | 195 | 99 | ${ }^{1}, 1,511$ |
| 5,438 | 199,469 | 974 | 18,255 | 181,215 | ${ }^{3,662}$ | 828 | ${ }^{1,1164}$ | 27,941 | 153,273 | 1,512 | 135 | 14 | 27 | 37 |  | 227 |  | 3,855 |  | ${ }^{287}$ | 200 | 102 | (1,769) |
| 5,438 5 5 | 204,908 | 1,000 | 19,255 | 185,652 | 3,717 | 850 | ${ }_{1}^{1,178}$ | 29,119 | 156,533 | ${ }_{1,545}^{1,577}$ | 177 | 14 | 28 | 38 | - | 250 311 | . |  |  | 295 | 206 211 | 105 | ${ }_{2}^{2,126}$ 2,146 |
| ${ }_{5}^{5,386}$ | ${ }_{215,680}^{210,294}$ | 1,027 1,053 | ${ }_{21,335}^{20,282}$ | 1900,012 <br> 194,345 |  | ${ }_{895}^{873}$ | 1,177 1,190 | 30,296 31,487 | 159,716 162,89 | 1,577 1,609 | 178 179 | 14 14 | 28 29 | 39 40 | . | 311 313 |  | 4,874 |  | 303 311 | 211 217 | 1110 | 2,146) $(2,680$ |
| 5,386 | 221,067 | 1,079 | 22,414 | 198,652 | ${ }^{3,814}$ | 917 | 1,190 | 32,677 | 165,976 | 1,640 | 200 | 14 | 30 | 41 |  | 355 |  |  |  | 318 | ${ }_{222}^{222}$ | 113 | 2,223 |
| - | ${ }_{2211067}^{221067}$ | 1,079 1079 | 23,494 2457 | 197,573 | 3,702 3 3 | 917 | ${ }^{1,144}$ | ${ }_{34}^{33,821}$ | ${ }^{163,752}$ | +1,645 | 185 187 | 14 14 | 30 30 | ${ }_{41}^{41}$ | - | 363 366 |  |  |  | 318 318 | $\begin{array}{r}222 \\ 222 \\ \hline\end{array}$ | 113 | 2,204 $(4.014)$ |
| - | ${ }^{221,067}$ | 1,079 1,079 | ${ }_{25,573}^{25,652}$ | 196,494 | ${ }_{3,477}$ | 917 | 1,098 <br> 1,051 | 34,918 35,970 | 161.575 159,45 | 1,623 <br> 1,601 | 185 | 14 | 30 30 | ${ }_{41}^{41}$ |  | 362 |  | 6,194 |  | 318 | $\begin{array}{r}222 \\ 222 \\ \hline\end{array}$ | 113 | ${ }_{( }^{(4,014)}$ |
| - | 221,067 | 1,079 | 26,732 | 194,335 | ${ }^{3,364}$ | 917 | 1,005 | ${ }^{36,975}$ | 157,360 | 1,580 | 180 | 14 | 30 | ${ }^{41}$ |  | 352 |  |  |  | ${ }^{318}$ | ${ }^{222}$ | 113 | (2,145 <br> $(3,979)$ <br> 2, |
| - | ${ }^{221,067}$ | 1,079 | 27,811 | 193,256 | 3,252 | 917 | 959 | ${ }^{37,934}$ | 155,322 | 1,560 1,539 | ${ }_{126}^{171}$ | 14 | 30 | ${ }_{41}^{41}$ | $:$ | 305 218 |  | 6,141 | - | 318 | 222 222 222 | 113 | $\underset{\substack{(3,979) \\ 2,185}}{ }$ |
| : | ${ }_{221,067}^{221,067}$ | 1,079 1,079 | ${ }_{29,970}^{28,890}$ | \|191,097 | ${ }_{3,027}^{3,192}$ | ${ }_{917}$ | 913 867 | ${ }_{39,713}^{38,87}$ | 151,384 | 1,520 | ${ }_{121}$ | 14 | ${ }_{30}$ | ${ }_{41}$ | $:$ | ${ }_{208}$ | 3 |  | - | ${ }_{318}$ | ${ }_{222}^{222}$ | ${ }_{113}$ | 2,166 |

Neighborhood Segment

$$
\begin{aligned}
& \begin{array}{llll}
\text { (1) } & \text { (2) } & \text { (3) } & \text { (4) }
\end{array}
\end{aligned}
$$



| 2009 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 312009 | - | - |  |  |
|  |  |  |  |  |
| 㖪 2009 | 1,682 | 1,682 | 10 | 10 |
| ett 2009 | 1,682 | 3,364 | 20 | 30 |
| V2009 | 1,682 | 5,045 | 30 | 60 |
| c 2009 | 1.748 | 6,794 | 41 | 102 |
| n 2010 | 3,581 | 10,375 | 63 | 165 |
| 2010 | 3,581 | ${ }^{13,955}$ | 85 | 249 |
| ar 2010 | 3,581 | 17,536 | 106 | 356 |



HMFA / Affordable Housing Segment

 $\qquad$
$\qquad$
 $\qquad$
 ITC"
Workshee
$\qquad$

$$
{ }^{(12)}
$$

$$
{ }^{(13)} \quad \text { Ex }
$$

$$
\frac{(14)}{\text { Expenses }}
$$

(15)

| 2009 | . | . |  | . | . |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2010 | $:$ | $:$ | : | : | : | : | : | : | : |  |  |  |
| 2010 |  | : | : | : | : | . | . | : |  |  |  |  |
| 2010 | - | . | : | : | : | : | : | - | : | : |  |  |
| 2010 | 478 | 478 | 3 | 3 | 475 | 14 | 3 | 4 | 4 | 471 |  |  |
| 2010 | 475 | ${ }^{953}$ | 6 | 9 |  | 27 | 5 | 9 | 13 | 930 | 7 |  |
| 2010 | 475 | 1,428 | 9 | 18 | 1,410 | 40 | 8 | 13 | 27 | 1,383 | 12 |  |


| $\vdots$ | $\vdots$ | $\vdots$ |
| :---: | :---: | :---: |
| $\vdots$ | $\vdots$ | $\vdots$ |

$\square$

|  | Program Assumption | Program Assumption | Refer to WP_SS 2a.xls to WP_SS 2d.xls "Bk Depr" Worksheets | Prior Month $+\mathrm{Col} 3$ | $\begin{gathered} \text { Col } 2 \\ -C^{2} 4 \end{gathered}$ | Refer to <br> WP_SS 2a.xls <br> WP SS <br> to $2 d$ xls "Sched--IS and BS" Worksheet Row 116 | Refer to <br> WP_SS 2a.xls to WP_SS 2d.xls "Sched--IS and Row 124 | (Col 6 - Col <br> 7) * [Income Tax Rate] | $\begin{gathered} \text { Pior } \\ + \text { + Coil } \end{gathered}$ | Col -Col 9 | (Prior Col $6+$ Col6)/2 Tax WACC | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | $\begin{aligned} & \text { Program } \\ & \text { Assumption } \end{aligned}$ | Program Assumption | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | Program Assumption | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | Program Assumption | Program Assumption | Program Assumption | $\begin{gathered} \text { Refer to } \\ \text { wP_ss 2a.xls } \\ \text { to to } \\ \text { WP_SS2.x.xis } \\ \text { "State Rebate } \\ \text { and ITC" } \\ \text { Worksheet } \\ \text { Row } 791 \end{gathered}$ | Col 21 * [Tax Rate] * [Rev. Conv. Fac.] Con. | $\begin{aligned} & \text { (Col 3-Col 7)*[Tax } \\ & \text { Rate] *[Rev. Conv. } \\ & \begin{array}{l} \text { Fac.] } \end{array} \end{aligned}$ | Col $3+\mathrm{Col} 11$ <br> + Col $12+$ Col 13 + Col $14+$ Col 15 <br> + Col 16 - Col 17 <br> - Col 18 - Col 19 <br> - Col 20 - Col 21 <br> - Col $22+$ Col 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) |
|  |  |  |  |  |  |  | Plant |  |  |  |  |  |  | Expenses |  |  |  | Revenue fit | Sale of |  | ITC |  |  |  |
| Year | $\frac{\text { Program }}{\text { Investment }}$ | Gross Plant | $\frac{\text { Depreciation }}{\text { Expense }}$ | Accumulated Depreciation | Net Plant | $\underline{\text { Depreciation }}$ | $\frac{\text { Book Deprec }}{\text { Tax Basis }}$ | Deferred Tax Exp | Accumulated Deferred Tax | $\begin{aligned} & \text { Investment } \\ & \text { Net } \end{aligned}$ |  | O\&M | Administrative | Rent | Insurance | Other | Energy | Capacity | SRECS | Other | Amoriztion | $\underline{\text { Tax Gross-up }}$ | Tax Assoc. w/50\% ITC Basis Reduction | Requirements |
| 2009 | 6,914 | 6,794 |  |  | 6,692 |  |  |  |  |  |  | ${ }_{842}^{21}$ | ( $\begin{gathered}607 \\ 1.842 \\ 1\end{gathered}$ | 894 | 14 |  |  |  |  |  | 29 2.358 | 20 |  |  |
| 2010 | 196,339 18651 | 203,255 389,905 | 8,083 21,178 | 8,184 29,362 | 1950703054 | ${ }^{38,675}$ | - $\begin{array}{r}6.870 \\ 18.001\end{array}$ |  | ${ }_{411,897}^{13,27}$ | 181,843 318,646 | (11,76 | + $\begin{array}{r}842 \\ 1.919\end{array}$ | 1,842 <br> 1,904 <br> 1 | -1,995 | 1,456 |  | ${ }_{5,101}^{1,927}$ |  | 82, 8164 |  | ¢, $\begin{aligned} & 2,358 \\ & 6,179\end{aligned}$ | 4,309 | 2.215 | 10,695 17,050 |
| 2012 | 186,086 | 575,992 | 34,028 | 63,390 | 512,602 | 116,105 | 28,924 | ${ }^{35,817}$ | 77,715 | 434,887 | 45,294 | 2,978 | ${ }^{1,968}$ | 3,434 | 2,474 | - | 8.140 |  | 47,192 |  | 9,926 | 6,922 | 3,559 | 21,556 |
| 2013 | 130,056 | 706,048 773015 | 45,604 <br> 5.236 | 108,994 161256 | $\begin{array}{r}597,054 \\ \hline 611258 \\ \hline\end{array}$ | ${ }_{\text {128,437 }}^{115652}$ | 38,763 <br> 1508 | 36,841 <br> 2929 <br> 2929 | ${ }_{114,556}^{143785}$ | 482,498 467873 | 56,272 <br> 57,633 | 3,895 | 2,034 | ${ }^{4,781}$ | $\begin{array}{r}3,474 \\ \hline 126\end{array}$ |  | 10,797 | ${ }^{3}$ | 61,801 |  | ${ }_{\text {13, }}^{13,301}$ | 9,276 | 4.747 | 25,653 |
| 2014 | ${ }^{66,967}$ | ${ }_{7}^{773,015}$ | ${ }^{52,363}$ | ${ }^{161,356}$ | $\begin{array}{r}611,658 \\ \\ \hline 77298\end{array}$ | 115,652 | ${ }^{44,508}$ | ${ }^{29,229}$ | ${ }^{143,785}$ | ${ }^{467,873}$ | ${ }^{57,633}$ | ${ }^{4.345}$ | 2,102 | 5,870 | 4,126 |  | ${ }^{12,115}$ | 53 | ${ }^{69,746}$ |  |  | ${ }^{10,652}$ | 5,477 | 24,074 |
| ${ }_{2016}^{2015}$ | 14,298 16,755 | 787,313 804,068 | 53,570 53,306 | ${ }_{268,233}^{214,926}$ | 572,387 <br> 535,835 | 8,128 55,529 | ${ }_{45,310}^{45,534}$ | 15,856 4,198 | 159,640 168,839 | ${ }_{\text {412,997 }}^{412,766}$ | ¢ $\begin{array}{r}56,447 \\ 46,87\end{array}$ | 4,474 4,586 | 1,372 573 | ¢, 6 6,160 | 4,4455 | . | 12,299 14,249 | 264 466 | 70,872 68,470 |  | 15,650 15,588 | 10,993 10,870 | 5,603 5,576 | 17,974 12,645 |
| 2017 | 16,812 | 820,881 | 53,124 | 321,357 | 499,524 | 37,106 | 45,429 | (3,419) | 160,419 | 339,105 | 42,493 | 4,701 | 593 | 7,689 | 4,609 |  | 16,340 | 660 | 66,057 |  | 15,072 | 10,510 | ${ }_{5}^{5,366}$ | ${ }^{9,935}$ |
| 2018 | 12,633 | 833,514 | 52,970 | 374,326 | 459,188 | 23,184 | 45,760 | $(9,275)$ | 151,144 | 308,044 | 38,792 | 4.819 | 613 | 8.476 | 4,747 | . | 18,422 | 692 | 63,808 |  | 14,232 | 9,925 | ${ }_{5,027}$ | ${ }_{8,366}$ |
| 2019 | 7,084 | 840,597 | 52,881 | 427,207 | 413,391 | 14,051 | 45,964 | (13,111) | 138,033 | 275,358 | ${ }^{34,952}$ | 4,940 | 635 | 9,260 | 4,890 |  | 20,491 | 710 | ${ }^{61,586}$ |  | ${ }^{13,724}$ | ${ }^{9,5570}$ | 23 | ${ }^{6,300}$ |
| 2020 | ${ }^{13,576}$ | 854,173 | 52,786 | 479,993 | 374,180 | ${ }^{11,376}$ | 46,162 | (14,2) | ${ }^{123,741}$ | 250,439 | ${ }^{31,380}$ | 5,064 | 657 | 10.039 | ${ }^{5.036}$ | - | 22,548 | 729 | 59,336 |  | ${ }^{13,246}$ | ${ }^{9,237}$ |  | ${ }_{4,4735}^{4,385}$ |
| 2021 | 15,863 | 870,036 | 52,610 | 532,603 | 337,433 | 13,167 | 46,479 | $(13,686)$ | 110,056 | 227,378 | 28,600 | 5,190 | 680 | 10,257 | 5,188 |  | 23,108 | 745 | 57,366 |  | 12,435 | ${ }^{8,671}$ | 4,275 | 4,473 3.953 |
| ${ }_{2022}^{2022}$ | ${ }_{115934}^{11966}$ | 885,970 897937 | 52,433 52,271 | 585,036 637307 | 300,934 260629 | 14,125 13,927 | ${ }_{46,371}^{46,533}$ | $(13,315)$ <br> $(13,329$ |  | 204,193 177,217 | ${ }_{22,922}^{25,832}$ | 5,320 5.454 | ${ }_{728}^{704}$ | 10,480 10,710 | 5,343 5.503 |  | 23,682 | 764 783 | 55,362 $5 \times, 429$ |  | 12,058 <br> 12,058 <br> 1 | 8,408 <br> 8,408 | 4,114 4.114 | 3,953 2,755 |
| 2024 | ${ }_{6,700}$ | 904,637 | 52,172 | 689,479 | 215,158 | 12,016 | 46,272 | (14,073) | 69,338 | 145,819 | 19,389 | 5,590 | 754 | 10,945 | 5,669 |  | 24,874 | 805 | 51,538 |  | 12,058 | ${ }^{8,4088}$ | 4,114 | 951 |
| 2025 | 10,014 | 914,650 | 48,788 | 738,267 | 176,383 | 10,622 | 43,342 | (13,443) | 55,896 | 120,487 | 15,846 | 5,497 | 780 | 9,778 | 5,681 | 12,907 | 24,084 | 822 | 44,050 |  | 11,142 | 7,769 | 3,798 | 15,209 |
| 2026 | 11,638 | 926,288 | 44,241 | 782,508 | 143,780 | 10,923 | 39,350 | (11,679) | 44,217 | 99,564 | 13,144 | 5,287 | 808 | 7,916 | 5,654 | 9,431 | 22,608 | 843 | 30,764 |  | 10,020 | 6,987 | 3,410 | 18,668 |
| 2027 | ${ }^{11,737}$ | ${ }^{938,025}$ | ${ }^{39,932}$ | 882,440 | 115,585 | 11,025 | ${ }^{35,561}$ | (10,080) | ${ }^{34,136}$ | ${ }^{81,449}$ | 10,806 | 5,095 | ${ }_{8}^{836}$ | 6,136 | ${ }_{5}^{5,633}$ | ${ }^{9,636}$ | ${ }^{21,223}$ | ${ }^{864}$ | ${ }_{7}^{18,511}$ |  | ${ }^{8,972}$ | 6,257 | ${ }^{3,048}$ | 25,296 |
| 2028 | 8,293 | 946,318 | 35,889 | 858,329 | 87,990 | 10,487 | 32,007 | (8,841) | 25,295 | 62,694 | 8,693 | 4,903 | 865 | 4,255 | 5,618 | 9,046 | 19,116 | 888 | 7,711 |  | 7,988 | 5,570 | 2,707 | 30,706 |
| 2009-2028 | 946,317 |  | 858,329 |  |  | 808,797 | 747,227 | 25,295 |  |  | 593,459 | 84,921 | 21,055 | 135,974 | 84,442 | 41,020 | 325,411 | 10,090 | 924,090 |  | 221,310 | 154,327 | 77,475 | 261,445 |

PSE\&G Solar 4 All Program
Revenue Requirements Calculation
(sooo's)
Centralized Segment


PSE\&G Solar 4 All Program
Revenue Requirements Calculation
$\underset{\text { (s000's) }}{ }{ }^{\text {Revenue Requirements Calculation }}$
Neighborhood Segment

|  | Program Assumption | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ |  Worksheets | $\begin{aligned} & \text { Prior Month } \\ & +\mathrm{Col} 3 \end{aligned}$ | $\begin{gathered} \text { Col } 2 \\ -C O O L_{4} \end{gathered}$ | Refer to <br> WP_SS 2b.xls "Sched--IS and BS" Worksheet Row 116 | Refer to wP ss 2b.x/s BS" Worksheet Row 124 | (Col 6 - Col 7)* [Income Tax Rate] | $\begin{aligned} & \text { Prior } \\ & + \text { Col } \end{aligned}$ |  | (Prior Col $6+$ Col 6) $/ 2$ Tax WACC | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Program Assumption | Refer to WP_SS 2b.xls "State Rebate Worksheet Row 791 | Col 21 * [Tax Rate] * [Rev Conv. Fac |  | $\mathrm{Col} 3+\mathrm{Col} 11$ <br> $+\mathrm{Col} 12+\mathrm{Col} 13$ <br> $+\mathrm{Col} 14+\mathrm{Col} 15$ <br> $+\mathrm{Col} 16-\mathrm{Col} 17$ <br> Col 18 - Col 19 <br> - Col 20 - Col 21 - Col $22+$ Col 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) |
|  |  |  |  |  |  |  | Plant |  |  |  |  |  |  | enses |  |  |  | Revenue | Sale of |  | ITC |  |  |  |
| Year | $\frac{\text { Program }}{\text { Investment }}$ | Gross Plant | $\frac{\text { Depreciation }}{\text { Expense }}$ | $\frac{\text { Accumulated }}{\text { Depreciation }}$ | Net Plant |  | $\frac{\text { Book Deprec }}{\text { Tax Basis }}$ | $\frac{\text { Deferred }}{\text { Taxexp }}$ | $\frac{\text { Accumulated }}{\text { Deferred Tax }}$ | $\underset{\text { livestment }}{\text { Net }}$ | Requirement | O\&M | Administrative | Rent | Insurance | Other | Eneray | Capacity | SRECS | Other | Amortizion | $\underline{\text { Tax Gross-up }}$ | $\frac{\text { Tax Assoc. w/50\% ITC }}{\text { Basis Reduction }}$ | $\frac{\text { Revenue }}{\text { Requirements }}$ |
| 2009 | 6,794 | ${ }^{6,794}$ | 102 | 102 | 6,692 |  |  |  |  | ${ }^{6,531}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | 54,006 | 60,799 | ${ }^{2,415}$ | 2.517 | 58,283 | ${ }^{11,127}$ | 2.052 515 | 3,728 9 | 3,889 1,867 | 54,394 10349 | $\begin{array}{r}3,415 \\ 9 \\ \hline 1555\end{array}$ | ${ }_{415}^{171}$ | ${ }_{73}^{71}$ |  | 340 1.016 |  | 539 1.573 |  | 2,332 8.554 8, |  | ( $\begin{array}{r}685 \\ 1.980\end{array}$ | 478 1.380 | ${ }_{728}^{253}$ | 2,630 5.239 7,42 |
| 2011 | 65,992 65.043 | ${ }_{\text {12, }}^{125,891}$ | 6,959 | 9,475 21,143 | 116,416 <br> 169,791 | 28,011 | 5,915 | 9,078 11.927 | ${ }_{24,984}^{12,967}$ | 103,449 | 9,535 114929 | ${ }_{681}$ | 73 76 7 | 421 | +1,016 |  | ${ }^{1,573}$ |  | ${ }^{8.554}$ |  | ${ }_{3}^{1,9380}$ | 1,380 |  | 5,239 |
| 2012 2013 | 65,043 52,219 | 1900,934 243,153 | li1,688 | 21,143 37,250 | 1699,791 <br> 205903 | 38,949 44,851 | 9,918 13,690 | (11,927 | 24,894 37,696 | 144,896 168,27 | 14, $\begin{aligned} & 14,299 \\ & 19,152\end{aligned}$ | ${ }_{948}^{681}$ | 79 | ${ }_{840}$ | ${ }_{2,499}$ |  | ${ }_{3,575}^{2,015}$ |  | ${ }_{20,313}^{15,077}$ |  | ${ }_{\substack{3,585 \\ 4.312}}$ | 2,316 3,197 | 1,685 | 7,424 <br> 9,638 |
| 2014 | 20,636 | 263,789 | 18,733 | 55,982 | 207,807 | 41,575 | 15,923 | 10,539 | 48,235 | 159,572 | 20,144 | 1,097 | 81 | 1,134 | ${ }^{2,995}$ |  | 4,108 |  | ${ }^{23,687}$ |  | 5,334 | ${ }^{3,720}$ | 1,959 | 9,294 |
| 2015 | 7,644 | 271,433 | 18,968 | 74,950 | 196,483 | . 608 | 16,122 | 5,540 | 53,776 | 142,707 | 17,999 | 1,111 | 84 | ${ }^{1,163}$ | 3,134 |  | 4,101 |  | 23,649 |  | 5,409 | 3,772 | 1,984 | 7,514 |
| 2016 | 9,263 | 280,696 | 18,876 | 93,826 | 186,870 | 20,854 | 16,045 | 1,976 | 55,751 | 131,118 | 16,360 | 1,139 | 87 | 1,157 | 3,228 |  | 4,751 |  | 22,835 |  | 5,389 | 3,758 | 1,974 |  |
| 2017 2018 | 9,322 <br> 7.531 | 2290,017 2979 | 18,793 18,725 | 112,620 | 177.398 <br> 166,204 | 15,315 <br> 10,838 | 10,126 16,333 | ${ }_{(2,257)}^{(333)}$ | 55,418 53,161 | 121.980 113.043 | 15,127 14,103 | 1,1167 1,196 | 90 93 | 1,152 <br> 1,146 | + $\begin{aligned} & 3,325 \\ & 3,424\end{aligned}$ |  | 5,448 6,143 |  | 22,031 21,279 |  | 5.116 4.657 | 退3,568 | 1,860 1.669 | 5,350 <br> 5.031 |
| 2019 | ${ }^{3,738}$ | 301,287 | 18,690 | 150,035 | 151,252 | 7,145 | 16,465 | (3,829) | 49,332 | 101,921 | ${ }^{12,905}$ | ${ }^{1,226}$ | 97 | ${ }^{1,140}$ | 3,527 |  | 6,833 |  | 20,538 |  | 4,375 | 3,051 | 1,551 | 4,338 |
| 2020 | 7,287 | 308,574 | 18,644 | 168,679 | 139,895 | 6,275 | 16,573 | (4,231) | 45,101 | 94,794 | 11,730 | 1,256 | 100 | 1,134 | 3,633 |  | 7.518 |  | 19,819 |  | 4,131 | 2,881 | 1,445 | 3,594 |
| 2021 | 8,842 | 317,416 | 18,563 | 187,242 | 130,174 | 7,240 | 16,758 | (3,910) | ${ }^{41,191}$ | 88,984 | 11,001 | 1,287 | 104 | ${ }^{1,129}$ | 3,742 |  | 7,705 |  | ${ }^{19,131}$ |  | 3,708 | 2,585 | 1,258 | 3,954 |
| 2022 | ${ }^{8,910}$ | 326,326 | 18.479 | ${ }^{205,721}$ | 120,605 | 7.833 | 16.802 | (3,685) | ${ }^{37,506}$ | ${ }^{83,099}$ | 10,300 | 1,319 | 107 | ${ }^{1,123}$ | ${ }^{3,854}$ |  | 7,897 |  | 18.463 |  | 3,507 | 2,445 | 1,169 | 4,041 |
| $\frac{2023}{2024}$ | 7,209 3,587 | 333,535 337,122 | 18,403 | 224,124 | $\begin{array}{r}109,411 \\ \hline 94,641\end{array}$ | 7,8832 | ${ }_{16,726}^{16,680}$ | (3,650) | 33,856 29,809 | 75,555 64,832 | 9,546 <br> 8,445 | 1,352 1,386 | 111 | 1,117 1,112 | 3,970 4,089 |  | 8,093 8,294 |  | 17,818 17,172 |  | 3,507 <br> 3,507 | 2,445 | 1,169 1,169 | 3,805 3,255 |
| 2025 | 7,031 | 344,153 | 18,322 | 260,803 | ${ }^{83,350}$ | ${ }_{6}^{6,219}$ | 16,645 | (4,284) | 25.526 | 57,825 | 7,300 | ${ }^{1,420}$ | 119 | 1,106 | 4,211 |  | 8.500 |  | 14,997 |  | 3,507 | 2,445 | ${ }^{1,169}$ | 4,200 |
| 2026 | 8,544 | 352,697 | 18,263 | 279,066 | 73,631 | 7,030 | 16,586 | (3,926) | 21.600 | 52,031 | 6.578 | 1,455 | 123 | 1,101 | 4,338 |  | 8,711 |  | 10,743 |  | 3,507 | 2,445 | ${ }^{1,169}$ | ${ }^{7,621}$ |
| ${ }_{2028}^{2027}$ | 8,623 6,987 | 361,320 368,307 | 18,205 18,152 | ${ }_{315,423}^{297,271}$ | 64,049 52,884 | 7,555 7,580 | 16,528 16,475 | $\underset{(3,654)}{(3,687}$ | 17,913 14,259 | ${ }_{3}^{46,136}$ 38,625 |  | 1,492 1,529 | 127 180 | 1,090 | 4,468 |  | 8,928 8,813 |  | 6,542 |  | ${ }^{3,507}{ }^{3,507}$ | , | ${ }_{1,169}^{1,169}$ | ${ }^{111,377}$ |
| 2009-2028 | 368,307 |  | 315,423 |  |  | 313,155 | 278,449 | 14,259 |  |  | 219,698 | 21,666 | 2.525 | 18,160 | 62,165 |  | 114,162 |  | 307,697 |  | 73,265 | 51,090 | 25,783 | 119,205 |



|  | (1) | (2) | (3) | (4) | (5) | (7) |  |  | (9) <br> Accumulated Deferred Tax | $\begin{array}{cc} \text { (10) } & \text { (11) } \\ \text { Investment } & \begin{array}{c} \text { Return } \\ \text { Requirement } \end{array} \end{array}$ |  | ${ }^{(12)} \quad{ }^{(13)} \quad \stackrel{\text { Expenses }}{\text { (14) }} \quad$ (15) ${ }^{\text {(16) }}$ |  |  |  |  | (17) ${ }_{\text {Revenue from Sale of }}$ |  |  |  | ${ }^{\text {(21) }}{ }_{\text {ITC }}{ }^{\text {(22) }}$ |  | (23) | (24) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Plant |  |  |  |  |  |  |  |  |  |  |  |  |
| Year | $\begin{aligned} & \text { Program } \\ & \text { Investment } \end{aligned}$ | Gross Plant | $\frac{\text { Depreciation }}{\text { Expense }}$ | $\frac{\text { Accumulated }}{\text { Depreciation }}$ | Net Plant | $\frac{\text { Tax }}{\text { Depreciation }}$ | $\frac{\text { Book Deprec }}{\text { Tax Basis }}$ | $\frac{\text { Deferred }}{\text { Tax Exp }}$ |  |  |  | ORM | Administrative | Rent | Insurance | Other | Energy | Capaciry | SRECS | Other | Amorrizion | $\underline{\text { Tax Gross-up }}$ | $\frac{\text { Tax Assoc. w/50\% iTC }}{\text { Basis Reduction }}$ | $\begin{gathered} \text { Revenue } \\ \text { Requirements } \end{gathered}$ |
| 2009 2010 | 75.121 | 75,121 | 3.692 | ${ }^{3.692}$ | ${ }^{71,429}$ | 16,250 | ${ }_{3,138}$ | 5.387 | 5,387 | 66,042 | 4,937 |  |  |  |  |  | 234 | 1,290 | 827 | 98 |  | 827 |  | 3,649 |  | 1.093 | 762 | 386 | 5,134 |
| 2011 | 50,680 | 125,801 | 7,903 | 11,594 | 114,207 | ${ }_{28,346}^{10,20}$ | 6,717 | ${ }_{8,886}^{5}$ | 14,273 | 99,934 | 9,991 | 454 | ${ }_{1,419}^{1,200}$ | 1,743 | 217 |  | 1,743 | - | ${ }_{9,922}^{3,49}$ |  | ${ }_{2}^{1,342}$ | 1,633 | 827 | 6,912 |
| 2012 2013 | 50,691 50,69 |  | 11.802 15701 | 23,396 2,997 | 153,096 188.054 18. | 3,2429 38.638 | 11,031 <br> 13,36 | 9,941 10,391 |  | 128.882 153448 | 11,739 16,92 | 671 899 | 1,508 1,583 1 |  | 334 457 |  | 2,572 3,379 |  | 15.089 10193 |  | 3,499 4.656 | (e,400 | 1,234 1,642 | 8,260 10,129 1012 |
| $\frac{2013}{2014}$ | 50,659 | 227,451 273,482 | ${ }^{15,701} 1$ | 39,097 58663 | 188,054 214,819 | 38,638 43.007 | ${ }_{\text {13, }}^{13,3631}$ | ${ }_{10,886}^{10,391}$ | 34,605 45.442 | 153,448 169,377 | ${ }^{11,942}$ | $\xrightarrow{1,134}$ | ${ }_{1}^{1,583}$ | ${ }^{3,1579} 4$ |  |  | $\stackrel{3,159}{4.158}$ |  | ${ }_{\text {12, }}^{1939}$ |  | ${ }_{5}^{4.605}$ | 3,247 | 1,642 2,047 | ${ }_{10,129}^{11,262}$ |
| 2015 | 3,028 | 276,510 | 20,572 | 79,235 | 197,275 | 33,141 | 17,486 | ${ }_{6,432}$ | 51,873 | 145,402 | 18,735 | ${ }_{1,195}^{1,195}$ | 1,016 | 4.412 | 650 |  | 4,412 |  | ${ }^{25,412}$ |  | ${ }_{6,108}^{5}$ | 4,429 | ${ }_{2,152}^{2,182}$ | ${ }_{8,541}^{1,202}$ |
| 2016 | 3,613 | 280,123 | 20,451 | 99,686 | 180,437 | 20,895 | 17,383 | 1,443 | 53,316 | 127,121 | 16,272 | 1,225 | ${ }^{241}$ | 5,111 | 670 |  | 5,111 |  | 24,571 |  | 6,076 | 4,237 | 2,139 | 6,114 |
| 2017 | 3,625 | 283,748 | 20,395 | 120,081 | 163,667 | ${ }^{13,883}$ | 17,395 | (1,443) | 51,873 | 111,794 | ${ }^{14,276}$ | 1,255 | ${ }^{264}$ | 5.862 | 690 |  | 5,862 |  | ${ }^{23,704}$ |  | 5,953 | 4,151 | 2,092 | ,164 |
| 2018 | 3,637 | 287,386 | 20,342 | 140,423 | 146,962 | 9,220 | 17,459 | (3,385) | 48,488 | 98,474 | 12,567 | 1,287 | 273 | 6,608 | 710 | . | 6,608 |  | 22,895 |  | 5,738 | 4,001 | 2,011 | 4.555 |
| 2019 | ${ }^{3,346}$ | 290,731 | 20,292 | 160,715 | 130,016 | 5,046 | 17.524 | (5,127) | 43,362 | 86,654 | 11,079 | ${ }_{1}^{1,319}$ | ${ }^{283}$ | ${ }^{7,351}$ | 732 |  | 7,351 |  | 22,096 |  | ${ }^{5} 5.535$ | ${ }^{3,853}$ | ${ }_{1}^{1,930}$ | 4,160 |
| 2020 | 2.872 | 293,603 | 20,264 | 180,979 | 112,625 | 3,190 | 17,582 | (5,913) | 37,449 | 75,176 | 9,658 | 1,351 | 293 | 8,088 | 754 |  | 8,088 |  | ${ }^{21,328}$ |  | 5,382 | 3,753 | ${ }_{1,870}^{1,80}$ | 3,726 |
| 2021 | 3,354 | 296,957 | 20,213 | 201,192 | 95,765 | 3,286 | 17,640 | (5,897) | 31,551 | 64,213 | 8,342 | 1,385 | 303 | 8,289 | 776 |  | 8,289 |  | 20.583 |  | 5,190 | 3,619 | 1,794 | 3.420 |
| ${ }_{2023}^{2022}$ | 3,367 3,381 | 300,324 303705 | 20,161 20,110 | 221,353 241.463 | 78,971 62.242 | - $\begin{aligned} & 3,336 \\ & 3,355\end{aligned}$ | 17,638 17.587 | (5, 5 (5,876) | ${ }_{10}^{25,876}$ |  | 7,032 5.728 5 | 1,419 1.455 | 313 324 | 8,495 8,706 | 800 824 |  | 8,495 8,706 |  | 19,864 19,173 |  | 5,102 5.102 | 3,558 <br> 3,558 | 1,760 1,760 | (2,963 |
| 2024 | 3,113 | 306,818 | 20,059 | 261.523 | 45,295 | 3,307 | 17,536 | (5,846) | 13,975 | 31,320 | ${ }_{4,428}$ | 1,991 | 336 | 8,923 | 848 |  | ${ }_{8,923}$ |  | 18,504 |  | 5,102 | ${ }^{3}, 5558$ | 1,760 | ${ }_{1}, 759$ |
| 2025 |  | 306,818 | 16,836 | 278,359 | 28,459 | 2,548 | 14,753 | (5,015) | 8,960 | 19,499 | 3,005 | 1,300 | 347 | 7,765 | 720 | 12,322 | 7,765 |  | 15,405 |  | 4,213 | 2,938 | 1,452 | 13,426 |
| 2026 | - | 306,818 | 12,796 | 291,155 | 15,663 | 1,533 | 11,219 | $(3,979)$ | 4,981 | 10,682 | 1,779 | 1,010 | 360 | 6,041 | 562 | 8,527 | 6,041 |  | 11,239 |  | ${ }^{3,196}$ | 2,228 | 1,100 | 9,472 |
| ${ }_{2027}^{2027}$ |  | ${ }^{306,818}$ | ${ }_{5}^{9,005}$ | ${ }^{300} 1600$ | -6,658 | ${ }_{513}^{924}$ | 7,895 4.599 | (2,864) | ${ }^{2,1177}$ | ${ }^{4,541}$ | 885 <br> 306 | ${ }^{739}$ | ${ }^{372}$ | ${ }_{4}^{4,417}$ | ${ }_{207}^{407}$ | 8,783 <br> 9046 | 4,417 2,606 |  | ${ }^{7,775}$ |  | ${ }^{2,254}$ | ${ }_{1,571}^{129}$ | 744 | ${ }_{9}^{9,365}$ |
| 2028 |  | 306,818 | 5,210 | 305,370 | 1,447 | 513 | 4,569 | (1,666) | 451 | 996 | 306 | 452 | 425 | 2,606 | ${ }^{243}$ | 9,046 | 2,606 |  | 4,525 |  | 1,311 | 914 | 447 |  |
| 99-2028 | 306,818 |  | 305,370 |  |  | 264,627 | 263,530 | 451 |  |  | 179,294 | 20,274 | 12,587 | 105,354 | 11,079 | 38,679 | 105,354 |  | 328,376 |  | 83,644 | 58,32 | 29,17 | 126,11 |

# HMFA / Affordable Housing Segment 

|  | Program Assumption | $\underset{\text { Assumption }}{\text { Program }}$ |  Workshee | Prior Month <br> $+\mathrm{Col} 3$ | $\begin{gathered} \text { Col } 2 \\ -\mathrm{Col} 4 \end{gathered}$ | Refer to <br> WP_SS $2 . \times 1 \mathrm{~s}$ BS" Worksheet Row 116 | Refer to <br> WP_Ss $2 . \times 1 \mathrm{~s}$ sched.-IS and Row 124 | (Col 6 - Col 7) Tax Rate] | $\begin{gathered} \text { Prior } \\ + \text { + Col } \end{gathered}$ | $\begin{gathered} \mathrm{COL} 5 \\ -\mathrm{Col} \end{gathered}$ | (Prior Col $6+$ $\underset{*}{\text { Col 6)/ } 2}$ Tax WACC | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | Program Assumption | Program Assumption | Program Assumption | Program Assumption | $\begin{gathered} \text { Program } \\ \text { Assumption } \end{gathered}$ | Refer to WP_SS 2d.xls State Rebate and ITC" Worksheet Row 791 | Col 21* [Tax Ratel * Rev, Conv. Fac | (Col 3-Col 7) * [Tax <br> Rate] * Fac.] | $\mathrm{Col} 3+\mathrm{Col} 11$ <br> + Col $12+$ Col 13 <br> + Col 14 + Col 15 <br> + Col 16 - Col 17 - Col 18 - Col 19 <br> - Col 20 - Col 21 <br> - Col $22+\mathrm{Col} 23$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | ${ }^{(24)}$ |
|  |  |  |  |  |  |  | Plant |  |  |  |  |  |  | Expenses |  |  |  | Revenue fit | om Sale of |  | ITC |  |  |  |
| Year | $\frac{\text { Program }}{\text { Investment }}$ | Gross Plant | Depreciation <br> Expense | $\frac{\text { Accumulated }}{\text { Depreciation }}$ | Net Plant | $\frac{\text { Tax }}{\text { Depreciation }}$ | $\frac{\text { Book Deprec }}{\text { Tax Basis }}$ | $\frac{\text { Deferred }}{\text { Tax Exp }}$ | $\frac{\text { Accumulated }}{\text { Deferred Tax }}$ | $\begin{gathered} \frac{\text { Net }}{\text { Investment }} \end{gathered}$ | $\xrightarrow{\text { Requirement }}$ | Oem | Administrative | Rent | Insurance | Other | Energy | Capaci | SRECS | Other | Amorizition | Tax Gross-up | $\frac{\text { Tax } A \text { Asoc. w } \mathbf{1} 50 \% \text { oric }}{\text { Basis }}$ | $\frac{\text { Revenue }}{\text { Requirements }}$ |
| 2010 | 3,802 | 3,802 | 108 | 108 | 3,694 | 485 | 92 | 161 | 161 | 3,533 | 144 | 39 | 259 | 20 | 3 |  | 20 |  | 61 |  | 31 | 22 | 11 | 450 |
| 2011 | 5,631 | 9,433 | 520 | 628 | 8,805 | 2,135 | 442 | 695 | 857 | 7,949 | 696 | 76 | 244 | 101 | 14 |  | 101 |  | 520 |  | 149 | 104 | 54 | 831 |
| 2012 | 5,101 | 14,534 | 941 | 1,570 | 12,965 | 3,167 | 800 | 972 | 1,829 | 11,135 | 1,173 | 94 | 198 | 182 | ${ }^{26}$ |  | 182 |  | 1,017 |  | 270 | 188 | 98 | 1,056 |
| 2013 | 143 | 14,677 | 1,108 | 2.677 | 12,000 | 2.675 | 942 | 712 | 2.541 | 9,458 | 1,227 | 53 | 205 | 211 | 32 |  | 211 |  | 1,230 |  | 318 | 222 | 116 | 972 |
| 2014 |  | 14,677 | 1,112 | 3,790 | 10,887 | ${ }^{1,779}$ | 945 | 343 | 2,884 | 8,004 | 1,043 | 54 | 212 | 208 | ${ }^{33}$ |  | 208 |  | 1,188 |  | 319 | 223 | 116 | ${ }^{841}$ |
| 2015 | 260 | 14,937 | 1,112 | 4,902 | 10,035 | 1,324 | 945 | 155 | 3,039 | 6,996 | 891 | 55 | 106 | 205 | ${ }^{34}$ |  | 205 |  | 1,149 |  | 320 | 223 | 16 | 623 |
| 2016 | 394 | 15,331 | 1,113 | ${ }_{6}^{6,14}$ | 9,317 | 868 | 946 | (32) | 3,007 | 6,310 | 795 | 57 | 87 | ${ }^{237}$ | ${ }^{35}$ |  | ${ }^{237}$ |  | 1,109 |  | ${ }^{321}$ | 224 | 116 | 548 |
| 2017 | 366 | ${ }_{15,5697}^{15,697}$ | ${ }_{1}^{1,115}$ | 7,129 8.244 | 8,568 <br> 7453 <br> 15 | 444 | ${ }^{954}$ | (209) | 2,798 2,991 | 5,770 4962 | 723 <br> 642 | ${ }_{60}^{58}$ | ${ }_{93}^{90}$ | ${ }_{306}^{272}$ | ${ }_{37}^{36}$ |  | ${ }_{306}^{272}$ |  | 1,070 |  | 314 | 219 | 112 | $\begin{array}{r}531 \\ 495 \\ \hline\end{array}$ |
| 2018 |  | 15,697 | 1,116 | 8,244 | 7,453 | 211 | 959 | (307) | 2,991 | 4,962 | 642 | 60 | 93 | 306 | 37 |  | 306 |  | 1,038 |  | 309 | 215 | 109 | 495 |
| 2019 |  | ${ }^{15,697}$ | ${ }_{1}^{1,116}$ | 9,360 | $\stackrel{6,337}{ }$ | ${ }^{134}$ | 959 | ${ }^{(339)}$ | 2,151 | 4,186 | 547 | ${ }^{61}$ | 97 | ${ }^{341}$ | ${ }^{38}$ |  | ${ }^{341}$ |  | 1,004 |  | ${ }^{309}$ | ${ }_{215}^{215}$ | 109 | 440 |
| 2020 | 262 | 15,959 | ${ }_{1,116}$ | 10,476 | 5,484 | 136 | 962 | (339) | 1,812 | 3,672 | 465 | 63 | 100 | 375 | 39 |  | 375 |  | 968 |  | 305 | 213 | 107 | 404 |
| ${ }_{2021}^{2022}$ | ${ }^{392}$ | 16,359 | 1,117 | ${ }^{11,593}$ | 4,766 | ${ }_{232}^{233}$ | 975 | ${ }^{(305)}$ | 1.507 | 3,259 | ${ }^{415}$ | ${ }_{6}^{64}$ | 104 | 384 | 40 |  | ${ }^{384}$ |  | 934 |  | ${ }_{296} 29$ | 204 | 99 | 409 |
| 2022 | 372 | 16,730 | 1,118 | 12,710 | 4,020 | ${ }^{282}$ | 981 | (287) | 1,220 | 2,800 | 365 | ${ }_{6} 6$ | 107 | 394 | ${ }_{4}^{42}$ |  | ${ }^{394}$ |  | ${ }_{801}^{901}$ |  | ${ }_{286}^{286}$ | 200 | 95 | 405 |
| $\frac{2023}{2024}$ |  | ${ }^{16,730}$ | 1,118 1,118 1 | ${ }_{1}^{13,829}$ | 2,902 <br> 1,784 <br> 1 | 224 147 | ${ }_{981}^{981}$ | ${ }^{(311)}$ | 909 | 1,993 | 286 192 192 | 67 | 111 | 404 414 | 43 44 |  | 404 414 |  | 866 833 |  | 286 286 | 200 | ${ }_{9}^{95}$ |  |
| 2024 2025 | - | 16,730 16,730 | 1,118 1,010 | ${ }^{14,949}$ | 1,784 774 | 147 107 | 981 887 | ${ }_{(320)}^{(343)}$ | 566 246 | 1,217 | 192 <br> 102 | ${ }_{66}^{69}$ | 115 119 | ${ }_{395}^{414}$ | 44 41 | 585 | ${ }_{395}^{414}$ |  | 833 750 |  | ${ }_{259}^{286}$ | 200 181 | 95 86 | 315 819 |
| 2026 | - | 16,730 | 597 | 16,554 | 177 | 61 | 524 | (190) | 56 | 121 | 36 | ${ }^{41}$ | 123 | 248 | 25 | 904 | 248 |  | 452 |  | 155 | 108 | 51 | ${ }^{1,061}$ |
| 2027 | - | 16,730 | 172 | 16,726 | 4 | 17 | 151 | (55) | 1 | 4 | 5 | 14 | 127 | 81 | 7 | 853 | 81 |  | 147 | - | 49 | 34 | 15 | ${ }^{963}$ |
| 2028 | $\cdot$ | 16,730 | 4 | 16,730 |  | 1 | 4 | (1) | (1) | 1 | 0 |  |  |  | 0 |  |  |  |  |  | 7 | 5 | 0 |  |
| 9-2028 | 16,730 |  | 16,730 |  |  | 14,429 | 14,431 | (1) |  |  | 9,746 | 1,057 | 2,498 | 4,777 | 570 | 2,342 | 4,777 |  | 15,236 |  | 4,587 | 3,199 | 1,604 | 11,525 |

Rate Impact Analysis
Scheadue SS - 4

|  | (1) | (2) | $\begin{array}{r} 7 \% \\ 44,823,552 \\ 23,451,245 \\ \text { (3) } \end{array}$ | SUT Rate kWh Sales (000 kWh Sales (000) (4) | $\begin{aligned} & \text { 0) - Annual } \\ & \text { כ) - July to Dec. } \end{aligned}$ (5) | (6) | $\begin{array}{r} 6,960 \mathrm{~T} \\ 722 \mathrm{~T} \\ 509 \\ 3,693 \mathrm{~T} \\ (7) \end{array}$ | Typ RS kWh / Typ RS kWh/ Typ RS kWh / Typ RS kWh / <br> (8) | yr. <br> Summer Mon Winter Month Jul to Dec <br> (9) | (10) | (11) | (12) | (13) | 0.000021 (14) | Current electric (15) | ric RRC (\$/kWh) (16) | (17) | (18) | (19) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Class | Average Rate | w/SUT - \$/kU |  |  |  |  | Typ.RS Solar 4 | 4 All Comp. el | electric RRC (\$) |  |  |  |
|  | $\frac{\text { Solar } 4 \text { All }}{\text { Revenue }}$ <br> Requirement$(\$$ (s) | $\begin{aligned} & \frac{\text { of Electric }}{\text { RRC }} \\ & \frac{\text { w/o SUT }}{(\$ / k W h)} \end{aligned}$ | $\frac{\frac{\text { Component of }}{\text { Electric RRC }}}{\frac{\mathrm{w} / \mathrm{SUT}}{(\mathrm{~S} / \mathrm{kWh})}}$ | RS | RHS | RLM | GLP | $\frac{\text { LPL-S }}{(0-749)}$ | $\frac{\text { LPL-S }}{(750-999)}$ | $\frac{\text { LPL-S }}{(1,000+)}$ | LPL-P | HTS-S | HTS-HV | Summer Monthly Bill | $\frac{\frac{\text { Winter }}{\text { Monthly }}}{\text { Bill }}$ | Annual Bill | $\frac{\frac{\text { Change in }}{\text { RS Typical }}}{\frac{\text { Annual Bill }}{\text { (\$'s) }}}$ | $\frac{\frac{\text { RS Typical }}{\text { Annual Bill }}}{\frac{(\$ ' s)}{}}$ | $\begin{aligned} & \frac{\text { \% Change }}{\text { in RS }} \\ & \text { Typical } \\ & \text { Annual Bill } \end{aligned}$ |
| Current |  |  |  | 0.183074 | 0.161083 | 0.171609 | 0.176113 | 0.154741 | 0.157620 | 0.161963 | 0.152961 | 0.144593 | 0.136245 | 0.02 | 0.01 | 0.16 |  | 1,269.28 |  |
| $2009{ }^{2}$ | 801,914 | 0.000168 | 0.000180 | 0.183254 | 0.161263 | 0.171789 | 0.176293 | 0.154921 | 0.157800 | 0.162143 | 0.153141 | 0.144773 | 0.136425 | 0.15 | 0.10 | 0.75 | 0.59 | 1,269.87 | 0.046\% |
| $2010^{2}$ | 10,694,783 | 0.000168 | 0.000180 | 0.183254 | 0.161263 | 0.171789 | 0.176293 | 0.154921 | 0.157800 | 0.162143 | 0.153141 | 0.144773 | 0.136425 | 0.15 | 0.10 | 1.40 | 1.24 | 1,270.52 | 0.098\% |
| 2011 | 17,050,483 | 0.000380 | 0.000407 | 0.183481 | 0.161490 | 0.172016 | 0.176520 | 0.155148 | 0.158027 | 0.162370 | 0.153368 | 0.145000 | 0.136652 | 0.31 | 0.22 | 3.00 | 2.84 | 1,272.12 | 0.224\% |
| 2012 | 21,555,801 | 0.000481 | 0.000515 | 0.183589 | 0.161598 | 0.172124 | 0.176628 | 0.155256 | 0.158135 | 0.162478 | 0.153476 | 0.145108 | 0.136760 | 0.39 | 0.27 | 3.72 | 3.56 | 1,272.84 | 0.280\% |
| 2013 | 25,652,769 | 0.000572 | 0.000612 | 0.183686 | 0.161695 | 0.172221 | 0.176725 | 0.155353 | 0.158232 | 0.162575 | 0.153573 | 0.145205 | 0.136857 | 0.46 | 0.32 | 4.40 | 4.24 | 1,273.52 | 0.334\% |
| 2014 | 24,073,695 | 0.000537 | 0.000575 | 0.183649 | 0.161658 | 0.172184 | 0.176688 | 0.155316 | 0.158195 | 0.162538 | 0.153536 | 0.145168 | 0.136820 | 0.43 | 0.30 | 4.12 | 3.96 | 1,273.24 | 0.312\% |
| 2015 | 17,973,916 | 0.000401 | 0.000429 | 0.183503 | 0.161512 | 0.172038 | 0.176542 | 0.155170 | 0.158049 | 0.162392 | 0.153390 | 0.145022 | 0.136674 | 0.32 | 0.23 | 3.12 | 2.96 | 1,272.24 | 0.233\% |
| 2016 | 12,644,949 | 0.000282 | 0.000302 | 0.183376 | 0.161385 | 0.171911 | 0.176415 | 0.155043 | 0.157922 | 0.162265 | 0.153263 | 0.144895 | 0.136547 | 0.23 | 0.16 | 2.20 | 2.04 | 1,271.32 | 0.161\% |
| 2017 | 9,934,899 | 0.000222 | 0.000237 | 0.183311 | 0.161320 | 0.171846 | 0.176350 | 0.154978 | 0.157857 | 0.162200 | 0.153198 | 0.144830 | 0.136482 | 0.19 | 0.13 | 1.80 | 1.64 | 1,270.92 | 0.129\% |
| 2018 | 8,366,031 | 0.000187 | 0.000200 | 0.183274 | 0.161283 | 0.171809 | 0.176313 | 0.154941 | 0.157820 | 0.162163 | 0.153161 | 0.144793 | 0.136445 | 0.16 | 0.11 | 1.52 | 1.36 | 1,270.64 | 0.107\% |
| 2019 | 6,299,751 | 0.000141 | 0.000150 | 0.183224 | 0.161233 | 0.171759 | 0.176263 | 0.154891 | 0.157770 | 0.162113 | 0.153111 | 0.144743 | 0.136395 | 0.12 | 0.09 | 1.20 | 1.04 | 1,270.32 | 0.082\% |
| 2020 | 4,385,003 | 0.000098 | 0.000105 | 0.183179 | 0.161188 | 0.171714 | 0.176218 | 0.154846 | 0.157725 | 0.162068 | 0.153066 | 0.144698 | 0.136350 | 0.09 | 0.06 | 0.84 | 0.68 | 1,269.96 | 0.054\% |
| 2021 | 4,473,420 | 0.000100 | 0.000107 | 0.183181 | 0.161190 | 0.171716 | 0.176220 | 0.154848 | 0.157727 | 0.162070 | 0.153068 | 0.144700 | 0.136352 | 0.09 | 0.07 | 0.92 | 0.76 | 1,270.04 | 0.060\% |
| 2022 | 3,953,057 | 0.000088 | 0.000094 | 0.183168 | 0.161177 | 0.171703 | 0.176207 | 0.154835 | 0.157714 | 0.162057 | 0.153055 | 0.144687 | 0.136339 | 0.08 | 0.06 | 0.80 | 0.64 | 1,269.92 | 0.050\% |
| 2023 | 2,754,502 | 0.000061 | 0.000066 | 0.183140 | 0.161149 | 0.171675 | 0.176179 | 0.154807 | 0.157686 | 0.162029 | 0.153027 | 0.144659 | 0.136311 | 0.06 | 0.04 | 0.56 | 0.40 | 1,269.68 | 0.032\% |
| 2024 | 950,663 | 0.000021 | 0.000023 | 0.183097 | 0.161106 | 0.171632 | 0.176136 | 0.154764 | 0.157643 | 0.161986 | 0.152984 | 0.144616 | 0.136268 | 0.03 | 0.02 | 0.28 | 0.12 | 1,269.40 | 0.009\% |
| 2025 | 15,208,503 | 0.000339 | 0.000363 | 0.183437 | 0.161446 | 0.171972 | 0.176476 | 0.155104 | 0.157983 | 0.162326 | 0.153324 | 0.144956 | 0.136608 | 0.28 | 0.20 | 2.72 | 2.56 | 1,271.84 | 0.202\% |
| 2026 | 18,668,310 | 0.000416 | 0.000446 | 0.183520 | 0.161529 | 0.172055 | 0.176559 | 0.155187 | 0.158066 | 0.162409 | 0.153407 | 0.145039 | 0.136691 | 0.34 | 0.24 | 3.28 | 3.12 | 1,272.40 | 0.246\% |
| 2027 | 25,296,252 | 0.000564 | 0.000604 | 0.183678 | 0.161687 | 0.172213 | 0.176717 | 0.155345 | 0.158224 | 0.162567 | 0.153565 | 0.145197 | 0.136849 | 0.45 | 0.32 | 4.36 | 4.20 | 1,273.48 | 0.331\% |
| 2028 | 30,706,342 | 0.000685 | 0.000733 | 0.183807 | 0.161816 | 0.172342 | 0.176846 | 0.155474 | 0.158353 | 0.162696 | 0.153694 | 0.145326 | 0.136978 | 0.54 | 0.38 | 5.20 | 5.04 | 1,274.32 | 0.397\% |
|  | $\begin{gathered} \text { From } \\ \text { Schedule SS-3 } \\ \text { Col } 24 * 1000 \end{gathered}$ | Col 1 / kWh <br> Sales Rnd 6 | $\begin{gathered} \operatorname{Col} 2 \text { * }(1+ \\ \text { SUT Rate) Rnd } \\ 6 \end{gathered}$ |  |  | $\mathrm{Col} 3+\mathrm{C}$ | urrent Class A | Avg Rate for E | Each Rate Clas | Ss (Col 4 thru | ol 13) |  |  | (Cur. eRRC <br> +Col 3 ) * <br> Typ RS kWh <br> Sum Mo Rnd <br> 2 | (Cur. eRRC <br> +Col 3 ) * <br> Typ RS kWh <br> Win Mo <br> Rnd 2 | $\begin{aligned} & (4 * \text { Col 14) }+ \\ & (8 * \text { Col 15 }) \\ & {[\text { See Note2 for }} \\ & 2009] \end{aligned}$ | Col 16 Current Col 16 | Current <br> Col $18+$ <br> Col 17 | Col 17 / Current Col 18 |
|  |  |  |  |  |  |  | \% Change fro | om Current Cla | ass Average R | Rate w/SUT |  |  |  |  |  |  | 0.35 |  |  |
|  |  |  |  | RS | RHS | RLM | GLP | $\begin{aligned} & \underline{\text { LPL-S }} \\ & (0-749) \end{aligned}$ | $\begin{gathered} \text { LPL-S } \\ (750-999) \end{gathered}$ | $\frac{\text { LPL-S }}{(1,000+)}$ | LPL-P | HTS-S | HTS-HV |  |  |  |  |  |  |
|  |  |  | $2009{ }^{2}$ | 0.098\% | 0.112\% | 0.105\% | 0.102\% | 0.116\% | 0.114\% | 0.111\% | 0.118\% | 0.124\% | 0.132\% |  |  |  |  |  |  |
|  |  |  | $2010^{2}$ | 0.098\% | 0.112\% | 0.105\% | 0.102\% | 0.116\% | 0.114\% | 0.111\% | 0.118\% | 0.124\% | 0.132\% |  |  |  |  |  |  |
|  |  |  | 2011 | 0.222\% | 0.253\% | 0.237\% | 0.231\% | 0.263\% | 0.258\% | 0.251\% | 0.266\% | 0.281\% | 0.299\% |  |  |  |  |  |  |
|  |  |  | 2012 | 0.281\% | 0.320\% | 0.300\% | 0.292\% | 0.333\% | 0.327\% | 0.318\% | 0.337\% | 0.356\% | 0.378\% |  |  |  |  |  |  |
|  |  |  | 2013 | 0.334\% | 0.380\% | 0.357\% | 0.348\% | 0.395\% | 0.388\% | 0.378\% | 0.400\% | 0.423\% | 0.449\% |  |  |  |  |  |  |
|  |  |  | 2014 | 0.314\% | 0.357\% | 0.335\% | 0.326\% | 0.372\% | 0.365\% | 0.355\% | 0.376\% | 0.398\% | 0.422\% |  |  |  |  |  |  |
|  |  |  | 2015 | 0.234\% | 0.266\% | 0.250\% | 0.244\% | 0.277\% | 0.272\% | 0.265\% | 0.280\% | 0.297\% | 0.315\% |  |  |  |  |  |  |
|  |  |  | 2016 | 0.165\% | 0.187\% | 0.176\% | 0.171\% | 0.195\% | 0.192\% | 0.186\% | 0.197\% | 0.209\% | 0.222\% |  |  |  |  |  |  |
|  |  |  | 2017 | 0.129\% | 0.147\% | 0.138\% | 0.135\% | 0.153\% | 0.150\% | 0.146\% | 0.155\% | 0.164\% | 0.174\% |  |  |  |  |  |  |
|  |  |  | 2018 | 0.109\% | 0.124\% | 0.117\% | 0.114\% | 0.129\% | 0.127\% | 0.123\% | 0.131\% | 0.138\% | 0.147\% |  |  |  |  |  |  |
|  |  |  | 2019 | 0.082\% | 0.093\% | 0.087\% | 0.085\% | 0.097\% | 0.095\% | 0.093\% | 0.098\% | 0.104\% | 0.110\% |  |  |  |  |  |  |
|  |  |  | 2020 | 0.057\% | 0.065\% | 0.061\% | 0.060\% | 0.068\% | 0.067\% | 0.065\% | 0.069\% | 0.073\% | 0.077\% |  |  |  |  |  |  |
|  |  |  | 2021 | 0.058\% | 0.066\% | 0.062\% | 0.061\% | 0.069\% | 0.068\% | 0.066\% | 0.070\% | 0.074\% | 0.079\% |  |  |  |  |  |  |
|  |  |  | 2022 | 0.051\% | 0.058\% | 0.055\% | 0.053\% | 0.061\% | 0.060\% | 0.058\% | 0.061\% | 0.065\% | 0.069\% |  |  |  |  |  |  |
|  |  |  | 2023 | 0.036\% | 0.041\% | 0.038\% | 0.037\% | 0.043\% | 0.042\% | 0.041\% | 0.043\% | 0.046\% | 0.048\% |  |  |  |  |  |  |
|  |  |  | 2024 | 0.013\% | 0.014\% | 0.013\% | 0.013\% | 0.015\% | 0.015\% | 0.014\% | 0.015\% | 0.016\% | 0.017\% |  |  |  |  |  |  |
|  |  |  | 2025 | 0.198\% | 0.225\% | 0.212\% | 0.206\% | 0.235\% | 0.230\% | 0.224\% | 0.237\% | 0.251\% | 0.266\% |  |  |  |  |  |  |
|  |  |  | 2026 | 0.244\% | 0.277\% | 0.260\% | 0.253\% | 0.288\% | 0.283\% | 0.275\% | 0.292\% | 0.308\% | 0.327\% |  |  |  |  |  |  |
|  |  |  | 2027 | 0.330\% | 0.375\% | 0.352\% | 0.343\% | 0.390\% | 0.383\% | 0.373\% | 0.395\% | 0.418\% | 0.443\% |  |  |  |  |  |  |
|  |  |  | 2028 | 0.400\% | 0.455\% | 0.427\% | 0.416\% | 0.474\% | 0.465\% | 0.453\% | 0.479\% | 0.507\% | 0.538\% |  |  |  |  |  |  |
| ${ }^{1}$ All customers assumed to have BGS Supply effective January 1, 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2/nitial Rate Period from July 2009 to Dec. 2010\$ $11,496,697=2009-2010$ Revenue Requirement |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Cumulative Rate Impact Analysis - Solar Program Recovery Charge (SPRC) \& Electric RGGI Recovery Charge (RRC)

Rate Calculations

|  | (A) | (B) | (C) | (D) | (E) | (F) | (G) Electric | (H) Electric | (1) | (J) | (K) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Carrying |  |  |  |  | Carbon | Carbon |  |  | SPRC + |
|  | Solar | Charge on | SPRC |  |  | SPRC Balance | Abatement | Abatement | Solar4All | Solar4All | Electric |
|  | Revenue | deferred | Revenue | SPRC w/o | SPRC | EOY | Revenue | Component | Revenue | Component | RRC |
|  | Requirement | balance | Requirement | SUT | Revenue | Under/(Over) | Requirement | w/o SUT | Requirement | w/o SUT | w/o SUT |
|  | (\$) | (\$) | (\$) | (\$/kWh) | (\$) | (\$) | (\$) | (\$/kWh) | (\$) | (\$/kWh) | (\$/kWh) |
| 2008 | 426,894 | 15,674 | 442,568 |  |  | 442,568 |  |  |  |  |  |
| Jan-Jun 2009 |  |  |  | 0.000000 |  |  |  | 0.000020 |  |  | 0.000020 |
| Jul-Dec 2009 |  |  |  | 0.000000 |  |  |  | 0.000020 | 801,914 | 0.000168 | 0.000188 |
| 2009 | 2,911,704 | 124,620 | 3,478,891 | 0.000000 | 0 | 3,478,891 | 899,056 | 0.000020 | 801,914 |  |  |
| 2010 | 3,288,527 | 366,172 | 7,133,590 | 0.000159 | $(7,126,945)$ | 6,645 | 1,351,696 | 0.000030 | 10,694,783 | 0.000168 | 0.000357 |
| 2011 | 1,336,695 | 345,628 | 1,688,969 | 0.000038 | $(1,703,295)$ | $(14,326)$ | 1,626,807 | 0.000036 | 17,050,483 | 0.000380 | 0.000454 |
| 2012 | 1,304,832 | 344,376 | 1,634,882 | 0.000036 | $(1,613,648)$ | 21,234 | 2,112,074 | 0.000047 | 21,555,801 | 0.000481 | 0.000564 |
| 2013 | 1,265,759 | 344,710 | 1,631,703 | 0.000036 | $(1,613,648)$ | 18,055 | 2,173,828 | 0.000048 | 25,652,769 | 0.000572 | 0.000656 |
|  | From Solar | From Solar | $\begin{aligned} & \text { Col A }+\operatorname{Col~B} \\ & +\operatorname{Prev} \operatorname{Col} \text { E } \end{aligned}$ | Col C $/$ <br> [Annual | $=C o l D^{*}$ <br> [Annual kWh | ColC +Col E | $\begin{aligned} & \text { CA Sched } \\ & \text { SS-3(Rev) } \\ & \text { Col } 15 \end{aligned}$ | Col G / <br> [Annual kWh Sales] (Rnd to 6 dec.) | Attach 7F Col 1 | Coll/ <br> [Annual kWh Sales] (Rnd to 6 dec.) | Col D+ <br> Col H + Col J |
|  | Rev. Req | Rev. Req |  | kWh Sales] |  |  |  |  |  |  |  |
|  | Calc+ Prev Cole |  |  | (Rnd to 6 |  |  |  |  |  |  |  |

44,823,552 Annual kWh Sales (000)


| \% Change from Current Class Average Rate w/SUT |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | RS | RHS | RLM | GLP | $\frac{\text { LPL-S }}{(0-749)}$ | $\begin{gathered} \text { LPL-S } \\ (750-999) \end{gathered}$ | $\frac{\text { LPL-S }}{(1,000+)}$ | LPL-P | HTS-S | HTS-HV |
| 2009 | 0.110\% | 0.125\% | 0.117\% | 0.114\% | 0.130\% | 0.128\% | 0.124\% | 0.131\% | 0.139\% | 0.148\% |
| 2010 | 0.209\% | 0.237\% | 0.223\% | 0.217\% | 0.247\% | 0.242\% | 0.236\% | 0.250\% | 0.264\% | 0.280\% |
| 2011 | 0.265\% | 0.302\% | 0.283\% | 0.276\% | 0.314\% | 0.308\% | 0.300\% | 0.318\% | 0.336\% | 0.357\% |
| 2012 | 0.329\% | 0.374\% | 0.351\% | 0.342\% | 0.390\% | 0.383\% | 0.372\% | 0.394\% | 0.417\% | 0.443\% |
| 2013 | 0.383\% | 0.436\% | 0.409\% | 0.399\% | 0.454\% | 0.445\% | 0.433\% | 0.459\% | 0.486\% | 0.515\% |

[^8]${ }^{2}$ Annual Rate impact as of Rates effective July 1st for 2009 only

| Income Statement | $\underline{2009}$ | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | $\underline{2023}$ | $\underline{2024}$ | $\underline{2025}$ | $\underline{2026}$ | 2027 | 2028 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Operating Revenue |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Energy | 18 | 1,927 | 5,101 | 8,140 | 10,797 | 12,115 | 12,299 | 14,249 | 16,340 | 18,422 | 20,491 | 22,548 | 23,108 | 23,682 | 24,271 | 24,874 | 24,084 | 22,608 | 21,223 | 19,116 |
| Capacity | - |  | - | - | 3 | 53 | 264 | 466 | 660 | 692 | 710 | 729 | 745 | 764 | 783 | 805 | 822 | 843 | 864 | 888 |
| Other Revenue--Solar | 16 | 8,164 | 28,210 | 47,192 | 61,801 | 69,746 | 70,872 | 68,470 | 66,057 | 63,808 | 61,586 | 59,436 | 57,366 | 55,362 | 53,429 | 51,538 | 44,050 | 30,764 | 18,511 | 7,711 |
| Other |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Revenue Requirements | 802 | 10,695 | 17,050 | 21,556 | 25,653 | 24,074 | 17,974 | 12,645 | 9,935 | 8,366 | 6,300 | 4,385 | 4,473 | 3,953 | 2,755 | 951 | 15,209 | 18,668 | 25,296 | 30,706 |
| Total Operating Revenue | 836 | 20,786 | 50,362 | 76,888 | 98,253 | 105,988 | 101,408 | 95,830 | 92,993 | 91,288 | 89,087 | 87,099 | 85,693 | 83,761 | 81,237 | 78,167 | 84,165 | 72,883 | 65,894 | 58,420 |
| Operating Expenses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operation \& Maintenance | 21 | 842 | 1,919 | 2,978 | 3,895 | 4,345 | 4,474 | 4,586 | 4,701 | 4,819 | 4,940 | 5,064 | 5,190 | 5,320 | 5,454 | 5,590 | 5,497 | 5,287 | 5,095 | 4,903 |
| Administrative | 607 | 1,842 | 1,904 | 1,968 | 2,034 | 2,102 | 1,372 | 573 | 593 | 613 | 635 | 657 | 680 | 704 | 728 | 754 | 780 | 808 | 836 | 865 |
| Rent | - | 894 | 1,995 | 3,434 | 4,781 | 5,870 | 6,160 | 6,898 | 7,689 | 8,476 | 9,260 | 10,039 | 10,257 | 10,480 | 10,710 | 10,945 | 9,778 | 7,916 | 6,136 | 4,255 |
| Insurance | 14 | 507 | 1,456 | 2,474 | 3,474 | 4,126 | 4,345 | 4,475 | 4,609 | 4,747 | 4,890 | 5,036 | 5,188 | 5,343 | 5,503 | 5,669 | 5,681 | 5,654 | 5,633 | 5,618 |
| Other | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12,907 | 9,431 | 9,636 | 9,046 |
| Total Operating Expenses | 641 | 4,084 | 7,273 | 10,854 | 14,184 | 16,443 | 16,351 | 16,532 | 17,592 | 18,656 | 19,724 | 20,796 | 21,315 | 21,848 | 22,395 | 22,958 | 34,643 | 29,096 | 27,336 | 24,688 |
| Depreciation and Amortization |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Depreciation | 102 | 8,083 | 21,178 | 34,028 | 45,604 | 52,363 | 53,570 | 53,306 | 53,124 | 52,970 | 52,881 | 52,786 | 52,610 | 52,433 | 52,271 | 52,172 | 48,788 | 44,241 | 39,932 | 35,889 |
| Amortization of State Rebate | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total Depreciation and Amortization | 102 | 8,083 | 21,178 | 34,028 | 45,604 | 52,363 | 53,570 | 53,306 | 53,124 | 52,970 | 52,881 | 52,786 | 52,610 | 52,433 | 52,271 | 52,172 | 48,788 | 44,241 | 39,932 | 35,889 |
| Operating Income | 92 | 8,619 | 21,911 | 32,006 | 38,465 | 37,182 | 31,487 | 25,992 | 22,277 | 19,662 | 16,482 | 13,516 | 11,768 | 9,481 | 6,571 | 3,037 | 733 | (454) | $(1,375)$ | $(2,157)$ |
| AFUDC | 0 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Interest Expense | 23 | 1,980 | 4,942 | 7,241 | 8,788 | 8,717 | 7,610 | 6,558 | 5,862 | 5,384 | 4,852 | 4,372 | 4,068 | 3,746 | 3,387 | 2,874 | 2,349 | 1,996 | 1,702 | 1,433 |
| Income Before Income Taxes | 70 | 6,641 | 16,969 | 24,765 | 29,677 | 28,465 | 23,877 | 19,434 | 16,415 | 14,279 | 11,630 | 9,144 | 7,700 | 5,734 | 3,184 | 163 | $(1,616)$ | $(2,450)$ | $(3,077)$ | $(3,589)$ |
| ITC Adjustment | (29) | $(2,358)$ | $(6,179)$ | $(9,926)$ | $(13,301)$ | $(15,276)$ | $(15,650)$ | $(15,588)$ | $(15,072)$ | $(14,232)$ | $(13,724)$ | $(13,246)$ | $(12,435)$ | $(12,058)$ | $(12,058)$ | $(12,058)$ | $(11,142)$ | $(10,020)$ | $(8,972)$ | $(7,988)$ |
| Income Tax Expense | 35 | 3,226 | 8,277 | 12,272 | 15,003 | 14,921 | 13,111 | 11,269 | 9,905 | 8,828 | 7,620 | 6,478 | 5,682 | 4,780 | 3,732 | 2,491 | 1,574 | 1,003 | 532 | 120 |
| Net Income | 64 | 5,773 | 14,871 | 22,420 | 27,975 | 28,819 | 26,416 | 23,752 | 21,582 | 19,683 | 17,734 | 15,912 | 14,453 | 13,012 | 11,510 | 9,730 | 7,952 | 6,568 | 5,364 | 4,278 |
| Preferred Dividends | 0 | 33 | 83 | 121 | 147 | 146 | 128 | 110 | 98 | 90 | 81 | 73 | 68 | 63 | 57 | 48 | 39 | 33 | 29 | 24 |
| Earnings Available to PSEG | 64 | 5,740 | 14,788 | 22,298 | 27,828 | 28,673 | 26,288 | 23,642 | 21,483 | 19,593 | 17,653 | 15,838 | 14,385 | 12,949 | 11,453 | 9,681 | 7,912 | 6,534 | 5,335 | 4,254 |



# PUBLIC SERVICE ELECTRIC AND GAS COMPANY DIRECT TESTIMONY OF <br> MARK G. KAHRER VICE PRESIDENT-FINANCE 

My name is Mark G. Kahrer and I am an employee of Public Service Enterprise Group, Inc. (PSEG) Services Corporation in the position of Vice President—Finance for Public Service Electric \& Gas ("PSE\&G" or "Company"). My business address is 80 Park Plaza, Newark, New Jersey. My credentials are included in the attached Schedule MGK-1 of this testimony.

## SCOPE OF TESTIMONY

The purpose of my testimony is to support the required return on the investments proposed by PSE\&G in its Solar 4 All Program ("Program"). The testimony provides the support for the cost and capitalization for the components of the Weighted Average Cost of Capital (WACC) that is used in the testimony of Stephen Swetz in the calculation of the revenue requirements associated with the Program.

## OVERVIEW OF THE PSE\&G SOLAR 4 ALL PROGRAM

The Company developed the Solar 4 All Program as the vehicle to deploy approximately 120 MWs of solar photovoltaic ("PV") systems. It is estimated that the

Program's investment will amount to approximately \$773 million over a six-year period, commencing in 2009 and running through 2014. Expenditures will be divided into four segments:

- Centralized Solar: 35 MWs--\$221 million.
- Neighborhood Solar: 40 MWs---\$264 million.
- Local Government Solar: 43 MWs--\$273 million.
- HMFA / Affordable Housing Solar: 2 MWs--\$15 million.

Of these expenditures approximately $\$ 203$ million is expected to be invested by the end of 2010. See Schedule MGK-2, attached, for the detailed year-by-year capital investment included in the Program.

## COST RECOVERY OF THE PSE\&G SOLAR 4 ALL PROGRAM

The revenue requirements and cost recovery mechanism of the Company's proposed Program are described in detail in the testimony of Stephen Swetz. Costs to be recovered include:

- Return of and on the invested capital associated with the Program.
- Expenses including operation and maintenance costs, administrative costs, rent, insurance and cost of removal.
- Tax related items (described in detail in Mr. Swetz’s testimony).
- Less revenue received associated with energy and SRECs produced by the PV systems.

Return of the investment will be over the book lives of the various components of the PV systems. Return on the unrecovered investment would be at WACC. Schedule MGK-3, attached, shows the calculation of the WACC proposed for this Program. Schedule MGK-4, attached, is provided as required by the Minimum Filing Requirements for Petitions under N.J.S.A. 48:3-98.1. Schedule MGK-4 shows the calculation of the capital structure approved by the Board in its most recent electric and gas cases as well as the allowed overall rate of return approved by the Board

## DESCRIPTION OF WACC FOR PURPOSES OF THE PROGRAM

PSE\&G will determine its revenue requirements based upon a WACC including income tax effects. WACC, for purposes of the Program, will reflect:

- A capital structure that:
o Includes the actual PSE\&G capital outstanding at the month ended prior to the decision.
o Includes long-term debt due within one year.
o Excludes short-term debt.
o Includes a pro forma adjustment that represents the capital required to finance the investment called for by this Program filing along with the capital required to finance the investments called for in the Economic Energy Efficiency Stimulus Program filing and in the Capital Economic Stimulus Infrastructure filing. The pro forma adjustment will assume the capital required will be a combination of new long-term debt at the then-current coupon rates for such utility long-term debt and common equity such that the pro forma PSE\&G capital structure will reflect a 51.2 percent common equity component.
- A cost of debt equal to the weighted embedded cost of long-term debt as of the month ended prior to the decision with a pro forma adjustment to reflect the anticipated financing as described above.
- A cost of preferred stock equal to the weighted embedded cost of preferred as of the month ended prior to the decision.
- A cost of common equity that reflects the market's current expectations.

The WACC in the Program's filing is $8.2582 \%$ annually. Including tax effects, the weighted pre-tax cost is $11.97 \%$. This would correspond to a $0.9975 \%$ monthly rate. The WACC is based on the capitalization and costs presented in Schedule MGK-3.

## DETERMINATION OF THE CAPITAL STRUCTURE

The WACC in Schedule MGK-3 reflects actual data for PSE\&G as of November 30, 2008, the information available as of the time this filing was being prepared. The capitalization ratio is derived by beginning with actual capitalization as of November 30, 2008 as per the Financial Statements of PSE\&G provided monthly to the BPU. Adjustments are made to reflect:

- The $\$ 275$ million five-year debt series issued on December 2, 2008 at a coupon rate of $6.33 \%$.
- A $\$ 286$ million debt issue to support the financing of the capital expenditures associated with this Program and the two other pending filings as described above through the end of 2010.

The $\$ 286$ million pro forma debt issue represents $34.17 \%$ of the capital requirements associated with program expenditures (see Schedule MGK-5) with the balance of the capital requirements coming from common equity. This $34.17 \% / 65.83 \%$ assumed debt/equity financing is such that the resulting pro forma PSE\&G capital structure would reflect a 51.2 percent common equity component. Schedule MGK-5 shows the derivation of the capital structure reflected in the WACC calculation.

The 51.2 percent common equity in the proposed capital structure is consistent with that allowed New Jersey Natural Gas (NJNG) (BPU Docket No. GR07110889)
in a decision dated October 3, 2008. In the third and fourth quarters of 2008 we have seen extreme volatility in the financial markets. The higher percent common equity allowed NJNG is consistent with the requirements of the current financial markets. A recent SNLi article quotes James Hempstead, Moody’s senior vice president, as saying:

For the long term, the biggest risk could come from new environmental legislation. Although such new laws may be introduced sooner rather than later, it could take some time before the details of implementation are fully worked out. But given the sheer magnitude of the implications for the sector, we remain befuddled as to why utilities are not more aggressive with their balance-sheet strengthening programs.

The capitalization ratio utilized in calculating the WACC for purposes of this Program will be updated annually prior to the resetting of rates for this clause. The update will reflect actual capitalization at that point along with a pro forma adjustment for expected capital financing requirements for the Program in the coming year.

## COST OF THE COMPONENTS OF THE WACC

## Cost of Long-term Debt

Schedule MGK-6 shows the calculation of the embedded cost of long-term debt based upon November 30, 2008 actual outstanding series cost information with the pro forma adjustments described above. The pro forma $\$ 286$ million debt issue is at an expected coupon rate of $5.5 \%$. The projected rate from January 2009 represents
the average of indicative quotes for a new 10-year debt issue by PSE\&G as provided to the Company by BNP Paribas, UBS and Royal Bank of Scotland who regularly follow our credit and bonds. This projected rate will be updated within 30 days prior to the expected decision date set by RGGI rules for this application. The cost for new debt to be issued to finance Program expenditures beyond 2010 will be updated annually prior to rates being reset under this Program's cost recovery mechanism.

## Cost of Customer Deposits

The cost for customer deposits is established annually by the BPU with a new rate effective each January. The rate in place in November 2008 was 4.79\%. The new rate effective January 1, 2009 is $2.34 \%$. For purposes of this filing we are using the current 2009 rate. The cost applied to customer deposits will be updated annually through the life of this Program to recognize the change in the BPU set customer deposit rate.

## Cost of Preferred Stock

Schedule MGK-7 shows the derivation of the weighted embedded cost of preferred stock of $5.03 \%$. The Company does not foresee the issuance of any new preferred stock in the near future. If any new preferred stock is issued during the life
of this Program the Company's WACC would be adjusted to reflect such an issue's impact on the Company's weighted embedded cost of preferred stock.

## Cost of Common Equity

As noted above, in the third and fourth quarters of 2008, we have seen extreme volatility in the financial markets. The market for new capital is thin and the horizon is very uncertain. The competition for scarce funds in the external markets is stronger than ever, and investors are demanding higher returns before they consider an equity investment. During this time, we have observed a dramatic increase in the cost of capital. The existing regulatory WACC applied to the Company's electric and gas operations reflect allowed returns on equity (ROEs) of $9.75 \%$ and $10 \%$ respectively. But these rates were established in 2003 for electric operations and 2006 for gas.

The BPU recognizes that the cost of common equity is now higher. Looking back over the period 2002 through 2007 we see that the BPU has allowed the electric and gas utilities it regulates an ROE that averaged $9.83 \%$, on an average $45.7 \%$ common equity in capitalization (see Schedule MGK- 8). The recent NJNG decision shows a movement in the upward direction that the markets are looking for-namely an increase in the allowed ROE to $10.3 \%$ on a $51.2 \%$ common equity in capitalization. While the Company believes the appropriate cost of common equity

5 This concludes my testimony.
is still above that allowed NJNG, to expedite the resolution of this filing PSE\&G is proposing that the WACC for purposes of this filing reflect the ROE and capitalization that the BPU saw fit to grant NJNG in its October 3, 2008 decision.

## QUALIFICATIONS <br> OF <br> MARK G. KAHRER VICE PRESIDENT--FINANCE

I have been employed at PSEG for more than 25 years, serving in a number of financial positions in the company including Director - Corporate Accounting, Director - Financial Risk Management, Assistant Treasurer and, most recently, Vice President Finance and Development of PSEG Power LLC, prior to my appointment as Vice President - Finance for PSE\&G. In those roles, I was responsible for closing the corporation's books of record, filing compliance reports with the Securities and Exchange Commission and the Federal Energy Regulatory Commission ("Commission"), establishing a risk governance framework and policies, overseeing the administration of more than $\$ 4.5$ billion in pension, $401(\mathrm{~K})$ and nuclear decommissioning trust funds, implementing the corporation's insurance programs and leading the corporate finance group, which was responsible for issuing more than $\$ 7$ billion in debt and equity securities during my tenure. In addition, I was also responsible for managing PSE\&G's relationships with financial rating entities such as Fitch Ratings, Moody's Investors Service and Standard and Poor's.

I have a Bachelor of Science degree in accounting from St. Peter’s College, a Masters in Business Administration with a concentration in finance from Seton Hall University, and I am a Certified Public Accountant licensed in the State of New Jersey.

## PSE\&G Solar 4 All Program

## Capital Investment <br> (thousands of dollars)

Capital Expenditures:
Centralized Solar
Neighborhood Solar
Local Government Solar
HMFA / Affordable Housing
Total
Cumulative Expenditure

| $\underline{\mathbf{2 0 0 9}}$ | $\mathbf{2 0 1 0}$ | $\underline{\mathbf{2 0 1 1}}$ | $\underline{\mathbf{2 0 1 2}}$ | $\underline{\mathbf{2 0 1 3}}$ | $\underline{\mathbf{2 0 1 4}}$ | $\underline{\text { Total }}$ |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\mathbf{1 2 0}$ | 63,411 | 65,247 | 65,252 | 27,035 | - | 221,065 |
| 6,794 | 54,006 | 65,092 | 65,043 | 52,219 | 20,636 | 263,790 |
| - | 75,121 | 50,680 | 50,691 | 50,659 | 46,331 | 273,482 |
| - | 3,802 | 5,631 | 5,101 | $\mathbf{1 4 3}$ | - | $\mathbf{1 4 , 6 7 7}$ |
| 6,914 | 196,340 | 186,650 | 186,087 | 130,056 | 66,967 | 773,014 |
|  |  |  |  |  |  |  |
| 6,914 | 203,254 | 389,904 | 575,991 | 706,047 | 773,014 |  |

## PSE\&G Solar 4 All Program

## Weighted Average Cost of Capital (WACC)

|  | Percent | Cost | WACC | Revenue Conversion Factor | WACC Including Tax Effects |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Long-term Debt | 46.8169\% | 6.2198\% | 2.9119\% |  | 2.9119\% |
| Customer Deposits | 1.0042\% | 2.3400\% | 0.0235\% |  | 0.0235\% |
| Sub-total | 47.8211\% |  | 2.9354\% |  | 2.9354\% |
| Preferred Stock | 0.9789\% | 5.0296\% | 0.0492\% | 1.697332 | 0.0836\% |
| Common Equity | 51.2000\% | 10.3000\% | 5.2736\% | 1.697332 | 8.9510\% |
| Total | 100.0000\% |  | 8.2582\% |  | 11.9700\% |
| Monthly WACC |  |  | 0.6882\% |  | 0.9975\% |

## PSE\&G Solar 4 All Program

Minimum Filing Requirement IV.h. for Petitions under N.J.S.A. 48:3-98.1
Electric (1):

|  |  |  | Overall |
| :--- | ---: | ---: | ---: |
| Long-term Debt | $\underline{\text { Percent }}$ | $\underline{\text { Cost }}$ | Rate of Return |
| Customer Deposits | $\underline{0.6434 \%}$ | $6.1900 \%$ | $3.1348 \%$ |
| $\quad$ Sub-total | $51.3265 \%$ | $2.9400 \%$ | $\underline{0.0201 \%}$ |
| Preferred Stock | $1.2708 \%$ | $5.0300 \%$ | $0.1549 \%$ |
| Common Equity | $\underline{47.4027 \%}$ | $9.7500 \%$ | $\underline{4.0639 \%}$ |
| $\quad$ Total | $100.0000 \%$ |  | $7.8406 \%$ |

Gas (2):

|  |  |  | Overall |
| :--- | ---: | ---: | ---: |
| Long-term Debt | $\underline{\text { Percent }}$ | $\underline{\text { Cost }}$ | Rate of Return |
| Customer Deposits | $\underline{0.6434 \%}$ | $6.1900 \%$ | $3.1348 \%$ |
| $\quad$ Sub-total | $51.3265 \%$ | $2.9400 \%$ | $\underline{0.0201 \%}$ |
| Preferred Stock | $1.2708 \%$ | $5.0300 \%$ | $0.1549 \%$ |
| Common Equity | $\underline{47.4027 \%}$ | $10.0000 \%$ | $\underline{4.7403 \%}$ |
| $\quad$ Total | $100.0000 \%$ |  | $7.9591 \%$ |

(1) BPU Docket No. ER02050303
(2) BPU Docket No. GR05100845

## PSE\&G Solar 4 All Program

## Development of Capitalization

(thousands of dollars)

## Actual Capital Structure:

|  | Capitalization |  |  | Capitalization |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Dec |  |  |
|  | Nov-08 | MTN Issue | Adiusted | Ratio |
| Long-term Debt | 3,248,737 | 274,916 | 3,523,653 | 48.27\% |
| Customer Deposits | 81,715 | - | 81,715 | 1.12\% |
| Sub-total | 3,330,452 | 274,916 | 3,605,368 | 49.39\% |
| Preferred Stock | 79,655 | - | 79,655 | 1.09\% |
| Common Equity | 3,615,421 | - | 3,615,421 | 49.52\% |
| Total | 7,025,528 | 274,916 | 7,300,444 | 100.00\% |

## Financing Requirement:

|  | Capital Economic Stimulu |  | EEE Stimulus |  | Solar 4 All Electric | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investment thru 2010: | Electric | Gas | Electric | Gas |  |  |
| Investment | 359,582 | 283,409 | 120,642 | 48,358 | 203,255 | 1,015,247 |
| Accum. Deprec/Amort | 8,842 | 6,782 | 8,697 | 3,486 | 8,184 | 35,991 |
| Accum. Def. Tax | 3,543 | 3,278 | 45,569 | 18,266 | 13,227 | 83,882 |
| Accum. Def. ITC | - | - | - | - | 58,590 | 58,590 |
| Amount to Finance | 347,197 | 273,350 | 66,376 | 26,606 | 123,254 | 836,783 |

Allocation of Financing Requirement between Debt and Equity: Financing

|  | Requiremen | Ratio |
| :---: | :---: | :---: |
| Long-term Debt | 285,946 | 34.17\% |
| Common Equity | 550,838 | 65.83\% |
| Total | 836,783 | 100.00\% |

WACC:
Long-term Debt
Customer Deposits
Sub-total
Preferred Stock
Common Equity
Total

| Capitalization |  |  | Capitalization Ratio |
| :---: | :---: | :---: | :---: |
|  | Net to be |  |  |
| Adjusted | Financed | Pro Forma |  |
| 3,523,653 | 285,946 | 3,809,599 | 46.82\% |
| 81,715 | - | 81,715 | 1.00\% |
| 3,605,368 | 285,946 | 3,891,314 | 47.82\% |
| 79,655 | - | 79,655 | 0.98\% |
| 3,615,421 | 550,838 | 4,166,259 | 51.20\% |
| 7,300,444 | 836,783 | 8,137,227 | 100.00\% |

## SE\&G Solar 4 All Program

|  | PSE\&G LONG TERM DEBT | COST OF BOND YIELD BASIS | $\begin{gathered} \text { PRINCIPAL } \\ \text { AMOUNT } \\ \text { OUTSTANDING } \end{gathered}$ | PLUS NET UNAMORTIZED PREMIUM/ (DISCOUNT) | PLUS NET UNAMORTIZED SELLING EXPENSE | PLUS NET UNAMORTIZED PREMIUM/ (DISCOUNT) \& SELLING EXPENSE | PRINCIPAL AMOUNT <br> AND UNAMORTIZED PREMIUM/ (DISCOUNT) \& $\qquad$ | WEIGHT IN \% OF PRINCIPAL AMOUNT AND UNAMORTIZED PREMIUM/ (DISCOUNT) \& SELLING EXPENSE- NET | COST IN $\underline{\underline{\text { PERCENT }}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6.750\% | SERIES VV DUE 1-1-16 | 7.319\% | \$171,245,000.00 | $(\$ 931,534.63)$ | (\$11,760.00) | (\$943,294.63) | \$170,301,705.37 | 4.4921\% | 0.3288\% |
| 6.450\% | PC SERIES T DUE 10-1-19 | 7.147\% | \$4,600,000.00 | (\$37,684.98) | (\$35,862.00) | (\$73,546.98) | \$4,526,453.02 | 0.1194\% | 0.0085\% |
| 9.250\% | SERIES CC DUE 6-1-21 | 9.730\% | \$134,380,000.00 | $(\$ 160,024.04)$ | (\$7,152.00) | (\$167,176.04) | \$134,212,823.96 | 3.5402\% | 0.3445\% |
| 5.200\% | PC SERIES M DUE 3-1-25 | 5.711\% | \$23,000,000.00 | (\$191,765.16) | (\$171,108.00) | (\$362,873.16) | \$22,637,126.84 | 0.5971\% | 0.0341\% |
| 3.664\% | PC SERIES Z (2003 B1) DUE 11-1-33 | 3.981\% | \$50,000,000.00 | \$0.00 | (\$321,649.68) | (\$321,649.68) | \$49,678,350.32 | 1.3104\% | 0.0522\% |
| 3.664\% | PC SERIES AA (2003 B2) DUE 11-1-33 | 3.981\% | \$50,000,000.00 | \$0.00 | (\$321,649.68) | (\$321,649.68) | \$49,678,350.32 | 1.3104\% | 0.0522\% |
| 5.450\% | PC SERIES O DUE 2-1-32 | 5.898\% | \$50,000,000.00 | (\$577,000.42) | (\$157,059.00) | $(\$ 734,059.42)$ | \$49,265,940.58 | 1.2995\% | 0.0766\% |
| 6.400\% | PC SERIES P DUE 5-1-32 | 6.917\% | \$100,000,000.00 | (\$1,092,824.65) | (\$478,800.00) | (\$1,571,624.65) | \$98,428,375.35 | 2.5963\% | 0.1796\% |
| 8.000\% | SERIES DUE 6-1-37 | 8.364\% | \$7,462,900.00 | \$0.00 | \$0.00 | \$0.00 | \$7,462,900.00 | 0.1969\% | 0.0165\% |
| 5.000\% | SERIES DUE 7-1-37 | 5.229\% | \$7,537,800.00 | \$0.00 | \$0.00 | \$0.00 | \$7,537,800.00 | 0.1988\% | 0.0104\% |
| 2.272\% | FRN SERIES B DUE 3-12-10 | 4.768\% | \$300,000,000.00 | \$0.00 | (\$643,506.91) | (\$643,506.91) | \$299,366,493.09 | 7.8962\% | 0.3765\% |
| 8.160\% | SERIES DUE 5/26/09 * | 8.769\% | \$16,500,000.00 | (\$2,193.78) | (\$340.00) | (\$2,533.78) | \$16,497,466.22 | 0.4352\% | 0.0382\% |
| 8.100\% | SERIES DUE 5/26/09 * | 8.708\% | \$43,500,000.00 | (\$5,783.62) | (\$896.00) | (\$6,679.62) | \$43,493,320.38 | 1.1472\% | 0.0999\% |
| 5.125\% | SERIES DUE 9/01/12 * | 5.857\% | \$300,000,000.00 | (\$429,000.00) | (\$763,679.55) | (\$1,192,679.55) | \$298,807,320.45 | 7.8818\% | 0.4617\% |
| 5.000\% | SERIES DUE 1/01/13 * | 5.667\% | \$150,000,000.00 | \$0.00 | (\$406,568.27) | $(\$ 406,568.27)$ | \$149,593,431.73 | 3.9459\% | 0.2236\% |
| 5.000\% | SERIES DUE 8/15/14* | 5.721\% | \$250,000,000.00 | (\$557,425.00) | (\$957,591.33) | (\$1,515,016.33) | \$248,484,983.67 | 6.5544\% | 0.3750\% |
| 7.040\% | SERIES DUE 11/06/20 * | 7.588\% | \$9,000,000.00 | (\$34,724.19) | (\$40,044.00) | (\$74,768.19) | \$8,925,231.81 | 0.2354\% | 0.0179\% |
| 5.375\% | SERIES DUE 9/1/13 * | 6.064\% | \$300,000,000.00 | (\$148,714.85) | (\$909,723.83) | (\$1,058,438.68) | \$298,941,561.32 | 7.8853\% | 0.4782\% |
| 7.180\% | SERIES DUE 8/01/23 * | 7.744\% | \$5,000,000.00 | (\$18,220.46) | (\$35,000.00) | (\$53,220.46) | \$4,946,779.54 | 0.1305\% | 0.0101\% |
| 7.150\% | SERIES DUE 8/30/23 * | 7.712\% | \$33,500,000.00 | (\$122,264.50) | (\$234,675.00) | (\$356,939.50) | \$33,143,060.50 | 0.8742\% | 0.0674\% |
| 5.250\% | SERIES DUE 7/1/35* | 5.634\% | \$250,000,000.00 | (\$695,625.00) | (\$1,895,412.36) | (\$2,591,037.36) | \$247,408,962.64 | 6.5260\% | 0.3676\% |
| 5.700\% | SERIES DUE 12/1/36 * | 6.113\% | \$250,000,000.00 | (\$987,943.90) | (\$2,027,149.26) | (\$3,015,093.16) | \$246,984,906.84 | 6.5148\% | 0.3982\% |
| 5.800\% | SERIES DUE 5/1/37* | 6.198\% | \$350,000,000.00 | (\$645,360.13) | (\$2,813,108.34) | (\$3,458,468.47) | \$346,541,531.53 | 9.1409\% | 0.5666\% |
| 5.300\% | SERIES DUE 5/1/18* | 5.985\% | \$400,000,000.00 | $(\$ 297,509.66)$ | (\$2,556,723.86) | (\$2,854,233.52) | \$397,145,766.48 | 10.4757\% | 0.6270\% |
| 6.330\% | SERIES DUE 11/1/2013 * | 7.570\% | \$275,000,000.00 | (\$83,875.76) | (\$1,721,789.88) | (\$1,805,665.64) | \$273,194,334.36 | 7.2062\% | 0.5455\% |
| 5.500\% | NEW 10 YR NOTE DUE 2018 * | 6.185\% | \$285,946,000.00 | \$0.00 | (\$2,015,676.00) | (\$2,015,676.00) | \$283,930,324.00 | 7.4893\% | 0.4632\% |
|  | TOTAL PSE\&G LONG TERM DEBT |  | $\begin{gathered} \$ 3,816,671,700.00 \\ ================= \end{gathered}$ | $\begin{gathered} (\$ 7,019,474.72) \\ ================ \end{gathered}$ | (\$18,526,924.95) | (\$25,546,399.68) | $\begin{gathered} \$ 3,791,125,300.32 \\ =================== \end{gathered}$ | 100.000\% | 6.2198\% |



## PSE\&G Solar 4 All Program

## Allowed ROEs and Common Equity in Capitalization

## Past Allowed Returns:

| Company | Docket No. | Date | ROE | Common Equity |
| :---: | :---: | :---: | :---: | :---: |
| PSE\&G | GR-01050297 | 1/9/2002 | 10.00\% | NA |
| Pivotal Utility | GR-02040245 | 11/20/2002 | 10.00\% | NA |
| PSE\&G | ER-02050303 | 7/9/2003 | 9.75\% | 41.45\% |
| Rockland Electric | ER-02100724 | 7/15/2003 | 9.75\% | 46.00\% |
| Jersey Central | ER-02080506 | 7/25/2003 | 9.50\% | 46.00\% |
| South Jersey Gas | GR-03080683 | 7/8/2004 | 10.00\% | 46.00\% |
| Atlantic City Electric | ER-03020110 | 5/26/2005 | 9.75\% | 46.22\% |
| Jersey Central | ER-02080506 | 6/1/2005 | 9.75\% | 46.00\% |
| PSE\&G | GR-05100845 | 11/9/2006 | 10.00\% | 47.40\% |
| Rockland Electric | ER-06060483 | 3/22/2007 | 9.75\% | 46.51\% |
| Average |  |  | 9.83\% | 45.70\% |
| cent Allowed Return: |  |  |  |  |
| New Jersey Natural Gas | GR-07110889 | 10/3/2008 | 10.30\% | 51.20\% |

# PUBLIC SERVICE ELECTRIC AND GAS COMPANY DIRECT TESTIMONY OF <br> DANIEL M. FURLONG ASSISTANT CONTROLLER 

My name is Daniel M. Furlong and I am an Assistant Controller of Public Service Enterprise Group, Inc. (PSEG) Services Corporation. My business address is 80 Park Plaza, Newark, New Jersey. My professional background and qualifications as a witness in this proceeding are included in Schedule DMF-1 of this testimony.

## SCOPE OF TESTIMONY

The purpose of my testimony is to describe the accounting for the Public Service Electric and Gas Company’s ("PSE\&G" or "Company") Solar 4 All Program ("Program"). My testimony provides the accounting entries to record expenditures and recovery associated with the Program as described in the testimony of Stephen Swetz (Attachment B). The accounting entries are summarized in Schedule DMF-2.

## PROGRAM COSTS

PSE\&G is proposing to recover the revenue requirements associated with the direct costs of the Program. Direct costs include all costs related to Program
capital expenditures and Operations and Maintenance Costs including the Administrative Costs of running the Program. These costs would be offset by all the net benefits derived from the Program including but not limited to the solar electrical output, the net SREC revenue as well as the amortization of the applicable solar investment tax credit (ITC) utilized by PSE\&G. The following is a description of each cost element and the associated accounting entries.
(1) The Program capital assets will include solar panels, inverters, metering and communications equipment. The investment in the solar installations will be capitalized as Other Production plant.

346 Miscellaneous Power Plant Equipment XXX 131 Cash (payroll, outside services, M\&S) XXX If the construction period is longer than 60 days then the Company will also accrue AFUDC in accordance with our capitalization policy.
(2) The solar panels and metering assets will be depreciated over twenty years or the life of the agreement with the host site if it is less than twenty years. The inverters and the communication assets will be depreciated over 5 years.

403 Depreciation Expense
XXX 108 Accumulated Depreciation

XXX
(3) The Company will record the investment tax credit received on the solar assets and amortize the credit to the income statement on a straight line basis over the book life of the equipment. The deferral:

- 3 -

236 Taxes Accrued
410.1 Deferred Income Tax
409.1 Income Taxes

255 Accumulated Deferred ITC

The amortization over the book life:
255 Accumulated Deferred ITC
411.4 Investment Tax Credit Adjustments

XXX
XXX
XXX
XXX

XXX
XXX
(4) The tax basis of the solar assets will be the original cost of the assets reduced by $50 \%$ of the solar investment tax credit. The book-tax basis difference is amortized to income on a straight line basis over the book life of the assets. Since the book cost exceeds the tax basis a portion of the book depreciation is not deductible. Therefore this flow through of the basis difference will increase income tax expense.
409.1 Income Taxes

236 Taxes Accrued

XXX
XXX
(5) The Company will incur operation and maintenance expenses associated with the solar installations which will be recorded in the appropriate Other Power Generation expense accounts.

549 Miscellaneous Operation Expense XXX
554 Miscellaneous Maintenance Expense
XXX 131 Cash

XXX
(6) When the centralized solar is installed on Gas Distribution or Transmission property, Electric Distribution will be charged a rental charge fee that will
cover the return on and of the property utilized plus an appropriate share of expenses.

550 Rents Other Power Generation
454 Rents from Electric Property
XXX
493 Rents from Gas Property XXX
XXX
(7) In the governmental and HMFA segments the customer will receive a bill credit based on the amount of solar energy produced at their location. This bill credit is intended to reimburse the customer for the use of their premises. The bill credit will be recorded as a rent expense.

550 Rents Other Power Generation
XXX
142 Customer Accounts Receivable XXX

## ACCOUNTING FOR THE SOLAR OUTPUT

(1) The output from the centralized solar systems will be sold in the PJM market and the net revenues will offset the revenue requirements of the program.

131 Cash
447 Sales for Resale - Solar 4 All

XXX XXX
(2) The output from the solar installations in the other three segments will be applied as a reduction to the load to be served by BGS-FP suppliers. The solar energy produced will be valued at the zonal load weighted average LMP and that value will be debited to the BGS-FP reconciliation charge and credited to the RGGI Recovery Charge to offset revenue requirements.

- 5 -

555 Purchased Power - BGS
447 Sales for Resale - Solar 4 All

XXX
XXX
(3) The SRECs received from all of the solar installations will be sold in the SREC

Auction approved by the BPU. The net revenues received from the SREC
sales will offset the revenue requirements of the program.
Record the receipt of the SRECs at current market value:
174 Misc. Current \& Accrued Assets - SREC XXX
182 Regulatory Asset - SREC XXX
Record the sale of the SRECs at auction by reducing the SREC asset and crediting the RGGI Recovery Charge:
131 Cash
XXX
182 Regulatory Asset - SREC XXX
174 Misc. Current \& Accrued Assets - SREC XXX
456 Other Electric Revenues - Solar 4 All XXX

## CALCULATION OF REVENUE REQUIREMENTS

Each month a revenue requirement for this program will be determined that will include the expenses and sales of energy and SRECs described above plus a return on the net capital invested at PSE\&G's overall weighted average cost of capital (WACC) authorized by the Board in the most recent base rate case, including income tax effects.

$$
\begin{aligned}
& \text { Revenue Requirements }=(\text { Pre-tax Cost of Capital } * \text { Net Investment }) \\
& + \text { Amortization and/or Depreciation }+ \text { Operation and Maintenance Costs - }
\end{aligned}
$$

Revenues from Solar Output - ITC Amortization w/ Tax Gross Up + Tax Associated from ITC Basis Reduction

The Net Investment in the formula is the capitalized cost of the solar installations less the associated accumulated depreciation and accumulated deferred income taxes. The investment tax credit amortization and the impact of flow through depreciation are charged directly to tax expense and therefore must be grossed-up when determining the revenue requirement.

## INCOME TAXES

The Company will record deferred incomes taxes for all of the tax-book timing differences that result from this program. The different lives and methods for tax vs. book depreciation and entries to regulatory asset or liability accounts represent timing differences.

## OVER/UNDER COLLECTION

Each month the actual revenue collected through the RGGI Clause will be compared to that month's revenue requirement. The difference will be deferred as a regulatory asset or regulatory liability with an offsetting charge to expense. For an under collection the entry will be:

182 Regulatory Assets - Solar 4 All 407.4 Regulatory Credits

XXX
XXX

For an over collection the entry will be:
407.3 Regulatory Debits

254 Regulatory Liabilities - Solar 4 All

XXX XXX

The monthly WACC rate will be multiplied by the average monthly deferred balance and the resulting carrying cost will be added to the deferred balance. For an under collection the entry will be:

> 182 Regulatory Assets - Solar 4 All
> 431 Interest Expense
> 419 Other Income

$$
\begin{array}{ll}
\text { XXX } & \\
& \text { XXX } \\
& \text { XXX }
\end{array}
$$

For an over collection the entry will be:

$$
\begin{array}{lc}
\text { 426.5 Other Deductions } & \text { XXX } \\
\text { 431 Interest Expense } & \text { XXX } \\
\text { 254 Regulatory Liabilities - Solar 4 All } &
\end{array}
$$

At the end of the initial and each annual period, the corresponding deferred balances would be included in the forecasted revenue requirements for the proceeding period for each respective electric and gas RGGI clause.

## 1 Historical Financial Information

The following financial data, as required by the applicable sections of
3 N.J.A.C. 14:1-5.11 and N.J.A.C. 14:1-5.12, are included with my testimony.
4 Schedule DMF-3 Balance Sheets - 12/2005, 12/2006, 12/2007
5 Schedule DMF-4 Income Statements-2005, 2006, 2007
6 Schedule DMF-5 Balance Sheet - 11/2008
7 Schedule DMF-6 Revenue by Class of Business 2007
8 Schedule DMF-7 Affiliate Payments 2005, 2006, 2007
10 This concludes my testimony at this time.

## QUALIFICATIONS

OF
DANIEL M. FURLONG ASSISTANT CONTROLLER

I graduated from Syracuse University in 1975 with a Bachelor of Science in Accounting (Magna Cum Laude).

Between 1975 and 1991 I was employed by Jersey Central Power \& Light Company (JCP\&L). I was employed in the Accounting Department of JCP\&L from 1975 through 1983, and my responsibilities ranged from entry-level accountant to Manager Accounting Operations. In 1983 I was named Director Rates, a position I held until 1988 at which time I returned to Accounting as an Assistant Comptroller.

From 1991 to 1995 I was an Assistant Comptroller for GPU Nuclear Inc., where I was responsible for budgeting, cost control, financial analysis and rate support. From 1995 to 1997 I was an Assistant Comptroller for GPU Service Inc., responsible for business planning and taxes. In 1997 I returned to GPU Nuclear as Comptroller where I was responsible for accounting, budgeting, internal controls and financial planning and analysis.

In 2001 I assumed my current position as Public Service Enterprise Group, Inc. Assistant Controller - PSE\&G in the PSEG Services Corporation. I am responsible for all accounting matters for the PSE\&G subsidiary.

I have previously testified before the New Jersey Board of Public Utilities in several proceedings while I was Director Rates for JCP\&L. I was the accounting and revenue requirements witness in three base rate proceedings. In addition I was a primary witness in several Levelized Energy Adjustment Clause proceedings during the same time frame.

I testified as a rebuttal witness in I/M/O the Petition of Public Service Electric and Gas Company for Declaratory Ruling Clarifying the Cost Responsibility for Nuclear Generation Asset Decommissioning Funds (BPU Docket No. EO02080610). I also testified in PSE\&G's gas base rate case, I/M/O the Petition of Public Service Electric and Gas Company for Approval of an Increase in Gas Rates, Depreciation Rates for Gas Property and for Changes in the Tariff for Gas Service (BPU Docket No. GR05100845), in PSE\&G's RAC 13/14 case, I/M/O the Motion of Public Service Electric and Gas Company to Modify its Manufactured Gas Plant (MGP) Remediation Component Within its Electric Societal Benefits Charge (SBC) and its Gas SBC, et al., (BPU Docket No. ER07020104) and in PSE\&G's RAC 15 case, I/M/O the Motion of Public Service Electric and Gas Company to Modify its Manufactured Gas Plant (MGP) Remediation Component Within its Electric Societal Benefits Charge (SBC) and its Gas SBC, et al., (BPU Docket No. ER07120970). Most recently, I testified in PSE\&G's Carbon Abatement filing, I/M/O the Petition of

1 Public Service Electric and Gas Company Offering a Carbon Abatement Program, et 2 al., (BPU Docket No. EO086060426).

## PSE\&G Solar 4 All <br> Accounting Entries

Entry Acct. Description Debit Credit
Accounting for Company Owned Solar Equipment
R1 Capitalize the solar equipment owned by PSE\&G.
346 Miscellaneous Power Plant Equipment ..... XXX
131 Cash (payroll, outside services, materials and supplies) ..... XXX
R2 Depreciate the solar equipment over the book life.
403 Depreciation Expense ..... XXX
108 Accumulated Depreciation ..... XXX
R3 Record deferred income taxes on the book tax timing difference.
410.1 Deferred Income Taxes, Utility Operating Income ..... XXX
282 Accumulated Deferred Income TaxesXXX
or
411.1 Deferred Income Taxes - Credit, Utility Operating Income ..... XXX
282 Accumulated Deferred Income Taxes ..... XXX
R4 Record solar equipment operation \& maintainence expense.
549 Miscellaneous Other Power Generation Expense ..... XXX
554 Maintenance of Miscellaneous Other Power Generation Plant ..... XXX
131 Cash ..... XXX
R5 Record the solar equipment Investment Tax Credit.
236 Taxes Accrued ..... XXX
410.1 Deferred Income Taxes, Utility Operating Income ..... XXX
409.1 Income Taxes, Utility Operating Income ..... XXX
255 Accumulated Deferred Investment Tax Credits ..... XXX
R6 Amortize the solar investment tax credit over the book life of the equipment.
255 Accumulated Deferred Investment Tax Credits ..... XXX
411.4 Investment Tax Credit Adjustments ..... XXX
R7 Record rent paid to Gas Distrubtion and Transmission
550 Rents Other Power Generation ..... XXX
454 Rents from Electric Property ..... XXX
493 Rents from Gas Property ..... XXX
R8 Record the bill credit provided to Goverment \& HMFA segments.
550 Rents Other Power Generation ..... XXX
142 Customer Accounts Receivable ..... XXX

## PSE\&G Solar 4 All <br> Accounting Entries

Entry Acct. Description Debit Credit
Accounting for SRECs
R9 Record the receipt of the SRECs at current market value.
174 Misc Current and Accrued Assets -SREC ..... XXX
182 Regulatory Asset - Solar 4 All ..... XXX
R10 Record the sale of the SRECs at auction (net of transaction cost).
131 Cash ..... XXX
182 Regulatory Asset - Solar 4 All - gain or loss on sale ..... XXX
174 Misc Current and Accrued Assets -SREC ..... XXX
456 Other Electric Revenues - Solar 4 AllAccounting for Sale of Solar EnergyR11 Record grid connected sales to PJM at LMP.
131 Cash ..... XXX
447 Sales For Resale - Solar Infrastructure ..... XXX
R12 Record energy benefit from unscheduled solar generation at LMP.
555 Purchased Power - BGS-FP ..... XXX
456 Other Electric Operating Revenues - Solar 4 All ..... XXX
Accounting for Cost Recovery
R13 Record the monthly Solar 4 All revenues.
142 Customer Accounts Receivable ..... XXX400 Operating RevenuesXXX
R14 Record any over/ under recovery.
182 Regulatory Asset - Solar 4 All ..... XXX
407.3 Regulatory Debits ..... XXX
407.4 Regulatory Credits ..... XXX
254 Regulatory Liability - Solar 4 All ..... XXX
R15 Record cost of capital on any over/ under recovered balance using PSE\&G's WACC.
182 Regulatory Asset - Solar 4 All ..... XXX
419 Other Income ..... XXX
431 Interest Expense ..... XXX ..... XXX
254 Regulatory Liability - Solar 4 All ..... XXX

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

baLANCE SHEET

Dec.31, 2006 Dec.31, 2007
(THOUSANDS)
Assets and Other Debits
Utility Plant
Electric Utility Plant


| Accumulated Provisions for Depreciation and Amortization |  |  |  |
| :---: | :---: | :---: | :---: |
| Electric Utility Plant |  |  |  |
| 108 \& 111 Electric Utility Plant in Service | $(2,158,680)$ | (2,261,775) | $(2,374,881)$ |
| Gas Utility Plant |  |  |  |
| 108 \& 111 Gas Utility Plant in Service | $(1,727,049)$ | $(1,739,553)$ | $(1,788,393)$ |
| Common Utility Plant |  |  |  |
| 108 \& 111 Common Utility Plant in Service | $(147,156)$ | $(128,968)$ | $(54,808)$ |
| Depreciation and Amortization |  |  |  |
| of Utility Plant | (4,032,885) | (4,130,296) | (4,218,082) |
| Net Utility Plant Excluding Nuclear Fuel | 6,663,107 | 6,989,233 | 7,334,177 |
| Nuclear Fuel |  |  |  |
| 120.1 In Process | 0 | 0 | 0 |
| 120.2 Materials and Assemblies Stock | 0 | 0 | 0 |
| 120.3 In Reactor | 0 | 0 | 0 |
| 120.4 Spent | 0 | 0 | 0 |
| Accumulated Provisions for Amortization |  |  |  |
| 120.5 Nuclear Fuel | 0 | 0 | 0 |
| Net Nuclear Fuel | 0 | $\underline{0}$ | $\underline{0}$ |
| Net Utility Plant | 6,663,107 | 6,989,233 | 7,334,177 |

# Schedule DMF-3 Page 2 of 3 

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

## BALANCE SHEET

Dec.31, 2005
Assets and Other Debits (Continued)
Other Property and Investments
121 Nonutility Property
122 Accumulated Provision for Depreciation
and Amortization of Nonutility Property
123.1 Investment in Subsidiary Companies
124 Other Investments
125-8 Special Funds

Current and Accrued Assets

| 131 Cash | 28,081 | 26,691 | 29,475 |
| :---: | :---: | :---: | :---: |
| 132-4 Special Deposits | 806 | 279 | 178 |
| 135 Working Funds | 0 | 0 | 0 |
| 136 Temporary Cash Investments | 129,282 | 0 | 0 |
| 141-3 Notes and Accounts Receivable | 998,644 | 850,070 | 1,039,546 |
| 144 Accumulated Provision for Uncollectible |  |  |  |
| Accounts - Credit | $(41,412)$ | $(46,404)$ | $(44,985)$ |
| 145-6 Receivables from Associated Companies | 105,019 | 98,866 | 85,410 |
| 151-5 Materials and Supplies (incl. 163) | 48,673 | 49,604 | 53,277 |
| 158 Allowances | 0 | 0 | 0 |
| 164 Gas Stored Underground - Current | 0 | 0 | 0 |
| 165 Prepayments | 48,959 | 14,009 | 57,170 |
| 171 Interest and Dividends Receivable | 0 | 220 | 4,561 |
| 172 Rents Receivable | 1,305 | 1,542 | 529 |
| 173 Accrued Utility Revenues | 393,990 | 327,755 | 353,031 |
| 174 Miscellaneous Current and Accrued |  |  |  |
| 176 (Less) Long-Term Debt Portion of Derivative Instrument | 0 | 2,430 | 0 |
| Derivitive Instrument Assests-Hedges |  |  | 842 | Total Current and Accrued Assets

Deferred Debits

| 181 | Unamortized Debt Expense | 20,135 | 20,627 | 21,930 |
| :---: | :---: | :---: | :---: | :---: |
| 182 | Unrec'd Plt and Reg Costs and Other Reg Assets | 3,160,219 | 3,936,719 | 3,577,221 |
| 183 | Preliminary Survey and Investigation Charges | 0 | 0 | 76 |
| 184 | Clearing Accounts | 0 | 0 | 0 |
| 185 | Temporary Facilities | 0 | 0 | 0 |
| 186 | Miscellaneous Deferred Debits | 27,023 | 25,870 | 20,707 |
| 188 | Research and Development Expenditures | 0 | 0 | 0 |
| 189 | Unamortized Loss on Reacquired Debt | 91,057 | 84,689 | 79,689 |
| 190 | Accumulated Deferred Income Taxes | 466,726 | 467,102 | 477,592 |
|  | Total Deferred Debits | 3,765,160 | 4,535,007 | 4,177,215 |
|  | Total Assets and Other Debits | \$12,651,084 | \$13,102,387 | \$13,352,739 |

# Schedule DMF-3 <br> Page 3 of 3 

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

## BALANCE SHEET

Dec.31, 2005
Liabilities and Other Credits

Proprietary Capital

| 201 | Common Stock Issued |
| :--- | :--- |
| 204 | Preferred Stock Issued |
| 207 | Premium on Capital Stock |
| 208 | Donations from Stockholders |
| 210 | Gain on Resale or Cancellation of |
|  | Reacquired Capital Stock |
| 211 | Miscellaneous Paid-In Capital |
| 215 | Appropriated Retained Earnings |
| 216 | Unappropriated Retained Earnings |
| 219 | Other Comprehensive Income |
|  |  |
|  | Total Proprietary Capital |

Long-Term Debt

| 221 | Bonds | $3,192,593$ |
| :--- | ---: | ---: |
| 223 | Advances from Assoc. Co. | 0 |
| 225 | Unamortized Premium on Long-Term Debt | 3,172 |
| 226 | Unamortized Discount on Long-Term Debt | $(7,224)$ |
|  | Total Long-Term Debt | $3,188,541$ |
| Other Non-Current Liabilities |  |  |
| $227-9$ | 573,698 |  |
|  | Other Non-current Liabilities |  |
| 230 Liabilities-Hedges | 0 |  |
|  | Asset Retirement Obligation | $\underline{209,927}$ |
|  | Total Other Non-Current Liabilities | 783,625 |

Current and Accrued Liabilities
231 Notes Payable
232 Accounts Payable
233-4 Payables to Associated Companie
235 Customer Deposits
236 Taxes Accrued
237 Interest Accrued
238 Dividends Declared
239 Matured Long-Term Debt
241 Tax Collections Payable
242 Miscellaneous Current and Accrued Liabilities
243 Obligations Under Capital leases
245 Derivative Instrument Liabilities - Hedges Long-Term Portion of Derivitive Instrument Liabilities-Hedges
Total Current and Accrued Liabilities $\quad 1,233,628$
Deferred Credits

| 252 Customer Advances for Construction | 1,809 | 11,412 | 10,086 |
| :---: | :---: | :---: | :---: |
| 253 Other Deferred Credits | 606,015 | 507,673 | 656,451 |
| 254 Other Regulatory Liabilities | 661,645 | 616,852 | 391,213 |
| 255 Accumulated Deferred Investment Tax Credits | 47,425 | 44,405 | 41,427 |
| 281-3 Accumulated Deferred Income Taxes | 3,000,503 | 2,907,886 | 2,859,261 |
| Total Deferred Credits | 4,317,397 | 4,088,229 | 3,958,438 |
| Total Liabilities and Other Credits | \$12.651.084 | \$13,102.387 | \$13,352.739 |

# Schedule DMF-4 <br> Page 1 of 2 

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

## ELECTRIC INCOME ACCOUNT

Utility Operating Income
400 Electric Operating Revenues
Electric Operating Expenses:
401 Operation Expense
402 Maintenance Expense
403 Depreciation Expense
404 Amortization of Limited Term Plant
407 Amortization of Property Losses
408.1 Taxes Other Than Income Taxes
409.1 Income Taxes - Federal
410.1 Provision for Deferred Income Taxes
411.1 Provision for Deferred Income Taxes Credit
411.103 Accretion Expense-Electric
411.4 Investment Tax Credit Adjustments (Net)

Total Electric Utility Operating Expenses
Electric Utility Operating Income

Year 2005 * $\quad \frac{\text { Year 2006 * }}{\text { (Thousands) }} \quad \underline{\text { Year 2007 * }}$

* Electric Distribution only


## Schedule DMF-4

Page 2 of 2

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

## GAS INCOME ACCOUNT

|  | Year 2005 | Year 2006 <br> (Thousands) | Year 2007 |
| :---: | :---: | :---: | :---: |
| 400 Gas Operating Revenues | $(2,976,901)$ | $(2,794,935)$ | $(3,027,323)$ |
| Gas Operating Expenses: |  |  |  |
| 401 Operation Expense | 2,540,333 | 2,432,174 | 2,566,508 |
| 402 Maintenance Expense | 24,600 | 25,210 | 29,865 |
| 403 Depreciation Expense | 119,364 | 115,225 | 87,289 |
| 404 Amortization of Limited Term Plant | 5,460 | 4,852 | 2,777 |
| 407 Amortization of Property Losses | 20,781 | 18,298 | 17,897 |
| 407.4 Amortization of Excess cost of removal | 0 | $(1,907)$ | $(13,200)$ |
| 408.1 Taxes Other Than Income Taxes | 59,987 | 54,434 | 60,025 |
| 409.1 Income Taxes - Federal | 43,865 | 32,225 | 47,307 |
| 410.1 Provision for Deferred Income Taxes | 50,517 | 41,698 | 56,675 |
| 411.1 Provision for Deferred Income Taxes - |  |  |  |
| Credit | $(31,519)$ | $(24,553)$ | $(23,418)$ |
| 411.4 Investment Tax Credit Adjustments (Net) | $(1,357)$ | $(1,348)$ | $(1,348)$ |
| Total Gas Utility Operating Expenses | 2,832,031 | 2,696,309 | 2,830,377 |
| Gas Utility Operating Income | $(144,870)$ | $(98,625)$ | $\underline{(196,946)}$ |

## Schedule DMF-5 <br> Page 1 of 3

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

BALANCE SHEET

|  | November 30, 2008 |
| :---: | :---: |
|  | (THOUSANDS) |
| Assets and Other Debits |  |
| Utility Plant |  |
| Electric Utility Plant |  |
| 101 Electric Utility Plant in Service | 7,452,000 |
| 103 Electric Experimental Plant Unclassified | 0 |
| 105 Electric Utility Plant Held for Future Use | 8,414 |
| 107 Electric Construction Work in Progress | 63,424 |
| Total Electric Utility Plant | 7,523,838 |
| Gas Utility Plant |  |
| 101 Gas Utility Plant in Service | 4,511,251 |
| 103 Gas Experimental Plant Unclassified | 0 |
| 105 Gas Utility Plant Held for Future Use | 0 |
| 107 Gas Construction Work in Progress | 5,771 |
| Total Gas Utility Plant | 4,517,022 |
| Common Utility Plant |  |
| 101 Common Utility Plant in Service | 83,799 |
| 107 Common Construction Work in Progress | 74,038 |
| Total Common Utility Plant | 157,837 |
| Total Utility Plant | 12,198,697 |
| Accumulated Provisions for Depreciation and Amortization |  |
| Electric Utility Plant |  |
| 108 \& 111 Electric Utility Plant in Service | (2,494,329) |
| 108.5 Electric Utility Plant Held for |  |
| Future Use |  |
| Total Electric Utility Plant | $(2,494,329)$ |
| Gas Utility Plant |  |
| 108 \& 111 Gas Utility Plant in Service | $(1,848,713)$ |
| Common Utility Plant |  |
| 108 \& 111 Common Utility Plant in Service | $(53,919)$ |
| Total Accumulated Provisions for |  |
| Depreciation and Amortization |  |
| of Utility Plant | $(4,396,961)$ |
| Net Utility Plant Excluding Nuclear Fuel | 7,801,736 |
| Nuclear Fuel |  |
| 120.1 In Process | 0 |
| 120.2 Materials and Assemblies Stock | 0 |
| 120.3 In Reactor | 0 |
| 120.4 Spent | 0 |
| Accumulated Provisions for Amortization |  |
| 120.5 Nuclear Fuel | 0 |
| Net Nuclear Fuel | $\underline{0}$ |
| Net Utility Plant | 7,801,736 |

## Schedule DMF-5 Page 2 of 3

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

## BALANCE SHEET

| Assets and Other Debits (Continued) | $\frac{\text { November 30, 2008 }}{\text { (THOUSANDS) }}$ |
| :--- | :--- |

Other Property and Investments

| 121 | Nonutility Property |
| :--- | ---: |
| $122 \quad$ Accumulated Provision for Depreciation | 2,857 |
| and Amortization of Nonutility Property | $(381)$ |
| 123.1 Investment in Subsidiary Companies | 56,666 |
| $124 \quad$ Other Investments | 150,368 |
| $125-8$ Special Funds | $\underline{45,084}$ |
| Total Other Property and Investments |  |

Current and Accrued Assets

| $131 \quad$ Cash | 4,051 |
| :--- | ---: |
| $132-4$ Special Deposits | 700 |
| $135 \quad$ Working Funds |  |
| $136 \quad$ Temporary Cash Investments | 894,260 |
| $141-3$ Notes and Accounts Receivable | $(52,012)$ |
| $144 \quad$ Accumulated Provision for Uncollectible | 113,527 |
| Accounts - Credit | 61,863 |
| $145-6$ Receivables from Associated Companies | 0 |
| $151-5$ Materials and Supplies (incl. 163) | 0 |
| $158 \quad$ Allowances | 113,974 |
| 164 | Gas Stored Underground - Current |
| 165 | Prepayments |
| 171 Interest and Dividends Receivable | 2,128 |
| 172 | Rents Receivable |
| 173 | Accrued Utility Revenues |
| $174 \quad$ Miscellaneous Current and Accrued | 403,545 |
| 176 (Less) Long-Term Debt Portion of Derivative Instrument | 524 |
| Derivitive Instrument Assests-Hedges | $1,585,174$ |

Deferred Debits

| 181 | Unamortized Debt Expense | 14,942 |
| :--- | :--- | ---: |
| 182 | Unrec'd Plt and Reg Costs and Other Reg Assets | $4,253,182$ |
| 183 | Preliminary Survey and Investigation Charges | 342 |
| 184 | Clearing Accounts | 738 |
| 185 | Temporary Facilities | 18,734 |
| 186 | Miscellaneous Deferred Debits |  |
| 188 | Research and Development Expenditures | 112,711 |
| 189 | Unamortized Loss on Reacquired Debt | $\underline{459,514}$ |
| 190 | Accumulated Deferred Income Taxes | $4,860,163$ |
|  | Total Deferred Debits | $\underline{\$ 14,501,667}$ |

## Schedule DMF-5 <br> Page 3 of 3

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

## BALANCE SHEET

November 30, 2008
(THOUSANDS)
Liabilities and Other Credits
Proprietary Capital

| 201 | Common Stock Issued | $(892,260)$ |
| :---: | :---: | :---: |
| 204 | Preferred Stock Issued | $(79,523)$ |
| 207 | Premium on Capital Stock | (132) |
| 208 | Donations from Stockholders | $(1,155,937)$ |
| 210 | Gain on Resale or Cancellation of Reacquired Capital Stock |  |
| 211 | Miscellaneous Paid-In Capital |  |
| 215 | Appropriated Retained Earnings |  |
| 216 | Unappropriated Retained Earnings | $(1,566,245)$ |
| 219 | Other Comprehensive Income | (978) |
|  | Total Proprietary Capital | $(3,695,076)$ |
| Long-Term Debt |  |  |
| 221 | Bonds | $(3,255,726)$ |
| 223 | Advances from Assoc. Co. |  |
| 225 | Unamortized Premium on Long-Term Debt |  |
| 226 | Unamortized Discount on Long-Term Debt | 6,988 |
|  | Total Long-Term Debt | $(3,248,738)$ |
| Other Non-Current Liabilities |  |  |
| 227-9 | Other Non-current Liabilities | $(872,958)$ |
|  | Long-Term Portion of Derivitive Instrument Liabilities-Hedges |  |
| 230 | Asset Retirement Obligation | $(241,108)$ |
|  | Total Other Non-Current Liabilities | $(1,114,066)$ |
| Current and Accrued Liabilities |  |  |
| 231 | Notes Payable | $(311,848)$ |
| 232 | Accounts Payable | $(131,277)$ |
| 233-4 | 4 Payables to Associated Companies | $(639,360)$ |
| 235 | Customer Deposits | $(81,715)$ |
| 236 | Taxes Accrued | $(1,891)$ |
| 237 | Interest Accrued | $(66,537)$ |
| 238 | Dividends Declared | 0 |
| 239 | Matured Long-Term Debt | 0 |
| 241 | Tax Collections Payable | (442) |
| 242 | Miscellaneous Current and Accrued Liabilities | $(465,284)$ |
| 243 | Obligations Under Capital leases |  |
| 245 | Derivative Instrument Liabilities - Hedges | $(81,864)$ |
|  | Long-Term Portion of Derivitive Instrument Liabilities-Hedges |  |
|  | Total Current and Accrued Liabilities | $(1,780,218)$ |

Deferred Credits
252 Customer Advances for Construction $\quad(9,706)$
253 Other Deferred Credits
$(1,313,095)$
254 Other Regulatory Liabilities
$(352,955)$
255 Accumulated Deferred Investment Tax Credits $\quad(39,163)$
281-3 Accumulated Deferred Income Taxes $\quad(2,948,650)$ Total Deferred Credits
$(4,663,569)$ Total Liabilities and Other Credits (\$14,501,667)

Schedule DMF-6
Page 1 of 2

## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

ELECTRIC REVENUE BY CLASS OF BUSINESS
12 MONTHS ENDING DECEMBER 31, 2007
(Thousands)

| Residential | $\$ 1,904,724$ |
| :--- | ---: |
| Commercial | $2,417,810$ |
| Industrial | 317,379 |
| Public Street \& Highway Lighting | 70,859 |
| Interdepartmental Revenues | 1,783 |
| Sales for Resale | 277,487 |
| Forfeited Discounts | 6,842 |
| Miscellaneous Service Revenues | 1,878 |
| Rent from Electric Property | 2,469 |
| Other Electric Revenues | 4,172 |

Total Revenue from Electric Distribution Sales
5,005,403

# PUBLIC SERVICE ELECTRIC AND GAS COMPANY <br> GAS REVENUE BY CLASS OF BUSINESS 12 MONTHS ENDING DECEMBER 31, 2007 

Residential \$1,949,378
Commercial ..... 789,402
Industrial ..... 117,831
Street \& Yard Light Service ..... 936
Cogeneration ..... 129,348
Interdepartmental Revenues ..... 1,365
Forfeited Discounts ..... 1,190
Miscellaneous Service Revenues ..... 33,955
Other Gas Revenues ..... 3,919
Total Revenue from Gas Distribution Sales3,027,323

## Schedule DMF-7

## Public Service Electric \& Gas Company

 Total Utility Payments or Accruals to Affiliates(\$ THOUSANDS) Net Billing

|  | 2007 |  | 2006 |  | 2005 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| PSEG Services | $\$$ | 477,726 | $\$$ | 433,544 | $\$$ | 425,633 |
| PSEG Power | $\$$ | $3,344,032$ | $\$ 2,758,103$ | $\$$ | $2,611,805$ |  |
| PSEG Energy Holdings | $\$$ | $(342)$ | $\$$ | $(359)$ | $\$$ | $(267)$ |
| PSEG Enterprise | $\$$ | $(51,746)$ | $\$$ | $(63,597)$ | $\$$ | $(80,303)$ |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Total Payments to Affiliates | $\$$ | $3,769,670$ | $\$ 3,127,691$ | $\$$ | $2,956,868$ |  |

# NOTICE TO PUBLIC SERVICE ELECTRIC AND GAS COMPANY ELECTRIC CUSTOMERS 

# IN THE MATTER OF THE PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY FOR APPROVAL OF A SOLAR GENERATION INVESTMENT PROGRAM AND AN ASSOCIATED COST RECOVERY MECHANISM 

Notice of a Filing<br>And<br>Notice of Public Hearings

TAKE NOTICE that, on February 10, 2009 Public Service Electric and Gas Company ("Public Service", "PSE\&G", "the Company") filed a Petition and supporting documentation with the New Jersey Board of Public Utilities ("Board", "BPU") in Docket Number XXXXXXXX seeking Board approval to implement and administer a PSE\&G Solar Generation Investment Program ("Program") and to approve an associated cost recovery mechanism. This Program will be promoted as "Solar 4 All".

Under the Program, PSE\&G will invest approximately $\$ 773$ million in solar photovoltaic generation systems ("Solar Systems"). PSE\&G will finance, own, and operate the Solar Systems. The Solar Systems will be installed in a variety of locations throughout PSE\&G's electric service territory including: PSE\&G property, brownfields/grayfields and/or sites owned by non-profit entities; utility poles; properties owned by local government including public schools; and in the common areas of HMFA-financed affordable housing communities. The Solar Systems will be gridconnected to PSE\&G's distribution system. In total, PSE\&G will install approximately 120 MW d.c. of Solar Systems under the Program. The Program is not similar to any current programs administered by the Office of Clean Energy. The Program directly supports the State of New Jersey's renewable energy initiatives, as outlined in the recently released Energy Master Plan.

PSE\&G proposes to recover all Program costs through a separate component of the electric RGGI Recovery Charge (RRC) entitled Solar Generation Investment Program. This new component will be applicable to all electric rate schedules on equal cents per kilowatt-hour basis. The Solar Generation Investment Program charge would be reviewed and modified in an annual filing. PSE\&G proposes to earn a return on its net investment in the Program based on a Weighted Average Cost of Capital. The proposed new RRC, if approved by the Board, is shown in Table \#1 below.

Table \#2 below provides customers with the approximate net effect of the proposed increase in rates relating to this Program, if approved by the Board. The annual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of the customer's usage. The approximate effect of the proposed increase on typical electric residential monthly bills, if approved by the Board, is illustrated in Table \# 3 below.

Based on the filing, a typical residential electric customer using 722 kilowatthours per summer month and 6,960 kilowatthours on an annual basis would see an initial increase in the annual bill from $\$ 1,269.28$ to $\$ 1,270.52$, or $\$ 1.24$ or approximately 0.10\%.

Any rate adjustments with resulting changes in bill impacts found by the Board to be just and reasonable as the result of the Company's filing may be modified and/or allocated by the Board in accordance with the provisions of N.J.S.A 48:2-21 and for other good and legally sufficient reasons to any class or classes of customers of the Company. Therefore, the described charges may increase or decrease based upon the Board's decision.

Copies of the Company's filing are available for review by the public at the Company's Customer Service Centers and at the Board of Public Utilities at Two Gateway Center, Newark, New Jersey 07102.

The following dates, times and locations for public hearings have been scheduled on the Company's filing so that members of the public may present their views.

Date 1, 2009
Time 1
Location 1
Location 1 Overflow
Room 1
Room 1 Overflow
Address 1
City 1, N.J. Zip 1

Date 2, 2009
Time 2
Location 2
Location 2 Overflow
Room 2
Room 2 Overflow
Address 2
City 2, N.J. Zip 2

Date 3, 2009
Time 3
Location 3
Location 3 Overflow
Room 3
Room 3 Overflow
Address 3
City 3, N.J. Zip 3

In order to encourage full participation in this opportunity for public comment, please submit any requests for needed accommodations, such as, interpreters, listening devices or mobility assistance, 48 hours prior to the above hearings. Customers may also file written comments with the Secretary of the

Table \# 1
Electric RRC Charge

|  | Solar Generation Investment <br> Program Component of the RRC |  | Total RRC |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Present \$/kWhr <br> (Incl. SUT) | Proposed <br> \$/kWhr <br> (Incl. SUT) | Present <br> \$/kWhr <br> (Incl. SUT) | Proposed <br> \$/kWhr <br> (Incl. SUT) |
| RRC Electric - \$ per kWhr | $\$ 0.000000$ | $\$ 0.000180$ | $\$ 0.000021$ | $\$ 0.000201$ |

Table \# 2
Impact By Customer Class

| PROPOSED PERCENTAGE INCREASES BY CUSTOMER CLASS <br> FOR ELECTRIC SERVICE |  |  |
| :--- | :---: | :---: |
| BGS-FP | Rate Class | \% Increase |
| Residential | RS | $\mathbf{0 . 1 0 \%}$ |
| Residential Heating | RHS | $\mathbf{0 . 1 1}$ |
| Residential Load Management | RLM | $\mathbf{0 . 1 1}$ |
| General Lighting \& Power | GLP | $\mathbf{0 . 1 0}$ |
| Large Power \& Lighting - Secondary (Peak Load Share 0 - 749) | LPL-S | $\mathbf{0 . 1 2}$ |
| Large Power \& Lighting - Secondary (Peak Load Share 750 - 999) | LPL-S | $\mathbf{0 . 1 1}$ |
|  |  |  |
| BGS-CIEP |  |  |
| Large Power \& Lighting - Secondary (Peak Load Share 1,000+) | LPL-S | $\mathbf{0 . 1 1}$ |
| Large Power \& Lighting - Primary | LPL-P | $\mathbf{0 . 1 2}$ |
| High Tension - Subtransmission | HTS-S | $\mathbf{0 . 1 2}$ |
| High Tension - High Voltage | HTS-HV | $\mathbf{0 . 1 3}$ |

The percent increases noted above are based upon current Delivery Rates and the applicable Basic Generation Service (BGS) charges and assumes that customers receive commodity service from Public Service Electric and Gas Company.

## Table \#3

Residential Electric Service

| If Your <br> Annual kWhr <br> Use Is: | And Your <br> Monthly <br> Summer kWhr <br> Use Is: | Then Your <br> Present Monthly <br> Summer Bill (1) <br> Would Be: | And Your Proposed <br> Monthly Summer <br> Bill (2) Would Be: | Your Monthly <br> Summer Bill <br> Increase <br> Would Be: | And Your <br> Monthly <br> Percent <br> Increase <br> Would Be: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1,800 | 170 | $\$ 33.16$ | $\$ 33.19$ | $\$ 0.03$ | $0.09 \%$ |
| 3,600 | 360 | 67.50 | 67.56 | 0.06 | 0.09 |
| 6,960 | 722 | 134.62 | 134.75 | 0.13 | 0.10 |
| 7,800 | 803 | 150.38 | 150.52 | 0.14 | 0.09 |
| 12,000 | 1,250 | 237.31 | 237.53 | 0.22 | 0.09 |

(1) Based upon current Delivery Rates and Basic Generation Service Fixed Pricing (BGS-FP) charges in effect January 1, 2009 and assumes that the customer receives BGS-FP service from Public Service.
(2) Same as (1) except for the addition of the proposed Solar Generation Investment Program component to the RRC.

Gregory Eisenstark, Esq.
Assistant General Corporate Rate Counsel
PUBLIC SERVICE ELECTRIC AND GAS COMPANY

# NOTICE TO PUBLIC SERVICE ELECTRIC AND GAS COMPANY ELECTRIC CUSTOMERS 

## IN THE MATTER OF THE PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY FOR APPROVAL OF A SOLAR GENERATION INVESTMENT PROGRAM AND AN ASSOCIATED COST RECOVERY MECHANISM

TAKE NOTICE that, on February 10, 2009 Public Service Electric and Gas Company ("Public Service", "PSE\&G", "the Company") filed a Petition and supporting documentation with the New Jersey Board of Public Utilities ("Board", "BPU") in Docket Number XXXXXXXX seeking Board approval to implement and administer a PSE\&G Solar Generation Investment Program ("Program") and to approve an associated cost recovery mechanism. This Program will be promoted as "Solar 4 All".

Under the Program, PSE\&G will invest approximately $\$ 773$ million in solar photovoltaic generation systems ("Solar Systems"). PSE\&G will finance, own, and operate the Solar Systems. The Solar Systems will be installed in a variety of locations throughout PSE\&G's electric service territory including: PSE\&G property, brownfields/grayfields and/or sites owned by non-profit entities; utility poles; properties owned by local government including public schools; and in the common areas of HMFA-financed affordable housing communities. The Solar Systems will be gridconnected to PSE\&G's distribution system. In total, PSE\&G will install approximately 120 MW d.c. of Solar Systems under the Program. The Program is not similar to any current programs administered by the Office of Clean Energy. The Program directly supports the State of New Jersey's renewable energy initiatives, as outlined in the recently released Energy Master Plan.

PSE\&G proposes to recover all Program costs through a separate component of the electric RGGI Recovery Charge (RRC) entitled Solar Generation Investment Program. This new component will be applicable to all electric rate schedules on equal cents per kilowatt-hour basis. The Solar Generation Investment Program charge would be reviewed and modified in an annual filing. PSE\&G proposes to earn a return on its net investment in the Program based
on a Weighted Average Cost of Capital. The proposed new RRC, if approved by the Board, is shown in Table \#1 below.

Table \#2 below provides customers with the approximate net effect of the proposed increase in rates relating to this Program, if approved by the Board. The annual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of the customer's usage. The approximate effect of the proposed increase on typical electric residential monthly bills, if approved by the Board, is illustrated in Table \# 3 below.

Based on the filing, a typical residential electric customer using 722 kilowatthours per summer month and 6,960 kilowatthours on an annual basis would see an initial increase in the annual bill from $\$ 1,269.28$ to $\$ 1,270.52$, or $\$ 1.24$ or approximately 0.10\%.

Any rate adjustments with resulting changes in bill impacts found by the Board to be just and reasonable as the result of the Company's filing may be modified and/or allocated by the Board in accordance with the provisions of N.J.S.A 48:2-21 and for other good and legally sufficient reasons to any class or classes of customers of the Company. Therefore, the described charges may increase or decrease based upon the Board's decision.

Copies of the Company's filing are available for review by the public at the Company's Customer Service Centers and at the Board of Public Utilities at Two Gateway Center, Newark, New Jersey 07102.

Table \# 1
Electric RRC Charge

|  | Solar Generation Investment <br> Program Component of the RRC |  | Total RRC |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Present \$/kWhr <br> (Incl. SUT) | Proposed <br> \$/kWhr <br> (Incl. SUT) | Present <br> \$/kWhr <br> (Incl. SUT) | Proposed <br> \$/kWhr <br> (Incl. SUT) |
| RRC Electric - \$ per kWhr | $\$ 0.000000$ | $\$ 0.000180$ | $\$ 0.000021$ | $\$ 0.000201$ |

Table \# 2
Impact By Customer Class

| PROPOSED PERCENTAGE INCREASES BY CUSTOMER CLASS <br> FOR ELECTRIC SERVICE |  |  |
| :--- | :---: | :---: |
| BGS-FP | Rate Class | \% Increase |
| Residential | RS | $\mathbf{0 . 1 0 \%}$ |
| Residential Heating | RHS | $\mathbf{0 . 1 1}$ |
| Residential Load Management | RLM | $\mathbf{0 . 1 1}$ |
| General Lighting \& Power | GLP | $\mathbf{0 . 1 0}$ |
| Large Power \& Lighting - Secondary (Peak Load Share 0 - 749) | LPL-S | $\mathbf{0 . 1 2}$ |
| Large Power \& Lighting - Secondary (Peak Load Share 750 - 999) | LPL-S | $\mathbf{0 . 1 1}$ |
|  |  |  |
| BGS-CIEP |  |  |
| Large Power \& Lighting - Secondary (Peak Load Share 1,000+) | LPL-S | $\mathbf{0 . 1 1}$ |
| Large Power \& Lighting - Primary | LPL-P | $\mathbf{0 . 1 2}$ |
| High Tension - Subtransmission | HTS-S | $\mathbf{0 . 1 2}$ |
| High Tension - High Voltage | HTS-HV | $\mathbf{0 . 1 3}$ |

The percent increases noted above are based upon current Delivery Rates and the applicable Basic Generation Service (BGS) charges and assumes that customers receive commodity service from Public Service Electric and Gas Company.

Table \#3
Residential Electric Service

| If Your <br> Annual kWhr <br> Use Is: | And Your <br> Monthly <br> Summer kWhr <br> Use Is: | Then Your <br> Present Monthly <br> Summer Bill (1) <br> Would Be: | And Your Proposed <br> Monthly Summer <br> Bill (2) Would Be: | Your Monthly <br> Summer Bill <br> Increase <br> Would Be: | And Your <br> Monthly <br> Percent <br> Increase <br> Would Be: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1,800 | 170 | $\$ 33.16$ | $\$ 33.19$ | $\$ 0.03$ | $0.09 \%$ |
| 3,600 | 360 | 67.50 | 67.56 | 0.06 | 0.09 |
| 6,960 | 722 | 134.62 | 134.75 | 0.13 | 0.10 |
| 7,800 | 803 | 150.38 | 150.52 | 0.14 | 0.09 |
| 12,000 | 1,250 | 237.31 | 237.53 | 0.22 | 0.09 |

(1) Based upon current Delivery Rates and Basic Generation Service Fixed Pricing (BGS-FP) charges in effect January 1, 2009 and assumes that the customer receives BGS-FP service from Public Service.
(2) Same as (1) except for the addition of the proposed Solar Generation Investment Program component to the RRC.

Gregory Eisenstark, Esq. Assistant General Corporate Rate Counsel

Attachment G
Page 1 of 1

## TYPICAL RESIDENTIAL ELECTRIC BILL IMPACTS

The initial effect of the proposed addition of the Solar Generation Investment Program component in the electric RGGI Recovery Charge on typical residential electric bills, if approved by the Board, is illustrated below:

| Residential Electric Service |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| If Your <br> Monthly <br> Summer <br> kWhr Use Is: | Then Your <br> And Your <br> Use Is: | And Your <br> Present <br> Annual Bill <br> (1) Would <br> Be: | Annual Bill <br> (2) Would <br> Be: | Your Annual <br> Bill Change <br> Would Be: | And Your <br> Percent <br> Change <br> Would Be: |
| 170 | 1,800 | $\$ 347.76$ | $\$ 348.12$ | $\$ 0.36$ | $0.10 \%$ |
| 360 | 3,600 | 666.96 | 667.52 | 0.56 | 0.08 |
| 722 | 6,960 | $1,269.28$ | $1,270.52$ | 1.24 | 0.10 |
| 803 | 7,800 | $1,422.54$ | $1,423.96$ | 1.42 | 0.10 |
| 1,250 | 12,000 | $2,191.72$ | $2,193.88$ | 2.16 | 0.10 |

(1) Based upon current Delivery Rates and Basic Generation Service Fixed Pricing (BGSFP) charges in effect January 1, 2009 and assumes that the customer receives BGS-FP service from Public Service.
(2) Same as (1) except includes the change for the Solar Generation Investment Program component of the RGGI Recovery Charge.

| Residential Electric Service |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| If Your Annual kWhr Use Is: | And Your Monthly Summer kWhr Use Is: | Then Your Present Monthly Summer Bill <br> (3) Would Be: | And Your Proposed Monthly Summer Bill (4) Would Be: | Your <br> Monthly Summer Bill Change Would Be: | And Your Percent Change Would Be : |
| 1,800 | 170 | \$33.16 | \$33.19 | \$0.03 | 0.09\% |
| 3,600 | 360 | 67.50 | 67.56 | 0.06 | 0.09 |
| 6,960 | 722 | 134.62 | 134.75 | 0.13 | 0.10 |
| 7,800 | 803 | 150.38 | 150.52 | 0.14 | 0.09 |
| 12,000 | 1,250 | 237.31 | 237.53 | 0.22 | 0.09 |

(3) Based upon current Delivery Rates and Basic Generation Service Fixed Pricing (BGSFP) charges in effect January 1, 2009 and assumes that the customer receives BGS-FP service from Public Service.
(4) Same as (3) except includes the change for the Solar Generation Investment Program component of the RGGI Recovery Charge.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
B.P.U.N.J. No. 14 ELECTRIC

XXX Revised Sheet No. 64C
Superseding
XXX RevisedOriginal Sheet No. 64C

## RGGI RECOVERY CHARGE


#### Abstract

Charge (cents per kilowatthour)

\section*{Component:}

Carbon Abatement Program 0.0020

Solar Generation Investment Program ......................................................................................... 0.0168 Sub-total per kilowatthour ........................................................................................... 0.01880.0020

Charge including New Jersey Sales and Use Tax (SUT)............................................ 0.02010 .0021

\section*{RGGI RECOVERY CHARGE}

This charge is designed to recover the revenue requirements associated with the PSE\&G Regional Greenhouse Gas Initiative (RGGI) pPrograms-per the Board Order in Docket No. E008030164. The charge will be reset nominally on an annual basis. For the Carbon Abatement Program, ilnterest at the weighted average of the interest rates on PSE\&G's commercial paper and bank credit lines utilized in the prior month will be accrued monthly on any under- or over- recovered balances. The interest rate shall be reset each month. For the Solar Generation Investment Program, interest will be accrued monthly on any under- or over- recovered balances based on PSE\&G Weighted Cost of Capital.


## PUBLIC SERVICE ELECTRIC AND GAS COMPANY

B.P.U.N.J. No. 14 ELECTRIC

XXX Revised Sheet No. 64C
Superseding
XXX Revised Sheet No. 64C

## RGGI RECOVERY CHARGE

Charge
(cents per kilowatthour)

## Component:

Carbon Abatement Program ................................................................................................................ 0.020
Solar Generation Investment Program ................................................................................ 0.0168
Sub-total per kilowatthour ................................................................................................... 0.0188
Charge including New Jersey Sales and Use Tax (SUT)
0.0201

## RGGI RECOVERY CHARGE

This charge is designed to recover the revenue requirements associated with PSE\&G Regional Greenhouse Gas Initiative (RGGI) programs. The charge will be reset nominally on an annual basis. For the Carbon Abatement Program, interest at the weighted average of the interest rates on PSE\&G's commercial paper and bank credit lines utilized in the prior month will be accrued monthly on any under- or over- recovered balances. The interest rate shall be reset each month. For the Solar Generation Investment Program, interest will be accrued monthly on any under- or over- recovered balances based on PSE\&G Weighted Average Cost of Capital.

## APPENDIX A

## MIMIMUM FILING REQUIREMENTS FOR PETITIONS UNDER N.J.S.A. 48:3-98.1

## I. General Filing Requirements

a. The utility shall provide with all filings, information and data pertaining to the specific program proposed, as set forth in applicable sections of N.J.A.C. 14:1-5.11 and N.J.A.C. 14:1-5.12.

Information and data pertaining to the specific program proposed, as set forth in the applicable sections of N.J.A.C. 14:1-5.11 and N.J.A.C. 14:1-5.12, is included in the schedules to the Testimony of Stephen Swetz (Attachment B to the Petition) and Testimony of Daniel M. Furlong (Attachment D to the Petition). Other information required by these regulations is provided in Attachments E, F, G and H.
b. All filings shall contain information and financial statements for the proposed program in accordance with the applicable Uniform System of Accounts that is set forth in N.J.A.C. 14:1-5.12. The utility shall provide the Accounts and Account numbers that will be utilized in booking the revenues, costs, expenses and assets pertaining to each proposed program so that they can be properly separated and allocated from other regulated and/or other programs.

Please refer to the Testimony and Schedules of Daniel M. Furlong, Attachment D to the Petition.
c. The utility shall provide supporting explanations, assumptions, calculations, and work papers for each proposed program and cost recovery mechanism petition filed under N.J.S.A. 48:3-98.1 and for all qualitative and quantitative analyses therein. The utility shall provide electronic copies of all materials and supporting schedules, with all inputs and formulae intact.

PSE\&G provides such data in its Petition, Testimony of Alfredo Z. Matos, Testimony of Stephen Swetz, and their supporting schedules and work papers. PSE\&G is providing copies of its Petition, supporting schedules and work papers in both hard copy and electronic format, where applicable.
d. The utility shall file testimony supporting its petition.

Please refer to the testimony filed in support of PSE\&G's Petition.
e. For any small scale or pilot program, the utility shall only be subject to the requirements in this Section and Sections II, III, and IV. The utility shall, however, provide its estimate of costs and a list of data it intends to collect in a subsequent review of the benefits of the program. Information in Section $V$ may be required for pilot and small programs if such programs are particularly large or complex. A "small scale" project is defined as one that would result in either a rate increase of less than a half of one percent of the average residential customer's bill or an additional annual total revenue requirement of less than $\$ 5$ million. A pilot program shall be no longer than three years, but can be extended under appropriate circumstances.

Under the Company's filing, the initial rate increase would be less than a half of one percent of the average residential customer's bill; therefore, this Program qualifies as a small scale program. However, PSE\&G will nonetheless provided additional information specified in Section V, where applicable.
f. If the utility is filing for an increase in rates, charges etc., or for approval of a program which may increase rates/charges to ratepayers in the future, the utility shall include a draft public notice with the petition and proposed publication dates.

PSE\&G will hold three (3) public hearings in its service territory; North, Central and Southern regions; a draft public notice is provided with the Petition as Attachment E.

## II. Program Description

a. The utility shall provide a detailed description of each proposed program for which the utility seeks approval.

PSE\&G provides this information in the Petition and the Testimony of Mr. Matos.
b. The utility shall provide a detailed explanation of the differences and similarities between each proposed program and existing and/or prior programs offered by the New Jersey Clean Energy Program, or the utility.

This explanation is provided in the Petition, Paragraph 20, and in the Testimony of Mr. Matos.
c. The utility shall provide a description of how the proposed program will complement, and impact existing programs being offered by the utility and the New Jersey Clean Energy Program with all supporting documentation.

This description is provided in the Petition, Paragraphs 20 through 23, and in the Testimony of Mr. Matos.
d. The utility shall provide a detailed description of how the proposed program is consistent with and/or different from other utility programs or pilots in place or proposed with all supporting documentation.

This description is provided in the Petition, Paragraph 20, and in the Testimony of Mr. Matos.
e. The utility shall provide a detailed description of how the proposed program comports with New Jersey State policy as reflected in reports, including the New Jersey Energy Master Plan, or, pending issuance of the final Energy Master Plan, the draft Energy Master Plan, and the greenhouse gas emissions reports to be issued by the New Jersey Department of Environmental Protection pursuant to N.J.S.A. 26:2C42(b) and (c) and N.J.S.A. 26:2C-43 of the Global Warming Response Act, N.J.S.A. 26:2C-37 et seq.

This description is provided in the Petition, Paragraphs 20 through 23, and in the Testimony of Mr. Matos.
f. The utility shall provide the features and benefits for each proposed program including the following:
i. the target market and customer eligibility if incentives are to be offered;
ii. the program offering and customer incentives;
iii. the quality control method including inspection;
iv. program administration; and
v. program delivery mechanisms.

PSE\&G provides this information in the Petition and the Testimony of Mr. Matos.
g. The utility shall provide the criteria upon which it chose the program.

PSE\&G provides this information in the Petition and the Testimony of Mr. Matos.
h. The utility shall provide the estimated program costs by the following categories: administrative (all utility costs), marketing/sales, training, rebates/incentives including inspections and quality control, program implementation (all contract costs) and evaluation and other.

PSE\&G provides details of the program costs in the Schedules to the Testimony of Stephen Swetz (Schedules SS-2 through SS-3).
i. The utility shall provide the extent to which the utility intends to utilize employees, contractors or both to deliver the program and, to the extent applicable, the criteria the utility will use for contractor selection.

PSE\&G provides this information in the Petition and the Testimony of Mr. Matos.
j. In the event the program contemplates an agreement between the utility and its contractors and/or the utility and its ratepayers, copies of the proposed standard contract or agreement between the ratepayer and the utility, the contractor and the utility, and/or the contractor and the ratepayer shall be provided.

PSE\&G does not intend to use standard contracts for this Program. As particular contracts are developed, copies will be filed with the Board for informational purposes
k. The utility shall provide a detailed description of the process for resolving any customer complaints related to these programs.

PSE\&G provides this information in the Petition, Paragraph 24, and Testimony of Mr. Matos, including Schedule AZM-2.
I. The utility shall describe the program goals including number of participants on an annual basis and the energy savings, renewable energy generation and resource savings, both projected annually and over the life of the measures.

PSE\&G provides the relevant information on renewable energy generation in the Petition and Testimony of Mr. Matos.
m . Marketing - The utility shall provide the following: a description of where and how the proposed program/project will be marketed or promoted throughout the demographic segments of the utility's customer base including an explanation of how prices and the service for each proposed program/project will be conveyed to customers.

PSE\&G provides the relevant marketing information in the Petition and Testimony of Mr. Matos.

## III. Additional Required Information

a. The utility shall describe whether the proposed programs will generate incremental activity in the energy efficiency/conservation/renewable energy marketplace and what, if any, impact on competition may be created, including any impact on employment, economic development and the development of new business with all supporting documentation. This shall include a breakdown of the impact on the employment within this marketplace as follows: marketing/sales, training, program implementation, installation, equipment, manufacturing and evaluation and other applicable markets. With respect to the impact on competition the analysis should include the competition between utilities and other entities already currently delivering the service in the market or new markets that may be created.

PSE\&G provides the relevant information regarding the renewable energy marketplace in the Testimony of Mr. Matos.
b. The utility shall provide a description of any known market barriers that may impact the program and address the potential impact on such known market barriers for each proposed program with all supporting documentation. This analysis shall include barriers across the various markets including residential (both single and multi-family), commercial and industrial (both privately owned and leased buildings), as well as between small, medium and large commercial and industrial markets. This should include both new development and retrofit or replacement upgrades across the market sectors.

PSE\&G is unaware of any market barriers that may impact the Program.
c. The utility shall provide a qualitative/quantitative description of any anticipated environmental benefits associated with the proposed program and a quantitative estimate of such benefits for the program overall and for each participant in the program with all supporting documentation. This shall include an estimate of the energy saved in kWh and/or therms and the avoided air emissions, wastewater discharges, waste generation and water use or other saved or avoided resources.

Information concerning avoided air emissions is discussed in the Petition, Paragraph 21, and in the Testimony of Mr. Matos.
d. To the extent known, the utility shall identify whether there are similar programs available in the existing marketplace and provide supporting documentation if applicable. This shall include those programs that provide other societal benefits to other under-served markets. This should include an analysis of the services already provided in the market place, and the level of competition.

PSE\&G is not aware of any other utility-owner solar generation systems in its electric service territory or in the State of New Jersey.
e. The utility shall provide an analysis of the benefits or impacts in regard to Smart Growth.

PSE\&G expects that its Program, which proposes the use of brownfield sites and other under-used commercial and industrial property in the Company's service territory, will help promote the State's Smart Growth policy. See Testimony of Mr. Matos.
f. The utility shall propose the method for treatment of Renewable Energy Certificates ("REC") including solar RECs or any other certificate developed by the Board of Public Utilities, including Greenhouse Gas Emissions Portfolio and Energy Efficiency Portfolio Standards including ownership, and use of the certificate revenue stream(s).

PSE\&G discusses the treatment of SRECs in the Petition (Paragraphs 16(1) (4) and 17 through 19) and in the testimonies of Messrs. Matos and Swetz.
g. The utility shall propose the method for treatment of any air emission credits and offsets, including Regional Greenhouse Gas Initiative carbon dioxide allowances and offsets including ownership, and use of the certificate revenue stream(s).

PSE\&G has not identified any specific air emissions credits or offsets; however, the Company's intent is to apply the proceeds from any such credits or offsets to the revenue requirements of the program, in a manner similar to the proposed treatment of solar RECs. Please see the Petition, Paragraph 21 and the Testimony of Mr. Matos.
h. The utility shall analyze the proposed quantity and expected prices for any REC, solar REC, air emission credits, offsets or allowances or other certificates to the extent possible.

PSE\&G addresses the expected quantities and assumed market prices of SRECs, as well as the proposal for auctioning the SRECs throughout the Petition and in the testimonies and supporting schedules of Messrs. Matos and Swetz.

## IV. Cost Recovery Mechanism

a. The utility shall provide appropriate financial data for the proposed program, including estimated revenues, expenses and capitalized investments, for each of the first three years of operations and at the beginning and end of each year of said three-year period. The utility shall include pro forma income statements for the proposed program, for each of the first three years of operations and actual or estimated balance sheets as at the beginning and end of each years of said three year period.

PSE\&G provides appropriate financial data for the proposed program in the Testimony and Schedules of Mr. Swetz and the Testimony and Schedules of Mr. Furlong. Specifically, the specified pro forma income statements and balance sheets are provided in Schedule SS-6.
b. The utility shall provide detailed spreadsheets of the accounting treatment of the cost recovery including describing how costs will be amortized, which accounts will be debited or credited each month, and how the costs will flow through the proposed method of recovery of program costs.

PSE\&G provides this information in the Testimony and Schedules of Mr. Swetz and the Testimony and Schedules of Mr. Furlong.
c. The utility shall provide a detailed explanation, with all supporting documentation, of the recovery mechanism it proposes to utilize for cost recovery of the proposed program, including proposed recovery through the Societal Benefits Charge, a separate clause established for these programs, base rate revenue requirements, government funding reimbursement, retail margin, and/or other.

PSE\&G provides this information in the Petition and in the Testimony and Schedules of Mr. Swetz.
d. The utility's petition for approval, including proposed tariff sheets and other required information, shall be verified as to its accuracy and shall be accompanied by a certification of service demonstrating that the petition was served on the Department of the Public Advocate, Division of Rate Counsel simultaneous to its submission to the Board.

PSE\&G's Petition is verified as to its accuracy, and PSE\&G will serve a copy of the filing on the Department of Public Advocate, Division of Rate Counsel
e. The utility shall provide an annual rate impact summary by year for the proposed program, and an annual cumulative rate impact summary for all approved and proposed programs showing the impact of individual programs as well as the cumulative impact of all programs upon each customer class of implementing each program and all approved and proposed programs based upon a revenue requirement analysis that identifies all estimated program costs and revenues for each proposed program on an annual basis. The utility shall also provide an annual bill impact summary by year for each program, and an annual cumulative bill impact summary by year for all approved and proposed programs showing bill impacts on a typical customer for each class.

PSE\&G provides the applicable rate impact information the Testimony and Schedules of Mr. Swetz and in Attachments E, F, and G to the Petition.
f. The utility shall provide, with supporting documentation, a detailed breakdown of the total costs for the proposed program, identified by cost segment (capitalized costs, operating expense, administrative expense, etc.). This shall also include a detailed analysis and breakdown and separation of the embedded and incremental costs that will be incurred to provide the services under the proposed program with all supporting documentation.

PSE\&G provides this information in the Petition and in the Testimony and Schedules of Mr. Swetz.
g. The utility shall provide a detailed revenue requirement analysis that clearly identifies all estimated program costs and revenues for the proposed program on an annual basis, including effects upon rate base and pro forma income calculations.

PSE\&G provides this information in the Testimony and Schedules of Mr. Swetz.
h. The utility shall provide, with supporting documentation: (i) a calculation of its current capital structure as well as its calculation of the capital structure approved by the Board in its most recent electric and/or gas base rate cases, and (ii) a statement as to its allowed overall rate of return approved by the Board in its most recent electric and/or gas base rate cases.

PSE\&G provides this information in the Testimony and Schedules of Mark G. Kahrer.
i. If the utility is seeking carrying costs for a proposed program, the filing shall include a description of the methodology, capital structure, and capital cost rates used by the utility.

PSE\&G provides this information in the Testimony and Schedules of Mr. Kahrer and Testimony and Schedules of Mr. Swetz.
j. A utility seeking incentives or rate mechanism that decouples utility revenues from sales, shall provide all supporting justification, and rationale for incentives, along with supporting documentation, assumptions and calculations.

PSE\&G has not proposed incentives or a decoupling mechanism in this filing.

## V. Cost/Benefit Analysis

a. The utility shall provide a detailed analysis with supporting documentation of the net benefits associated with the proposed program, including, if appropriate, a comprehensive and detailed avoided cost savings study with supporting documentation. The value of the avoided environmental impacts and the environmental benefits and the value of any avoided or deferred energy infrastructure should be stated separately.

PSE\&G provides an analysis of the costs and benefits of the Program in the Testimony and Schedules of Mr. Swetz.
b. The utility shall calculate a cost/benefit analysis utilizing the Total Resource Cost ("TRC") test that assesses all program costs and benefits from a societal perspective. The utility may also provide any cost benefit analysis that it believes appropriate with supporting rationales and documentation.

This Program is a renewable energy program and therefore not subject to a cost/benefit test (see section V.(d), below). Nonetheless, Mr. Swetz has quantified the Programs benefits and costs in his testimony and schedules, and the Company will provide a supplemental cost/benefit analysis in the near future.
c. The utility shall quantify all direct and indirect benefits as well as provide projected costs resulting from a proposed program that is subject to a cost/benefit test.

This Program is a renewable energy program and therefore not subject to a cost/benefit test (see section V.(d), below). Nonetheless, Mr. Swetz has quantified the Program's benefits and costs in his testimony and schedules, and will provide a supplemental cost/benefit analysis in the near future.
d. Renewable energy programs shall not be subject to a cost/benefit test but the utility must quantify all direct and indirect benefits resulting from such a proposed program as well as provide the projected costs. The utility must also demonstrate how such a proposed program will support energy and environmental statewide planning objectives, such as attainment of the Renewable Portfolio Standard and any emission requirements.

This Program is a renewable energy program and therefore not subject to a cost/benefit test. Nonetheless, Mr. Swetz has quantified the Programs benefits and costs in his testimony and schedules. In addition, Mr. Matos addresses how the Program supports the State's energy and environmental planning objectives, includes the Renewable Portfolio Standards.
e. The utility must demonstrate for the proposed program that it results in a positive benefit/cost ratio, or, if the utility cannot make such a demonstration, it must provide the rationale for why the proposed program should be approved.

See section V.(d), above.
f. The level of energy and capacity savings utilized in these calculations shall be based upon the most recent protocols approved by the Board of Public Utilities to measure energy savings for the New Jersey Clean Energy Program. In the event no such protocols exist, or to the extent that a protocol does not exist for a filed program, the utility must submit a measurement protocol for the program or contemplated measure for approval by the Board.

Not applicable.
g. The utility shall also quantify and deduct from the energy and capacity savings any free rider effects and the business as usual benefits from homeowners and businesses installing Energy Efficiency or Renewable Energy without the N.J.S.A. 48:3-98.1 benefits or incentives.

Not applicable.


[^0]:    ${ }^{1}$ All references to MW capacity of Solar Systems in this Petition are in direct current or "dc." The electricity generated by a Solar System passes through an inverter and is converted to alternating current or "ac."

[^1]:    ${ }^{2}$ The legislation is codified principally at N.J.S.A. 26:2C-45.

[^2]:    ${ }^{3}$ Section 13 of the RGGI legislation has been codified at N.J.S.A. 48:3-98.1 et seq.

[^3]:    4 PSE\&G has not identified any specific air emissions credits or offsets; however, the Company's intent is to apply the proceeds from any such credits or offsets to the revenue requirements of the Program, in a manner similar to the proposed treatment of SRECs.

[^4]:    ${ }^{1}$ All references to MW capacity of Solar Systems in this testimony are in direct current or "dc." The electricity generated by a solar system passes through an inverter and is converted to alternating current or "ac."

[^5]:    ${ }^{2}$ For the purpose of calculating the Program's revenue requirements, PSE\&G has used the Board's estimated level of SREC prices as set forth in this Order, and has extrapolated the SREC values based on the Board's Order for the balance of the forecasted period. Mr. Swetz has incorporated these values into his revenue requirements calculations. See Schedule SS-2.

[^6]:    ${ }^{3}$ PSE\&G has not identified any specific air emissions credits or offsets; however, the Company's intent is to apply the proceeds from any such credits or offsets to the revenue requirements of the Program, in a manner similar to the proposed treatment of SRECs.

[^7]:    ${ }^{1}$ See the following section "Method for Recovery of Direct Costs" for description of "initial period"

[^8]:    ${ }^{1}$ All customers assumed to have BGS Supply

