

New Jersey Board of Public Utilities

SREC Registration Program (SRP) Guidebook

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Acronyms

The following acronyms are used frequently in this document; any agency referenced to is a New Jersey agency unless otherwise specified:

- "AC": Alternating Current
- "DC": Direct Current
- "EDC": Electric Distribution Company
- "ESFI": EDC Solar Financing Incentive
- "kW": Kilowatt
- "kWh": Kilowatt Hour
- "MW": Megawatt
- "MWh": Megawatt hour
- "NEC": National Electrical Code
- "NJBPU": The New Jersey Board of Public Utilities
- "NJCEP": New Jersey's Clean Energy Program[™]
- "PJM": PJM Interconnection
- "PJM-EIS GATS": PJM Environmental Information Systems Inc. Generation Attribute Tracking System
- "PV": Photovoltaic
- "QA": Quality Assurance
- "QC": Quality Control
- "REIP": Renewable Energy Incentive Program
- "RPS": Renewable Portfolio Standard
- "SBC": Societal Benefits Charge
- "SREC": Solar Renewable Energy Certificate
- "SRP": SREC Registration Program

Definitions

The following definitions of terms are used frequently in this document:

- <u>Approved:</u> Project status on the "Updated Project Status List" for registrations that an Acceptance letter was issued.
- <u>Behind-the-meter</u>: The photovoltaic system is interconnected to the utility meter at the site and was installed to offset the electric consumption at that utility meter.
- <u>Call Center:</u> The Market Manager staff answering the 1-866-NJSMART (1-866-657-6278) phone number. The call center is the initial contact point for any questions on project status or general questions about the program.
- <u>Complete:</u> Project status on the "Updated Project Status List" for registrations that all NJCEP requirements have been met and the NJ Certification Number was issued and sent to the registrant and to PJM-EIS GATS for verification.
- <u>Customer-generator:</u> An electricity customer, such as an industrial, large commercial, residential or small commercial customer that generates electricity behind the meter, using a class I renewable energy source.

- <u>Customer-sited:</u> Another term for behind-the-meter.
- <u>Data Entry:</u> Project status on the "Updated Project Status List" for registrations that are in the review phase.
- <u>Developer</u>: The entity hired by the system owner to develop the photovoltaic system.
- <u>Direct Grid-Supply or Grid-Supply:</u> The solar array is interconnected directly to the electric distribution system and exists primarily for the production of wholesale power.
- <u>EDC Notification</u>: The EDC or Municipal Electric Provider has notified the site host contact that the system is authorized to be energized for behind-the-meter projects or the EDC or PJM has notified the site host contact that the system is authorized to be energized for Grid-Supply projects.
- <u>Electric Distribution Company (EDC)</u>: The electric public utility that serves the solar project site. The EDCs are: Public Service Electric & Gas (PSE&G), Jersey Central Power & Light (JCP&L), Rockland Electric Company (RECO) and Atlantic City Electric (ACE).
- <u>Final As-Built</u>: The paperwork packet required in the CORE, REIP and SRP programs that is submitted once the system is installed, passed local inspection and has been "authorized to energize".
- <u>Final DE:</u> Project status on the "Updated Project Status List" for registrations that Final As-Built paperwork was received but is incomplete.
- <u>Interconnection agreement:</u> An agreement between a customer-generator and an EDC, which governs the connection of the customer-generator facility to the electric distribution system, as well as the ongoing operation of the customer-generator facility after it is connected to the system. An interconnection agreement shall follow the standard form agreement developed by the Board and available from each EDC.
- <u>Installer</u>: The entity that will be installing the photovoltaic system.
- <u>Market Manager</u>: The organization(s) that were contracted by the NJBPU to administer the NJCEP Renewable Energy Programs.
- Merchant Power Generators: Another term for Grid-Supply projects.
- <u>Municipal Electric Provider:</u> An electric power utility owned and operated by a local jurisdiction. They are: Butler, Lavallette, Madison, Milltown, Park Ridge, Pemberton, Seaside Heights, South River, Sussex Rural Electric Cooperative and Vineland.
- <u>Processing Rebate:</u> Project status on the "Updated Project Status List" for registrations that will be receiving an incentive check. The NJ certification number will be issued and sent to the registrant and a copy will be sent to PJM-EIS GATS for verification (see "Sent to GATS Date" column).
- <u>Program Coordinator</u>: The organization that was contracted by the NJBPU to provide oversight for the program.
- <u>Project Tracking System</u>: The database system managed by the MM that tracks the SRP registrations.
- Program Staff: The NJBPU Office of Clean Energy staff.
- <u>Program Inspectors:</u> The MM staff that performs on-site program inspections and verifications, and reviews the Final As-Built packets for technical accuracy.
- <u>Updated Project Status List:</u> A report available at <u>NJCleanEnergy.com</u> that includes status updates on projects which are currently in progress or have been recently completed.
- <u>PV Watts:</u> A calculator developed by National Renewable Energy Labs (NREL) that determines the estimated energy production and cost savings of grid-connected photovoltaic (PV) energy systems.

- <u>QC Selected/ QA Selected:</u> Project status on the "Project Status List" for registrations that Final As-Built documents were received and accepted, project is in QC/QA Inspection phase.
- <u>Ready for Rebate:</u> Project status on the "Updated Project Status List" for registrations that passed inspection and all Final As-Built paperwork has been received.
- <u>Registrant:</u> The entity that registers for the SREC Registration Program (SRP) (i.e. Registrant could be a developer, system owner, installer or site host contact. If the registrant is not clearly defined to the Market Manager, the default registrant will be the installer).
- <u>Site host contact</u>: The entity or individual located at the solar project site. This individual or entity can either own the building or grounds or be the tenant whose electric bill is being offset by the system.
- <u>System owner:</u> The entity or individual that will own the SRECs generated by the solar system once construction is complete.
- <u>Updated Project Status List:</u> A report available at <u>NJCleanEnergy.com</u> that includes status updates on projects which are currently in progress or have been recently completed.

This document frequently refers to web pages and materials contained in the New Jersey Clean Energy (NJCEP) website, which is located at <u>NJCleanEnergy.com</u>. All renewable energy programs are listed under the "Renewable Energy" tab.

1) Overview of the SREC Registration Program (SRP)

1A) Purpose

New Jersey's Clean Energy Program ("NJCEP") is a New Jersey Board of Public Utilities initiative which provides education, information, and financial incentives for renewable energy systems and energy efficiency measures. The statewide program provides incentives to support technologies that save electricity and natural gas and increase the amount of electricity produced by clean renewable resources. These incentives are made available through a suite of initiatives approved by the New Jersey Board of Public Utilities ("NJBPU") and managed by the Office of Clean Energy ("OCE"), the New Jersey Economic Development Authority ("NJEDA"), and contractors engaged by the Board referred to as "Market Manager."

This SRP Program Guidebook ("SRP Guidebook") describes the processes and procedures by which the SREC Registration Program (SRP) is administered by the Market Manager. The processes and procedures in this document are open to periodic revision, subject to review and approval by the OCE. The SRP Guidebook will be available on the New Jersey Clean Energy website at <u>NJCleanEnergy.com</u>.

During 2012, it is anticipated that the Market Manager will develop and launch a web based project portal that enables program participants in the SRP to automate applications, to document submissions, and to track project status. This SRP Guidebook does not currently include this functionality. A separate user's manual will be developed to support this initiative.

1B) Program Description

The SREC Registration Program (SRP) began as the SREC-only Pilot Program, created by Order of the NJBPU and signed on 1/19/07 (BPU Docket No. EO0600744) The Pilot Program was designed to enable market participants to install solar systems eligible for SRECs without first proceeding through the state's solar rebate program. The SRP is used to register potential system owners' intent to install solar projects in New Jersey. The registration of solar projects provides market participants with information about market-wide plans for new solar capacity additions and the future supply and demand for SRECs. Acceptance of a project in the SRP indicates the project, once installed, will be eligible upon fulfillment of all program requirements to produce New Jersey Solar Renewable Energy Certificates (SRECs) for use in New Jersey's Renewable Portfolio Standard (RPS).

After a registered solar project is installed and has demonstrated fulfillment of program requirements, the Market Manager issues the system owner an NJ Certification Number which enables the owner to establish an account with the PJM Generation Attribute Tracking System (GATS), to record electricity generation and to earn SRECs. GATS is a regional REC tracking system managed by PJM Environmental Information Systems Inc. (PJM-EIS). The GATS system has been designated by the NJBPU as the SREC tracking system required to be used by regulated entities with compliance obligations under the NJ RPS at N.J.A.C. 14:8-2.9.

Registrants should understand that:

- The value of NJ SRECs is determined by the market established by the NJ Renewable Portfolio Standard rules at N.J.A.C. 14:8-2. The value of an NJ SREC and the number of buyers are not determined by the Market Manager, New Jersey's Clean Energy Program, or the New Jersey Board of Public Utilities.
- It is the responsibility of the registrant to secure a buyer for SRECs at a mutually agreed price that is established by a transaction(s) between the registrant and a buyer of their choice.
- The <u>SREC pricing report</u> contains monthly New Jersey SREC pricing data based on prices reported by registered SREC account holders on the PJM-EIS GATS system. The SREC pricing report includes the Cumulative Weighted Average Price (CWAP) and the number of SRECs that are issued and traded for each month. The Cumulative Weighted Average Price takes into account all of the SRECs that have been traded for all of the months reported in the applicable Energy Year. This number can be used to reflect pricing trends. It is calculated based on [(number of SRECs sold at price A x price A) + (number of SRECs sold at price B x price B) +...] / (total number of SRECs sold at price A + total number of SRECs sold at price B +...)].
- Additional information on SRECs is available at the PJM GATS website at <u>pim-eis.com</u>. Please select "Reports & News" then "Public Reports" to view the Market Reports available at the PJM GATS website. Please note that the Solar Weighted Average Price per Certificate listed on the PJM GATS website provides the *monthly* weighted average SREC trading price for each month listed in the table that is generated from this report.

1C) Eligibility to Participate in the SRP

Solar projects that seek eligibility to create SRECs for use in NJ's RPS must register in the SRP, must be connected to the distribution system serving New Jersey and include two basic types of projects:

<u>"Customer-generators" aka "Behind-the-meter", or "Customer-sited" solar electric projects:</u> Customer-sited projects within one of the four Electric Distribution Company (EDC) territories regulated by the NJBPU are referred to, by regulation, as "Customer-generators". Customergenerators must be approved to interconnect according to N.J.A.C. 14:8-4.1 which includes demonstrating to their EDC that the estimated electricity production from the proposed equipment does not exceed the historic annual electricity consumption at the meter proposed for interconnection. Registrants for customer-sited projects receiving electric service from an NJ Municipal Electric Provider must demonstrate the ability to interconnect their solar energy system with the Municipal Electric Provider's distribution system. On-site load at least equal to project generation must exist before a net-metered system may be energized or final program approval is issued. The EDCs will require at the time of interconnection the existence of sufficient load to justify the capacity installed.

"Merchant Power Generators" a/k/a "Direct Grid-Supply" solar electric projects:

Direct Grid-supply is defined as a renewable generation system that is interconnected directly to the electric distribution system and exists primarily for the production of wholesale power under the jurisdiction of the Federal Energy Regulatory Commission through PJM Interconnection LLC. Direct Grid-Supply projects must have the PJM Interconnection Service Agreement

completed and signed by the Electric Distribution Company showing that the system will be connected to the distribution system serving NJ or have received a letter from the Electric Distribution Company verifying that the system will connect to the distribution system serving New Jersey prior to participating in the SRP.

1D) Benefits of Project Registration

The SREC Registration Program provides support for potential owners of both customer-sited and direct grid-supply solar energy systems. This support takes the following form:

- **Pre-construction SREC eligibility review:** The SREC registration forms provide the Market Manager staff with information necessary to confirm a project's eligibility to produce New Jersey SRECs. System owners of accepted projects receive a letter which affirms the proposed project's eligibility to earn New Jersey SRECs upon completion of construction and fulfillment of SRP requirements.
- **Quality-assurance review:** The Final As-Built packet submitted by registrants for projects ready for program inspection or program waiver of inspection are reviewed, and a sampling of projects receive on-site verifications by the Market Manager program inspection team. These reviews ensure projects meet program requirements.
- **Project Certification and Handoff to SREC Tracking System:** Once a project is constructed, and all Final As-Built paperwork is deemed complete, and the NJCEP inspection is completed or waived, the project is issued a New Jersey Certification Number by the Market Manager. This NJ Certification Number is communicated to the system owner via letter and to PJM-EIS GATS, the administrator of the New Jersey SREC Tracking System (electronically). Receipt by both parties of the New Jersey Certification Number enables the system owner to register the project on the GATS System, to create a new account for the project or link the project to an existing account, and begin earning SRECs for the project.

1E) When to Submit a SRP Registration

Under current program guidelines, registrants must register the solar projects in the SRP prior to construction completion in order to establish the project's eligibility to earn SRECs. On May 1, 2012, the New Jersey Board of Public Utilities (BPU) re-adopted Chapter 8 (renewable energy and energy efficiency) rules with amendments that became effective upon publication on June 4, 2012. The new rule amendments require SREC registration to occur no later than ten (10) business days after execution of the contract for purchase or installation of the photovoltaic panels to be used for the solar project. If the applicable deadline is not met, any SRECs based on electricity generated by the solar facility shall not be used for compliance with the New Jersey RPS until 12 months after the solar facility has received authorization to energize by the EDC.

Registrants who submit a registration packet that is not in compliance with this requirement, but that is otherwise complete, will receive an SRP Acceptance letter advising them they are not in compliance and offering them the opportunity to remedy their situation.

To remedy the project's lack of compliance with the Chapter 8 rules governing SRP submittal requirements following contract execution, registrants may revise the SRP Registration packet and resubmit it to the Market Manager, within one year from the date of the conditional

acceptance letter. The revised SRP Registration packet must include all items on the SRP Registration checklist and an updated contract for the purchase or installation of photovoltaic panels to be used in the solar facility with an executed contract date no later than <u>ten business</u> <u>days from the date of resubmission</u>. A <u>cover letter</u> cancelling your non-compliant SRP registration must be included with the revised SRP Registration packet.

You cannot begin construction under the conditional registration prior to submitting a revised SRP Registration packet for compliance without incurring the penalty described at N.J.A.C. 14:8-2.4 (e). If you do not resubmit a revised SRP Registration packet within the required one year period from the date of the non-compliant SRP Acceptance letter, any SRECs based on electricity generated by your solar system cannot be used for compliance in the New Jersey Renewable Portfolio Standard for 12 months, from the date of your EDC authorization to energize.

Once your Final As-Built packet has been submitted, you can no longer submit a revised SRP Registration packet for compliance.

Registrants must have received an SRP acceptance number prior to submitting the Final As-Built packet.

Registrants will have 12 months from the date of the acceptance letter to satisfy all the program requirements and submit a complete Final As-Built packet for receipt by the Market Manager. Projects not completed within the 12 month registration period will be considered expired and the registrant must submit a new SRP registration packet.

Any system that was installed and operational prior to receiving an SRP Program project acceptance letter will not receive the full 15 year SREC qualification life. The project will only receive the time remaining in the 15 year qualification life from the date that the system was authorized to be energized. The registrant must supply the "EDC Notification" to establish this date which will then be used to establish the start date for the SREC qualification life as required by the NJ RPS rules.

1F) Relationship to Other Programs

Registration of proposed solar projects in the SRP may be a precondition of participation in other programs. For example, currently both the PSE&G Solar Loan program (<u>http://www.pseg.com/home/save/solar/index.jsp</u>) and the JCP&L/ACE/RECO (EDC) SREC-Based Financing Program (see <u>http://www.njedcsolar.com/</u>) require participating projects to register and be accepted in the SRP. Project developers participating in these EDC programs should check program requirements in determining when to register projects in the SRP.

1G) Additional Information

Registrants seeking eligibility for SRECs from solar projects must request acceptance through the SRP by satisfying all of the eligibility requirements contained in the registration forms and

technical worksheets, and must adhere to all of the processes and procedures contained in this SRP Guidebook.

System registrations accepted under previous SRP processes and procedures are now governed by the processes defined in this SRP Guidebook.

In accordance with the State of New Jersey Open Public Records Act (OPRA), N.J.S.A. 47:1A, Registrants that wish to treat the installed system cost as confidential must submit two copies of the SRP Technical Worksheet and the Final As-Built Technical Worksheet. The public copies will be submitted to the Market Manager and the confidential copies to the BPU. These copies and submission process are described below.

Public copy – Registrant must submit a public copy of the SRP Technical Worksheet and the Final As-Built Technical Worksheet for Solar Electric Equipment with the field E: System Cost Information redacted. This version must be submitted to the MM at project registration and at Final As-Built. In that section indicate CONFIDENTIAL and note that a confidential copy was sent to the BPU per the instructions below.

Confidential copy – Registrant must submit a confidential copy of the SRP Technical Worksheet and the Final As-Built Technical Worksheet with the field E: System Cost Information provided. The word CONFIDENTIAL must be placed on the top of the form.

Confidential copies must include a cover letter indicating that the Registrant wishes to treat the installed system cost as confidential and include any previously assigned BPU project ID numbers. Confidential documents are sent to:

B. Scott Hunter
Renewable Energy Program Administrator
Office of Clean Energy
Division of Economic Development and Energy Policy
New Jersey Board of Public Utilities
44 S. Clinton Ave., POB 350
Trenton, NJ 08625-0350

Public copies are sent with the Registration or Final As-Built Packet to:

New Jersey's Clean Energy Program c/o Conservation Services Group 75 Lincoln Highway, Suite 100 Iselin, New Jersey 08830

The MM will contact the BPU to verify that the confidential copy was received prior to registering the project in the SRP.

Changes to this SRP Guidebook may come from suggestions from stakeholders, from the Market Manager who administers the program, and/or the Program Coordinator. Substantive changes to the SRP procedures may require Board approval.

2) Program Participation Process

2A) Participation Overview

The participation process can be broadly defined as two steps:

1. Submit Initial Registration Packet

The registrant should submit an initial registration packet once a project is likely to proceed. The RPS rule re-adoption described in Section 1E specifies that registration must occur within a defined period following execution of a contract to install or purchase solar equipment in order for the registration to be in compliance with the Chapter 8 rules. In most cases, this means the project is contracted for construction. If this application deadline is not met, SRECs based on electricity generated by the solar facility cannot be used for compliance with the New Jersey RPS until 12 months after the solar facility has received authorization to energize by the EDC.

After the Market Manager has reviewed the registration package and deemed it complete, the registrant, system owner, site host contact and installer will receive an SRP Acceptance Letter from the Market Manager. Also effective with the RPS rule re-adoption is a requirement that construction on a project may not begin until an SRP Acceptance Letter is issued. Violation of this rule may result in

2. Submit Final As-Built Packet

On or before the SRP project registration expiration, after installation, local code inspection, and authorization to energize is granted by the Electric Distribution Company, the registrant should submit the complete Final As-Built Packet.

An NJCEP inspection will be waived, or an on-site inspection will be scheduled and conducted. Once a project passes the NJCEP inspection process, the New Jersey Certification Number is assigned to the project and provided to the system owner by letter. Receipt of this NJ Certification Number enables the system owner to establish an account with PJM-GATS or link a previously established GATS account with the newly completed project to earn SRECs.

Participants can submit completed and legible documents to the Market Manager. <u>The packet</u> <u>must be either mailed or hand delivered to:</u>

New Jersey's Clean Energy Program SREC Registration Program c/o Conservation Services Group 75 Lincoln Highway, Suite 100 Iselin, New Jersey 08830

Documents that are faxed or emailed will not be accepted. Packets are date and time stamped and reviewed upon receipt.

2B) Submitting a Registration

Registrants complete and submit an SRP Registration Packet. All registration forms, tools needed to complete the forms and checklists are found on the SRP Program Forms page located at <u>www.NJCleanEnergy.com/renewable-energy/programs/srec-registration-program/registration-forms</u>.

The contents of a completed **behind-the-meter SRP Registration Packet** include:

- Completed <u>SRP Registration</u> form with all appropriate signatures.
- Completed <u>SRP Technical Worksheet</u>. All sections must be completed.
- A one-page site map of either an **overhead view drawing or a single line electrical diagram. The site map** must **clearly indicate the location of the generator(s)**, **batteries** (if any), lockable disconnect switch (unless otherwise approved by the electric utility, the disconnect switch shall be installed at the electric utility meter location), and point of connection with the utility system. The installation address, current electric utility account number at that address, and the installer's name and telephone number must also be included on the site map.
- <u>Copy of one recent EDC bill</u> for site host facility to include account number and installation address.
- <u>Executed contract</u> A full copy of the contract is not required. Provide the key elements of the contract, including contract execution date, host site address and facility owner, system owner, installer, equipment summary information, total project costs, total system capacity **and dated signatures.** If the site host contact and the system owner are the same, submit key elements of a contract signed by the site host contact and the installer. If the site host contact and system owner are different, submit either the key elements of one contract signed by all three parties or the key elements of two signed contracts; one between the system owner and site host contact and one between the system owner and installer. Public projects must comply with this requirement. To satisfy the contract requirement, self installations must include the purchase order or invoice for the solar equipment.

The contents of a completed grid-supply SRP Registration Packet include:

- Completed <u>SRP Registration</u> form with all appropriate signatures.
- Completed <u>SRP Technical Worksheet</u>. All sections must be completed.
- Site Map Including all features that may affect performance and construction of the solar system.
- Documentation of the determination by PJM or the EDC indicating that the point of interconnection is located on the EDC's distribution system serving NJ. The registrant must work with the EDC representatives to obtain this written determination. Submit either a letter from the EDC or the executed Interconnection Service Agreement (ISA).
- <u>Executed contract</u> A full copy of the contract is not required. Provide the key elements of the contract, including contract execution date, host site address and facility owner, system owner, installer, equipment summary information, total project costs, total system capacity **and dated signatures.** If the site host contact and the system owner are the same, submit key elements of a contract signed by the site host contact and the installer. If the site host contact and system owner are different, submit either the key elements of one

contract signed by all three parties or the key elements of two signed contracts; one between the system owner and site host contact and one between the system owner and installer. Public projects must comply with this requirement. To satisfy the contract requirement, self installations must include the purchase order or invoice for the solar equipment.

Prior to registering a grid supply project for SRECs, it must be determined that the project's proposed point of interconnection is located on the EDC's distribution system and not connected to transmission assets managed by the EDC. Registrants must provide documentation of the determination by PJM or the EDC resulting from the PJM Interconnection process which indicates that the proposed point of interconnection is located on the EDC's distribution system serving NJ.

Grid supply project developers are encouraged to work with PJM and the relevant EDC to determine feasibility, impact and other requirements prior to executing a contract for construction and submitting an SRP.

For projects that have multiple meters, an SRP Registration packet must be submitted for each meter. For SRP Registrations that incorporate multiple residents under one common property owner, an SRP Registration packet must be completed for each separate electric account. The site host contact should be completed using the contact information from the current electric bill, with the location address. A different mailing address may be provided if the landlord or property manager is the contact for the site. The system owner name that is provided should be the individual or entity that will be responsible for owning the system.

The Electric Distribution Companies (EDC) approve interconnection based upon the net metering and interconnection rules, (N.J.A.C. Title 14- Public Utilities, Chapter 8 – Renewable Energy and Energy Efficiency and Subchapter 4- Net Metering and Interconnection Standards for Class I Renewable Energy Systems). System owners are encouraged to apply for interconnection commensurate with submission of an SRP to ensure that the system built will be interconnected by the EDC or the Municipal Electric Provider, especially if the project involves new construction. Registrants are reminded that the SRP project acceptance letter does not constitute net metering and interconnection approval.

The SRP Registration Form requires the identification of the "Registrant." The "Registrant" is defined as the entity that registers for the SRP (i.e. Registrant could be a developer, system owner, installer or site host contact.) If the registrant is not clearly defined to the Market Manager, the default registrant will be the installer. Indicating the "Registrant" on the project will insure that the correct party receives project communications.

To complete the SRP Technical worksheet, installers must provide the requested information regarding system production. For more information on how to utilize PV Watts to provide this, please refer to Section 2C.

All new registrations are time-stamped when they are received by the Market Manager and reviewed in order of receipt to determine if they are complete.

If the initial registration package is incomplete or deficient, the Market Manager will notify registrant in writing of the deficiencies. If the Market Manager notices frequent incorrect paperwork, the contractor may be subject to a verbal warning under Level 1 of the Contractor Remediation procedures. This would apply to missing paperwork and missing or incorrect items

on the paperwork submitted. The October 7, 2010 Board Order detailing all the requirements for the Contractor Remediation Procedures can be found at:

http://www.NJCleanEnergy.com/files/file/program_updates/NJCEP%20Remediation%20Board %20Order.pdf.

Once the SRP packet is reviewed and deemed complete, the project will be added to the next Updated Project Status List and will show a "Data Entry" status.

Once the SRP acceptance letter is printed, the project is moved to the "Approved" status on the Updated Project Status List and the registrant, system owner, site host contact and the installer will receive an SRP acceptance letter. This letter will certify that the project, once installed and all SRP requirements are fulfilled will be eligible to generate SRECs in accordance with the State's RPS rules. From the date on the acceptance letter, projects will be given 12 calendar months to be completed. A complete Final As-Built packet must be received by the Market Manager on or before the expiration date to request a program inspection or receive an inspection waiver.

Acceptance letters are mailed within 6 weeks from receipt of complete Registration packet by the Market Manager.

If the project is not completed within the 12 month registration period, the registration will be considered expired and the registrant must resubmit a new registration packet. If the project has completed significant progress but cannot be completed within the 12 month registration period, a registrant can follow the procedures defined in Section 6C - Acceptance Periods and Extensions.

If the project was accepted into the EDC Solar Finance Incentive program (ESFI), the expiration date will be 12 months from the date of the signed Board Order approving the bid in the EDC financing solicitation.

2C) Submitting Final As-Built Paperwork

All SRP projects regardless of the date of registration acceptance must adhere to the following requirements to achieve an NJ Certification Number.

Once the system is installed, has passed local electric code inspection and has been interconnected by the local utility, Registrants must submit the Final As-Built Packet, as defined in the <u>Final As-Built Checklist</u> to schedule a program inspection or receive an inspection waiver. All forms, checklists and the tools needed to complete the forms are found on the SRP Program Forms page located at <u>www.NJCleanEnergy.com/renewable-energy/programs/srec-registration-program/registration-forms</u>.

This packet includes the following:

- 1. Final As-Built Technical Worksheet. The authorized representative for each party listed at the bottom of the Technical Worksheet must sign the form in the designated space. The parties are defined on the SREC Registration Program Form.
- 2. One page Final Site Map (if not included in SRP Registration Packet). This document can

be an **overhead view drawing or a single line electrical diagram** and must clearly indicate the specific location of the renewable energy technology, the inverter, batteries (if any), lockable disconnect switch, and the point of connection with the utility system. The installation address, current electric utility account number at that address, and the installer's name and telephone number must also be included on the site map.

- 3. Representative digital photographs of the system affixed to the template in the Final As-Built Technical Worksheet. The photos shall be a minimum of 5" x 7" at 300 DPI and must include 1) the solar array 2) inverter(s), 3) site changes if any from original registration (for example – tree removal) and 4) Revenue Grade kWh Production Meter that has been certified to the ANSI C12.1-2008 standards.
- 4. Residential projects must perform a shading analysis using: Solmetric SunEye or Solar Pathfinder tool and corresponding software. A complete report must be submitted and include a summary page and a minimum of four skylines (two lowest corners and two uppermost corners of each array). Only Commercial projects installed on flat rooftops and commercial ground-mounted systems may provide a satellite image or aerial photographs to be used for analysis in determining any potential impact of shading on performance.
- 5. PV Watts actual system printouts showing the system production estimates supporting Item D: the system estimated production calculation on the Final As-Built Technical Worksheet: If changing derate factor, include a copy of the derate factor calculation page.

For systems without shading or other changes to the derate factor:

• Production estimates calculated using the actual data from the Final As-Built Technical Worksheet and default derate factors in PV Watts.

For systems with shading and other changes to the derate factor:

- Production estimates calculated using the actual data from the Final As-Built Technical Worksheet and new derate factors.
- Complete documentation on why there are changes to the derate factors. The only allowable changes are for PV module spec sheets, inverter spec sheet and shading.
- Calculator for overall DC to AC derate factor. A printed copy of the calculator for overall DC to AC derate factor page with all the changes. (The derate factor help page).

For systems with multiple arrays:

- Each array must have a separate shade analysis and PV Watts calculation.
- PV Watts ideal system printouts Calculate estimated production using the system size only from your Final As-Built Technical Worksheet, but for orientation (azimuth) use the default (180° true south), for tilt use the default Latitude for the location selected and do not include shading or change any other derate factors.
- 7. Completed PV Commissioning Form which verifies that the system has been tested and is functioning as per system design. This form must be completed by the installer as they commission the system. Note: You may use the NJCEP PV Commissioning Form or provide the same information in another format when submitting Final As-Built paperwork.

- 8. EDC Notification the written notification that the system is authorized to be energized from the utility. Per the *N.J.A.C.* 14:8-5.8 *Requirements after approval of an interconnection*, once the EDC performs an inspection or determines that no inspection is needed and has received an executed interconnection agreement from the customer-generator; the EDC shall notify the customer-generator in writing that the customer-generator is authorized to energize the customer-generator facility. Note: If this document is not included in the Final As-Built paperwork, and the remainder of the Final As-Built paperwork is complete, the project will not be considered expired but will not receive a program inspection or inspection waiver until that document is received by the Market Manager.
- 9. ANSI C12.1-2008 Certified Meter Worksheet. A revenue grade kWh production meter that has been certified to the ANSI C12.1-2008 standards is required for all SRP systems.
- 10. If participating in the ESFI incentive, SREC Purchase and Sale Agreement including Appendix B, from their participation in an EDC SREC solicitation occurring between 1/1/2011 and 6/30/2011 and the Initial Notice of Award Letter from NERA.

If the Final As-Built Packet is not deemed complete, the Market Manager will not take any further action on the project. The project status will change in the Updated Project Status List to "Final DE" to indicate that paperwork is missing or incomplete. The project tracking system will include a notation detailing the missing or incomplete documents. The Market Manager will send out one email to the installer email address provided on the registration form. This email will identify the missing items and this will be the only notification about the missing items. The registrant will be responsible for sending the missing documents to the Market Manager via hard copy with proper reference to the BPU Project ID and host facility location. Registrants should frequently review for any updates the <u>Updated Project Status List</u>. If projects are listed in the "Final DE" status, contact 1-866-NJ-SMART to learn more about the paperwork deficiencies and actions needed to be taken.

If the Market Manager notices frequent incorrect paperwork, the contractor may be subject to a verbal warning under Level 1 of the Contractor Remediation procedures. This would apply to missing paperwork and missing or incorrect items on the paperwork submitted. The October 7, 2010 Board Order detailing all the requirements for the Contractor Remediation Procedures can be found at:

http://www.NJCleanEnergy.com/files/file/program_updates/NJCEP%20Remediation%20Board %20Order.pdf.

Once the Final As-Built Packet is deemed complete, an automated selection process will determine if the installation will be selected for an on-site inspection (QC Selected) or if it will receive a waiver of inspection which results in a Quality Assurance paper work review process (QA Selected). If the inspection is waived, the registrant, installer, system owner, and the site host contact will receive a letter within 2-3 weeks of receipt of the complete Final As-Built Packet. If the project is selected for an on-site inspection, residential customers will be called within one week to schedule an inspection. Since installers are expected to be present for the inspection of non-residential projects, the Market Manager will email the installer within one week to schedule the inspection of non-residential projects. It is the installer's responsibility to contact the system owner and site host contact with the inspection date and time.

On-site inspections for PSE&G loan program projects will be handled by PSE&G program inspectors.

2D) Pass/Fail State Inspection

Installers are notified via email of inspection results **within two weeks of the date of the inspection.** If the project passes inspection, the email notification will include a passed inspection report.

If the project fails inspection, the email notification will include a failed inspection report. The installer must correct the deficiencies or supply the missing information and request a program re-inspection. The project must receive a passed inspection status before it can receive an NJ Certification Number.

2E) Issuance of the New Jersey Certification Number

Once the project has received an inspection waiver letter or a passed inspection report and the registrant has submitted all requested paperwork, a letter containing the NJ Certification Number will be sent to the system owner. This letter should be sent **within 4 to 6 weeks from the date that the last of these items is satisfied.** This letter contains instructions on how to register with PJM-GATS SREC tracking system. The project status will change in the Updated Project Status List to "Complete" to indicate that the NJ Certification Number has been issued and the NJCEP considers the project installation and all project paperwork complete.

If the project is receiving an incentive under the ESFI, the project status will change in the Updated Project Status List to "Processing Rebate" to indicate that the NJ Certification Number has been issued and also an incentive payment request has been issued. This incentive payment will be received by the system owner within approximately 75 days from the date of the NJ Certification Number letter. Once the incentive payment check is cut, the project status will change to "Complete" in the Updated Project Status List and the NJCEP considers the project installation and all the project paperwork complete.

2F) Earning and Trading Renewable Energy Certificates

Once the solar installation is interconnected with the power grid and is authorized to energize by the EDC, the system is legally able to produce electricity and is eligible to begin to earn SRECs. Each time a system generates 1,000 kWh of electricity; an SREC is earned and placed in the customer's electronic account. SRECs can then be offered for sale via the GATS bulletin board and transferred on the PJM-GATS SREC tracking system to buyers.

The <u>SREC tracking system</u> enables account holders to track solar energy production from their installations. SRECs are issued to account holders based on recorded production of the solar energy system. All solar energy systems eligible to earn SRECs must report system production

based upon readings from a revenue-grade meter that meets the American National Standards Institute (ANSI) Standard C12.1-2008. This meter is in addition to the electric meter installed by the local utility to measure the home or business' electric consumption.

On May 1, 2012, the New Jersey Board of Public Utilities (BPU) re-adopted Chapter 8 rules with amendments that became effective on June 4, 2012. In re-adopting N.J.A.C. 14:8-2.9(c), the Board eliminated the use of production estimates for systems with a capacity of less than 10 kW. The revenue-grade meter must be installed by November 30, 2012. Following that date, SRECs will be issued to systems based only upon readings obtained from a revenue-grade meter measuring the system output. SREC account holders must report actual energy data to the SREC Administrator via the SREC Administrator's web interface. Please refer to Section 5 for additional information on metering requirements.

Once the solar energy system has been authorized to energize and the online SREC tracking system account has been established, SRECs will be deposited as earned. The SREC tracking system records the sale of SRECs from generators to purchasers, and is ultimately used by electric suppliers and providers to retire SRECs for NJ RPS compliance purposes.

These accounts are hosted by the Generation Attribute Tracking System (GATS) managed by PJM-Environmental Information Systems (PJM-EIS); which is the current SREC Administrator.

New owners of a solar project with a New Jersey Certification Number can obtain and access SREC accounts via <u>https://gats.pjm-eis.com/mymodule/mypage.asp</u>.

In most cases, system owners will be responsible for establishing and monitoring their accounts, verifying generation inputs, and trading SRECs. In cases where system owners assign the rights to SRECs to a third party such as their installer or a financier, system owners will not have access to SREC generation data. Questions or issues with the SREC platform should be directed to the GATS Administrator at 610-666-2245 or gatsadmin@pim-eis.com.

3) Additional Eligibility

3A) System and Technology Requirements and Eligibility

Generation Technology Types:

Only systems that produce electric energy from solar photovoltaic, or "PV" are eligible to participate in the SREC Registration Program. Developers of solar thermal electric systems are encouraged to petition the Board for a determination of eligibility for SRECs in NJ's RPS.

System Location and Point of Interconnection to the Electric Grid:

Only systems connected to the distribution system serving New Jersey such as customersited net metered systems or grid-supply systems interconnected to an electric distribution facility serving NJ are eligible to earn SRECs.

3B) New Construction Eligibility

The SRP accepts registrations for customer-sited renewable energy systems proposed for a structure that has yet to be built and therefore has not yet received a utility bill. Since these

structures have no annual historical consumption, it is recommended that new construction projects work with the local Electric Distribution Company to ensure the project will meet net metering and interconnection eligibility prior to submitting the SRP registration packet. On-site load at least equal to project generation must exist before a net-metered system may be energized or final program approval is issued. The EDCs will require at the time of interconnection the existence of sufficient load to justify the capacity installed.

3C) Ineligible Systems

Solar lighting systems that are not connected to a building's electric distribution system are not eligible for the SRP. While solar systems with a battery back-up system are eligible for incentive, the registration must be for a permanent installation to be interconnected with the NJ electric distribution system. Portable systems are not eligible to participate in the SRP.

3D) System Capacity Limits

Solar electric systems of any size/capacity are eligible to participate in the SREC Registration Program and are eligible to earn NJ SRECs.

For the purposes of this program, a renewable energy system's AC capacity is defined as the lesser of: a) the sum of the AC nameplate capacity ratings (watts) of the inverters installed; or b) the sum of the DC nameplate capacity ratings of the renewable energy system (modules installed, turbine nameplate capacity) multiplied by the inverter's published peak efficiency rating.

3E) Past Participation: Eligibility for Systems Installed at the Same Site

Project developers have the flexibility to install projects in one or more phases. However, customers that previously participated in the REIP program for the same utility meter must wait one year after the installed system has passed program inspection before they can submit a new project to the SREC Registration Program (SRP). Past participants in the SRP and the CORE rebate program do not have a waiting period for the submittal of a new project.

Additional capacity will be eligible for SREC generation if the EDC or Municipal Electric Provider approves the new interconnection agreement application and all NJCEP program requirements are met. Registrants are encouraged to apply for EDC interconnection prior to adding additional capacity and before submitting a new registration to the NJCEP.

Upon obtaining EDC interconnection approval, registrants will need to submit a new SRP Registration packet for the additional capacity. The registration packet must include a technical worksheet and all other required registration documents. The registrant must indicate on the registration form that an existing system is already present at the same site.

Registrants will have two options regarding the NJ SREC generation when installing additional capacity at a site that has an existing system with an ANSI C12.1-2008 revenue grade meter recording the system output.

a. Registrant may elect to add the capacity to the existing NJ Certification Number utilizing the existing ANSI C12.1-2008 SREC generation meter. In these cases, the additional capacity will be subject to the remaining qualification life that is applicable to the original NJ Certification number. An NJ Certification Number for the additional capacity will NOT be issued.

b. Registrant may elect to develop their project through one or more project phases with each phase eligible for a unique 15-year qualification life. Each project phase must apply for and obtain a unique SREC Registration Program acceptance number and install a dedicated ANSI C12.1-2008 revenue grade meter recording the system output that will be used to determine SREC generation for that project phase. A unique NJ Certification Number will be issued for each SREC generation meter and will have its own 15-year qualification life based upon the EDC's "Authorization to Energize" date.

Registrants that have an existing system and have been issued an NJ Certification Number but do not have an ANSI C12.1-2008 revenue grade production meter recording the system output must install an ANSI C12.1-2008 meter to measure the system output for the new capacity as required for all SRP projects.

When additional capacity is installed, the customer has the option of placing the entire system under one meter or separately metering the additional capacity for purposes of generating SRECs. If the customer chooses to install one meter for the combined output of both systems, the SREC generation for the combined system output will be subject to the remaining qualification life that is applicable to the original NJ Certification Number. If the customer chooses to install a separate meter for the additional capacity, a unique NJ Certification Number will be issued for the new capacity, and it will have its own 15-year qualification life based on the EDC's "Authorization to Energize" date. In all cases, meters must be ANSI C12.1-2008 revenue-grade production meters.

Please refer to Section 5 for additional information on metering requirements.

4) Installation Requirements

All systems must be installed in accordance with manufacturer specifications and the provisions of the National Electrical Code (NEC). A complete list of Quality Control installation guidelines are listed in Appendix 3b. System installation must match the information submitted with the Final As-Built packet and meet all applicable local, state, and federal codes and permit requirements.

4A) Self-Installations

Self-installed systems are accepted in the SREC Registration Program. The same registration guidelines apply to self-installed projects as to those installed by contractors.

4B) Warranties

Customer-sited systems must be covered by an all-inclusive warranty for at least five years from the date of installation to protect the purchaser against component or system breakdown. The warranty must cover all major components of the system against breakdown or degradation in electrical output of more than 10% from their originally rated electrical output during the five-year period. The manufacturer and installer may provide the required warranty in conjunction,

covering major system components and labor, respectively. An owner's manual, including warranty documentation, must be delivered to the customer on completion of the installation.

4C) System as Installed Differs from Documentation submitted at Registration

It is expected that the system design and initial registrations will in general reflect the system as it is installed. The Market Manager recognizes that changes to the system components, system size, and the system owner and/or the installers are necessary after the acceptance letter has been received. To accommodate necessary changes, registrants must submit the following:

- For changes to the system components and system size, include the actual system built on the As-Built Technical worksheet with the Final As-Built packet. Note: Changes to the system size must still comply with the interconnection/net metering rules. Electric usage at the time of registration must be greater than or equal to estimated annual production of the system.
- For changes to the system owner or installer, submit a new signed copy of the SRP Registration form. Include date of original acceptance and acceptance number.

Rule amendments to the RPS at the N.J.A.C. 14.8-2.9 which were adopted by the BPU on May 1, 2012 and which became effective upon publication on June 4, 2012 require that any increase or decrease of more than 10% of a project's generating capacity from what was specified in the initial registration packet be reported by the Registrant to the MM within 10 days of the change.

4D) Vendors and Trade Allies

A list of solar photovoltaic (PV) installation companies, equipment manufacturers, and other service providers is available on the Trade Ally section of the NJCEP website. To be listed on the website, contractors must have completed three successful renewable energy system installations under the NJCEP in the category they are listed.

This list is provided as an informational source only. Inclusion on this list does not constitute any endorsement, advertisement, warranty, promise of employment, statement of qualification, or other representation of service by the Market Manager or New Jersey's Clean Energy Program. NJCEP recommends that prospective customers contact several installers for information and project bids.

As a prerequisite to being included on the list, all vendors are required to agree to indemnify, defend, and hold the NJBPU and their representatives, including the Market Manager, harmless from any act or omission resulting in personal injury (including death) or property damage. This agreement is detailed in the NJCEP Trade Ally Agreement.

Once the vendor has completed the NJCEP Trade Ally Agreement, he/she must submit an online application, which will be reviewed by the Market Manager. The application must include the project numbers for the three completed projects in the categories being requested. (Include in comments section). If the application is approved, the vendor will be notified and their listing will be added to the vendor listing. Vendors may be listed as distributors, installers, or PPAs provided they have competed three or more projects in that category. Manufacturers may be listed once the UL listing on their product(s) is verified.

N.J.S.A. 45:5A-2(d) states that solar PV systems are, by definition, electrical work and require any person engaged in installing, erecting, or repairing such equipment to be an electrical contractor under the provisions of the statute. The Market Manager will collect the name of the New Jersey electrical license holder and New Jersey license number stated on the SRP Registration form in order to demonstrate that the contractor has a valid business permit and holds a non-expired license from the New Jersey Board of Electrical Contractors. If anything changes between the time of registration and program inspection, an updated and signed SRP Registration form must be submitted PRIOR to the program inspection or waiver. Customers are urged to discuss this with their prospective solar installers.

More information on vendor participation and the trade ally list is available at: <u>http://www.NJCleanEnergy.com/renewable-energy/programs/renewable-energy-incentive-program/for-vendors</u>

5) Production Meter Requirements

5A) General Meter Requirements

In New Jersey, Class I renewable energy systems receive value from the electricity produced in two distinct transactions. The nature of these transactions frequently requires the installation of two separate meters to accurately reflect the value of each. First, the electricity is valued as a commodity depending upon the nature of the generator and how it is interconnected. Additionally, the state's Renewable Portfolio Standards places value on the attributes of the electricity produced through the creation of a Renewable Energy Certificate (REC) or Solar Renewable Energy Certificate which is unbundled from the electricity.

"Customer-generators" that enjoy net energy metering with their Electric Distribution Company for their interconnected system receive retail credit for the electricity. This value is received either through directly offsetting the electricity that must be delivered by the grid or through a credit applied by the Electric Distribution Company after a month of net excess generation. The metering required to achieve this netting and crediting is not capable of measuring gross generation for the purposes of REC or SREC creation. Reliance upon one meter to receive value for both revenue streams would leave the customer-generator short changed on RECs or SRECs.

The net energy meter is a bi-directional meter installed by the Electric Distribution Company (EDC) which replaces the existing meter. A net energy meter measures the difference between the electricity supplied to the customer by the electric distribution company and the excess electricity generated by the renewable energy system that is sent back to the grid during a billing period. For more information about net energy meter please visit the link below.

http://www.njcleanenergy.com/renewable-energy/programs/net-metering-and-interconnection

Merchant wholesale power generators interconnected directly to the distribution grid receive wholesale value for the electricity. Since all of the electricity that is generated by the renewable

energy system is delivered to the grid, the meter that is used to measure whole sale electricity may also be used for the purpose of generation RECs or SRECs.

5B) Production Meter Category

All solar energy systems eligible to earn SRECs must report system production based upon readings from a revenue-grade meter that meets the American National Standards Institute (ANSI) Standard C12.1-2008. This meter is in addition to the electric meter installed by the local utility to measure the home or business' electric consumption.

On May 1, 2012, the New Jersey Board of Public Utilities (BPU) re-adopted Chapter 8 rules with amendments that became effective on June 4, 2012. In re-adopting N.J.A.C. 14:8-2.9(c), the Board eliminated the use of production estimates for systems with a capacity of less than 10 kW. The revenue-grade meter must be installed by November 30, 2012. Following that date, SRECs will be issued to systems based only upon readings obtained from a revenue-grade meter measuring the system output.

5C) Production Meter Accuracy Requirements

A revenue grade system output meter that must meet or exceed the ANSI C12.1-2008 accuracy standards is required. The meter must be capable of recording the cumulative kilowatt-hours that the solar installation produces. This meter is commonly called a "production meter". The monthly kilowatt-hour generation recorded on this meter is used to determine how many SREC's the solar installation has generated. The monthly kWh production must be reported to the PJM GATS SREC Tracking system to update your account. This meter does not need to be capable of transferring data electronically. While it is possible that your inverter is capable of displaying accumulated kilowatt-hours, the accuracy of the inverter meter typically does not meet the ANSI C12.1-2008 accuracy standards required by the NJCEP and therefore cannot be used for the purpose of generating SRECs.

A revenue grade meter that meets the ANSI C12.1-2008 accuracy requirements may be purchased and installed via a variety of sources. This work should be performed by a licensed NJ electrical contractor in compliance with all local and national electric codes. You may contract directly with a licensed NJ electrical contractor or work with your project contractor to meet this requirement. You may also review the list of meter suppliers contained in the NJCEP Trade Ally database by clicking the link below and selecting "Metering and Monitoring".

http://www.njcleanenergy.com/findavendor

There are many meters that meet the accuracy requirements and the two lists provided below are intended to assist you in identifying a revenue grade meter that meets these accuracy requirements.

1. Download a PDF copy of the New York State Department of Public Service approved meter list. Pages 2 -14 provide a listing of approved Watt-hour meters which meet the ANSI C12.1-2008 accuracy standards.

2. The California Energy Commission (CEC) has prepared a list entitled "List of Eligible System Performance Meters" which provides a listing of hundreds of meters along with a column to designate those meters that meet or exceed +/- 2% accuracy required in ANSI C12.1-2008. Only those meters that have a "Y" designation in the column titled "PBI eligible" meet the +/- 2% accuracy standard. Therefore those are the only meters on this list that meet the NJCEP requirements. Proper documentation for these meters was supplied to the California Energy Commission by a third party Nationally Recognized Testing Laboratory (NRTL) to verify that the meter met or exceeded the +/- 2% accuracy standard.

http://www.gosolarcalifornia.org/equipment/system_perf.php.

5D) Production Meter Location

This meter location section does NOT apply to projects if the AC system output voltage from the inverter matches the voltage that is delivered to the customer's facility and/or to the point of interconnection to the grid and does not feed through any transformers prior to arriving at these delivery points. Residential projects and most non-residential projects will not need to be concerned about this section.

However, this section does apply to ALL direct grid supply projects and also to behind the meter projects that feed the solar output through a transformer prior to arriving at the customer's facility and/or the point of interconnection.

The production meter must be located at a point that will reflect the electrical generation that is delivered to the customer's facility and/or to the point of interconnection. This section will describe the metering configuration that is necessary to avoid including transformer losses in the reported system output that is used to generate the SRECs.

Section 6.3 of the GATS Operating Rules (December 2011) identifies the meter location for both behind the meter and direct grid supply generators. This section describes the metering location that is required to ensure that the SREC generation is properly determined. The sub-sections cover both direct grid supply projects and also behind the meter projects. The objective is stated below:

For each renewable energy resource, total MWh of generation as defined in the previous paragraph shall be measured at the point of interconnection to the transmission or distribution company's facility, or adjusted to reflect the Energy delivered into either the transmission or distribution grid at the high side of the transformer.

If the meter cannot be installed at the desired point due to physical constraints then a meter that automatically adjusts for the transformer losses may be used. If the meter cannot provide the adjustment automatically then an external adjustment factor must be determined and applied to the meter readings as described below.

The process to determine the adjustment factor is left to each state to decide. The NJCEP methodology to calculate the meter adjustment factor is based upon the weighted average of the transformer efficiency at 25, 50, 75 and 100% loading as described below.

- A) Provide the percent of annual operating time at 0-25%, 25-50%, 50-75% and 75-100% transformer load.
- B) Provide transformer efficiency at 25, 50, 75 and 100% transformer load.
- C) Multiply Item A by Item B for each load percent.
- D) Meter adjustment factor = Sum of all factors derived in item C.

The registrant is required to calculate the meter adjustment factor and to document the results on the System Metering/Monitoring Worksheet. Any documents that are necessary to support the calculation should be included with this worksheet.

The transformer documentation must include the transformer specification sheet that shows the transformer efficiency at 25, 50, 75 and 100% transformer load. The annual load profile may either be based upon metering information if available or a projection of loading during a typical year. If a projection is utilized, please provide backup information to support the values.

Once the meter adjustment factor has been determined the SREC owner will be required to apply the adjustment factor to their system output meter readings to arrive at the monthly generation and will then be responsible to input the adjusted generation into the GATS system for the purpose of reporting system output.

6) Project Acceptance

Complete SRP Registration packets will be processed within **6 weeks** of receipt. These timeframes are subject to change based upon volumes. The Market Manager will provide timely web-based reporting on received and accepted projects on the main <u>SREC Registration page</u> of the NJCEP website.

The most recent updates to the SRP registrations received and accepted are available on <u>NJCleanEnergy.com</u> under "Project Activity Reports". Installers are encouraged to visit the site often as the "Updated Project Status List" is updated frequently and can be a valuable project tracking tool for installers.

6A) Project Acceptance Letters

Following its processing of the SRP Registration packet, the Market Manager will issue one of two versions of the Project Acceptance Letter:

In Compliance: Once the registration packet is complete and determined to comply with all program requirements, including the Chapter 8 rules governing SRP submittal requirements, the registrant, system owner, site host contact and installer will receive a project acceptance letter. This letter certifies that the project, as proposed, will be eligible to earn SRECs in accordance with the State's RPS rules. An acceptance number will be listed in that letter and all further

communications and documentation to the market manager must include this number. The Final As-Built packet cannot be submitted without this acceptance number.

Not in Compliance: Registrants who submit a registration packet that is not in compliance with Chapter 8 rules governing SRP submittal requirements, but that is otherwise complete and complies with all other program requirements, will receive an SRP Acceptance letter advising them they are not in compliance and offering them the opportunity to remedy their situation. Please refer to Section 1E for additional details. As with the "In Compliance" version, an acceptance number will be listed in the letter and all further communications and documentation to the market manager must include this number.

6B) Moving an Accepted Project to a New Address

The registrant of an accepted project is not permitted to change the address of the project from that reflected on the acceptance letter. In these cases, the original project must be withdrawn or cancelled and a new registration packet must be submitted for the new address.

6C) Acceptance Periods and Extensions

Project acceptance procedures and installation deadlines are designed to strike a balance between the need for rigorous and efficient program administration, including the need to discourage speculative project registrations and eliminate distressed projects that cannot complete as planned, with the need for reasonable completion intervals that reflect implementation realities and the need for commercial contracting confidence.

The following policy pertains to extensions for projects registered under the SREC Registration Program (SRP). It describes the processes for completion deadlines and extensions for all SRP registrations.

- Projects will be given 12 calendar months to be completed, as measured from the date on the acceptance letter to the date the complete Final As-Built packet is received by the Market Manager.
- If the project is accepted into the ESFI, the expiration date will be 12 months from the date of the signed Board Order approving the bid in the EDC financing solicitation.
- If the project cannot be completed within the initial 12-month period, the registrant/contractor may apply for an extension. Extension requests must be received before 5:00 PM on the expiration date of the initial acceptance letter. The request must include the updated schedule for completion and documentation such as permits, purchase orders, photos, etc. that support the likelihood of timely and successful completion of the solar facility.

Upon conducting a review of all required documents, the Market Manager may grant an extension for a period of six months. The Market Manager will send the system owner, site host contact and installer a letter with the extension decision.

7) Project Cancellations

The Market Manager should be promptly notified of projects that have been accepted but have been cancelled by the system owner or site host contact. In order for a project to be considered cancelled, the Market Manager must receive an email or signed letter from the registrant indicating that the project is cancelled.

7A) Project Expiration Procedures

The Market Manager monitors project expiration dates. If the Market Manager has not received the Final As-Built packet (with the exception of the Interconnection documentation) or a request for extension before the expiration date of the project, the Market Manager will send an expiration letter to the registrant, system owner, site host contact and the installer.

8) Inspections

This section details for inspections, quality control (QC) and quality assurance (QA) processes. Specific technical guidance is provided in Appendix 3b.

8A) Required Local Inspections

It is the installer's responsibility to identify and obtain all relevant local, state, and federal permits for the solar system installation. For example, these may include local building and electrical permits, as well as other local, state, or federal permits in cases where the proposed system is to be located in special-use or environmentally sensitive areas.

The installer shall make professional efforts to design and install renewable energy generating systems in accordance with all applicable codes, standards, and SRP requirements. Upon completion, the installer shall obtain all relevant inspections and approvals from the local jurisdictions and local electric utilities.

Evidence of passed local inspection (UCC) **does not** need to be provided to the Market Manager.

8B) Utility Interconnection

Prior to installation all registrants must submit an Interconnection Application/Agreement Part 1 directly to the appropriate electric utility company. There are different applications based upon size of system. Interconnection applications are subject to review by the electric utility company and must comply with all utility interconnection requirements. Registrants will receive notification from the utility once the utility has approved interconnection. After installation, the registrant will request utility interconnection by completing Part 2 of the Interconnection Application/Agreement – Certificate of Completion. Once the utility has interconnected the system, a representative will sign the Certificate of Completion with the interconnection date and mail a copy to the electric utility user or send an email to the supplied contact indicating the interconnection date and authorization to energize the system.

Local electrical code inspection and utility interconnection must be completed prior to submitting the Final As-Built Packet. For customer-sited projects, a copy of the mailed or email EDC Notification from the EDC or Municipal Electric Provider to the customer-generator authorizing the system to energize must be included with the Final As-Built paperwork. For grid supply projects, authorization to energize from the EDC or PJM must accompany the Final As-Built packet. A complete Final As-Built packet is required in order to schedule a program inspection or receive an inspection waiver letter.

8C) Quality Control/Quality Assurance Program Inspections

The Quality Control (QC) program inspection process includes both on-site QC inspections and on-site QC verifications. The QC program inspection process will achieve an overall target of 20% inspections for CORE, REIP and ESFI projects and 10% verifications for SRP projects. To meet this requirement, EDC financed projects in the EDC SREC financing program and self install projects will no longer be subject to 100% inspection, but may be sampled at a higher rate than other SRP projects. On-site inspections for PSE&G loan program projects will be handled by PSE&G program inspectors.

On-site QC Inspections:

QC Inspections include onsite solar component verification and review of submitted project documents for accuracy and will be limited to CORE, REIP and ESFI projects only, and shall include at minimum, the following steps:

**(Please note: the NJCEP reserves the right to inspect any and all projects in accordance with specified protocol as listed in this Guidebook and/or Appendix 3b if deemed necessary)

- Collect solar module(s) make and model information
 - Capture information on manufacturer's nameplate
 - Verify nameplate rating watts DC
- Collect inverter(s) make and model information
 - o Capture information on manufacturer's nameplate
 - Verify nameplate rating watts AC
 - Capture inverter serial number

- Verify inverter operation and record production output:
 - Display screen must be capable of displaying instantaneous power production in watts or kilowatts. If the system is not powered, the inspector shall close all open circuits to verify proper operation and production consistent with the availability of sunlight at the time of the inspection.
 - (Please note: Systems that are locked and cannot be powered on would fail inspection. Therefore it is critical that all parties involved in an inspection be aware during scheduling that the system must be in operation, and the responsibility lies with the installers and/or customers to provide access during the inspection)
 - Verify the installation of a revenue grade production meter that has been certified to the ANSI C12.1-2008 standard and is capable of displaying and recording cumulative kWhs of production and obtain a reading
 - Capture meter model number and type
 - Capture meter serial number
 - Verify module tilt(s) and orientation(s) using a compass and inclinometer
 - Perform rooftop inspection (subject to safety conditions) of the following to ensure installation was performed in a "neat and workmanlike manner":
 - o Module installation procedures
 - o Rail installation procedures
 - Wire management application
 - o Conduit penetrations
 - Ensure manufacturer's specifications were followed
 - Perform calculations necessary to verify installer's annual production estimates and ensure system voltage does not exceed the allowable maximum.
 - Perform a shading analysis using a Solmetric or Pathfinder (if deemed necessary by the inspector)

On-site QC Verifications:

For SRP projects, inspections will be redefined as verifications and include onsite solar component verification and review of submitted project documents for accuracy and shall include, as a minimum, the following steps:

**(Please note: the NJCEP reserves the right to inspect any and all projects in accordance with specified protocol as listed in this Guidebook and/or Appendix 3b if deemed necessary)

- Collect inverter(s) make and model information
 - Capture information on manufacturer's nameplate
 - Verify nameplate rating watts AC
- Collect solar module(s) make and model information
 - o Capture information on manufacturer's nameplate

- Verify nameplate rating watts DC
- Verify inverter operation and record instantaneous kWh production
- Verify the ANSI C12.1-2008 revenue grade meter and obtain a kWh reading
 - o Capture meter model and type
 - Capture meter serial number
- Perform estimation measurement of panel tilt
- Perform estimation measurement of orientation

**(Please note: Program inspectors will not be accessing the rooftop during the verification procedure, unless deemed necessary by the inspector)

Both the QC inspections and verifications will follow the same inspection scheduling process protocols.

(a) Inspection Scheduling Process Protocols

In general, program inspections are scheduled as follows:

- Inspections are assigned to an NJCEP program inspector within one week after files are deemed to be complete.
- Initial contact with the site host contact (*if residential*) or installer (*if non-residential*) is made by the processing team within one week after the inspection is assigned.
- The inspection team schedules inspections 3-4 weeks in advance of the inspection date.

(b) Installer Presence during Inspections

It is recommended that the installer be present during all inspections in order to make minor modifications during the inspection, thereby avoiding repeat inspections. There are two cases in which the installer is **required** to be present during inspections:

- Non-residential Inspections
- Inspections which require special equipment beyond that normally carried by the inspectors (i.e., a 20-foot ladder) to safely access the array, roof, process equipment, or other locations

(c) Inspection Status (Pass/Fail)

Within two weeks of performing an inspection, an inspection status will be assigned. Installers are notified, via email, of inspection results. During this two week window the installer may resolve any outstanding discrepancies with the Program Inspector.

Status will be assigned as follows:

- PASS The system status in the SRP registration process has passed inspection and the system will be submitted and reviewed for final processing.
- FAIL The system status in the SRP registration process has not met the necessary criteria as denoted in the inspection report and will require re-inspection. (NOTE: Should deficiencies arise during inspection; these deficiencies will be communicated to the installer. Should the installer provide remedies to resolve the deficiencies within the two week inspection window, the inspection status will reflect this).

(d) Paperwork discrepancies during a QC on-site verification

If an NJCEP program inspector notices incorrect paperwork during on-site program verification, the installer will be required to correct the paperwork to receive a "Passed" inspection. For example, if the Final As-Built Technical worksheet states 0% shading affecting the array, but shading is identified by the program inspector, the paperwork will be deemed incorrect. Since repeated incorrect paperwork submissions are part of the Level 1 Contractor Remediation procedures, the contractor may be subject to a verbal warning. This would apply to shading, orientation and tilt discrepancies that differ from the submitted Final As-Built packet. The October 7, 2010 Board Order detailing all the requirements for the Contractor Remediation Procedures can be found at:

http://www.NJCleanEnergy.com/files/file/program_updates/NJCEP%20Remediation%20Board %20Order.pdf.

(e) Quality Assurance (QA)

The QA process includes all projects that will not receive an on-site inspection or on-site verification and therefore receives an inspection waiver. The Market Manager staff will randomly select and review 25% of these projects to perform a more in depth paperwork review (review of "Final As-Built" information, including PV watts, shading analysis, photos, etc.) while all other projects will be reviewed only for system size and manufacturers' information.

Projects that receive a "Waiver of Inspection" will proceed to receive its NJ Certification number. The Market Manager and the NJ Clean Energy Program reserve the right at any time to schedule an inspection at any installation for which a "Waiver of Inspection" was received.

In putting greater reliance on the QA model, reduced onsite inspections, and more reliance on self-enforcement within the industry, the Board granted the Market Manager the authority to seek remediation procedures against contractors who willingly and consistently violate program rules or misrepresent information.

9) SREC Ownership and Registration at PJM GATS

9A) Post-Installation Major System Changes

As described in section 2E, once the project has received an inspection waiver letter or a passed inspection report and the registrant has submitted all requested paperwork, a letter containing the NJ Certification Number will be sent to the system owner. This letter contains instructions on how to register with PJM-GATS SREC tracking system.

Once a generator is registered at PJM GATS, system owners are required to provide PJM-EIS with information concerning major changes to generating systems. Major changes include:

- Changes in ownership of the system; e.g., with the sale of a property;
- Changes in the location of the system; e.g., the system is moved to a new property; (The NJCEP will not perform an on-site inspection or on-site verification of a system moved to a new property);
- System add-on's; any changes to the rated capacity of the system; (in addition to submitting a new SRP packet);
- Changes of major system components, such as modules or inverters;
- Changes or replacements of components used to meter generation from the system, such as inverters or meters.

9B) Policies Regarding SREC Ownership

The NJCEP and PJM GATS currently have procedures in place for verifying initial ownership of SRECs. These procedures include review of installation contracts by the Market Manager and/or affidavits from the facility owner which is reviewed by GATS. Once SREC ownership is confirmed, the Market Manager will provide the name of the SREC owner to PJM GATS and PJM GATS will accept the account registration in the name of the specified SREC Owner at the time the SREC owner registers at GATS.

SREC ownership shall remain with the individual or entity that is designated as the SREC owner upon initial registration of the NJ Certification Number unless changed by:

- the registered SREC Owner,
- judicial adjudication, or
- by operation of law.

Examples of the SREC Owner changing the ownership would be by consent of the SREC Owner such as: contract in the sale of the facility property where the SREC owner and facility owner are one in the same, will, gift, settlement or other voluntary means on the part of the registered SREC Owner.

Other examples include cases of assignment on a forward basis, or sale of SRECs once generated under contract. In all cases, ownership succession should be governed by contract between the transacting parties. In the case of a dispute regarding SREC ownership or assignment under brokerage or aggregation, the facility and SRECs involved remain in their currently registered ownership state (at the time of the dispute) until clarified by a court decision.

Examples of judicial adjudication would be a judgment in a divorce proceeding, contract dispute or other matters where ownership interests are determined by the court.

An example of "by operation of law" would be where the SREC owner dies intestate (without a will) and the estate is disposed of in accordance with state statute.

In the case where the facility owner transfers ownership of the SRECs to another entity for a limited period of time, the policy would allow for the transfer of SREC Ownership back to the facility owner upon expiration of the initial transfer. For example, a facility owner sells their SRECs to an aggregator or broker for a three year period after which ownership transfers back to the facility owner. In this example the facility owner does not require the consent of the aggregator/broker to transfer rights to the SRECs.

10) Other Program Processes

10A) Program Dispute Resolution

There will be times when program participants are not in agreement with the Market Manager's decisions. The over-riding objective of the NJCEP is to achieve participant satisfaction and to satisfactorily resolve any disputes.

Disputes, concerns or complaints that arise will be addressed initially by the Market Manager or Program Staff at the point of contact. Inquiries that cannot be resolved at the Call Center level will be forwarded to the Market Manager for response.

The first level response shall be to document the date and nature of the complaint and the specific details to include contact information; name, address, phone number and/or email and parties or programs involved. The Market Manager will maintain all contact and status records. This will open the issue; next an appropriate action step must be completed for it to be resolved and closed. The Market Manager shall be responsible to delegate or take action to resolve the issue promptly.

In all cases, where the customer appeal is not consistent with the Program SRP Guidebook, the Market Manager will notify the Program Coordinator of the issue. Disputes that cannot be resolved nor have future action agreed to by all parties during initial contact will be brought to the attention of the Program Coordinator. The Program Coordinator will then investigate and respond directly to the customer. Disputes that cannot be resolved nor have future action agreed to by all parties during initial contact will be brought to the attention of the New Jersey Board of Public Utilities. The procedure for filing a complaint can be found at: www.state.nj.us/bpu/assistance/complaints.

10B) Vendor Dispute Resolution

For contractual disputes between a system owner or site host contact and the installer or registrant, the Division of Consumer Affairs (DCA) would be the point of contact. The DCA website has a <u>complaint form</u> for reporting disputes between the affected parties. Once a complaint is received via their website it is initially reviewed by DCA staff. If the dispute is criminal in nature, the staff will process the complaint. If the initial evaluation does not appear criminal, the complaint will be forwarded to the respective County Consumer Affairs office for resolution.

10C) Inspection Findings Dispute Resolution

In the event that there is a dispute regarding technical considerations of a project between the Market Manager and the registrant, the Program Dispute Resolution process should be utilized as described above.

10D) Contractor Remediation Procedures

New Jersey Clean Energy Program (NJCEP) is designed to allow for participation by any third party contractor that meets the program requirements. At times contractors have violated program procedures and in some cases a contractor may consistently violate program procedures.

One of the primary responsibilities of the Market Manager is to oversee the level of performance of the contractors that participate in the NJCEP. This involves two primary areas: adherence to program processes and the level of service delivery.

Three types of contractor issues commonly arise:

- Deficiencies in adhering to established guidelines and procedures (administrative and field services)
- Failure to provide the services to the customer in a timely and professional manner as described in the program
- Intentional misconduct outside the established guidelines and procedures

The October 7, 2010 Board Order detailing all the requirements can be found at: <u>http://www.NJCleanEnergy.com/files/file/program_updates/NJCEP%20Remediation%20Board</u> <u>%20Order.pdf</u>

10E) Tax Considerations

System owners should consult a tax professional regarding the eligibility of their installation for federal tax credits, treatment of depreciation, and the taxability of program incentives received and SRECs sold.

10F) Disclaimers

Any questions on the SRP Guidebook, web site content, or program processes and procedures should be directed to the Market Manager.

The Market Manager endeavors to offer timely program updates, including policy changes and installation activity through the NJCEP website. Enabling policies concerning program governance, funding, and related support originating from Orders issued by the New Jersey Board of Public Utilities can be found at <u>www.bpu.state.nj.us</u>. The Market Manager does not distribute information about individual registrants without their consent.

Appendix 1

Contacting the Market Manager:

For all initial inquiries regarding status on any submitted or approved projects including status of application approval, NJ certification number, or rebate:

call 866-NJSMART (866-657-6278) or

send an e-mail to NJREINFO@csgrp.com.

Program updates, renewable committee meetings and other important information are distributed through the RE listserv. All contractors participating in the NJCEP renewable energy programs should sign up for this listserv by visiting:

http://mail.njcleanenergy.com/mailman/listinfo/Renewables

Forms, eligibility, processes, and timeframes and other information about the New Jersey SREC Registration Program can be found at <u>http://www.NJCleanEnergy.com/renewable-energy</u>

Questions about the NJCEP Renewable Energy Programs or extensions or expirations which are not available in this document or on the website, please contact:

Theresa Heller, Sr. RE Administrative Coordinator; <u>Theresa.Heller@csgrp.com</u>

Questions about issues with inspections or quality assurance, contact: David Damiani, Technical Field Manager; David.Damiani@csgrp.com

Questions about SREC accounts and trading please contact: PJM-EIS GATS: GATS Administrator; <u>gatsadmin@pjm-eis.com</u> or call 610-666-2245

Appendix 2



STEPS FOR PARTICIPATION IN THE SREC REGISTRATION PROGRAM

Appendix 3a

SREC Registration Program Technical Requirements

Equipment Eligibility Requirements

All major system components must be new, and not have been placed in service at any previous site. Major system components include, but are not limited, to:

- 1. Solar electric (photovoltaic) modules
- 2. Inverters
- 3. Transformers

Solar Electric Systems

All major photovoltaic system components must be Underwriters Laboratory (UL) listed (or listed by an equivalent nationally recognized testing lab (NRTL) and comply with the requirements detailed in the technology-specific Technical Worksheets. Panels must comply with UL 1703 listed and Inverters must comply with UL 1741.

Minimum Performance Design Threshold (applicable only to customer-sited projects)

It is recommended that the default output of a solar electric system, as estimated and verified in accordance with program QC/QA guidelines, using PVWATTS, should be *at least* eighty percent (80%) of the default output of a reference design system (with no shading, southern orientation, latitude tilt, and other PVWATTS default de-rate parameters).

Sub-optimal system designs can diminish the expected return on investment.

Appendix 3b

Solar Program Quality Control Guidance

CODE REQUIREMENTS

1. The installation must comply with the provisions of the National Electrical Code and all other applicable local, state, and federal codes or practices.

The local municipality inspection will inspect for code requirements. The system must have passed local electrical inspection. The EDC Notification will be the evidence for this requirement. However, if the project receives an ESFI incentive and is selected for an onsite inspection, the NJCEP program inspector will review the project for egregious safety issues, which shall be defined as bonding, grounding and/or over current protection issues, during inspections and may communicate possible issues to installers and/or customers on inspection reports.

2. All required local permits must be properly obtained.

Other permits which may be required for an installation, such as building permits, etc., are the responsibility of the installer and will not be confirmed by the program inspectors.

3. All required inspections must be performed (i.e., Electrical/NEC, Local Building Codes Enforcement Office, etc.). Note: In order to ensure compliance with provisions of the NEC, an inspection by a state-licensed electrical inspector is mandatory.

The local municipality inspection will inspect for code requirements. However, if the project receives an ESFI incentive and is selected for an on-site inspection, the NJCEP program inspector will review the project for egregious safety issues, which shall be defined as bonding, grounding and/or over current protection issues, during inspections and may communicate possible issues to installers and/or customers on inspection reports

INVERTER AND CONTROLS

1. The inverter and controls must be properly installed according to manufacturer's instructions.

Manufacturer's instructions might include statements about clearances, minimum and maximum input voltages, etc.

2. The inverter must be certified as compliant with the requirements of IEEE 929 for small photovoltaic systems and with UL 1741.

UL 1741 is the UL test standard that is used for the listing of PV inverters, charge controllers, and other BOS equipment. It continues to be updated as all new standards are over the first several years of implementation. UL 1741 incorporates the testing required by IEEE 929 and 1547 (frequency and voltage limits, power quality, non-islanding inverter

testing), and includes both design (type) testing and production testing. During an on-site inspection, the inverters may be checked for anti-islanding by the NJCEP program inspector.

While UL is specifically called out as a program standard, there are four nationally recognized testing labs that can test to UL 1741. These are UL, ETL, CSA, and TUL, and program inspectors will recognize any of these certifications on an inverter. NJCEP program inspectors may also look for and confirm the term "utility interactive" on the product label.

3. The system should be equipped with the following visual indicators and/or controls: On/off switch; Operating-mode setting indicator: AC/DC over-current protection; Operating status indicator.

During an on-site inspection, the NJCEP program inspector may note deficiencies and communicate them to installers, but exceptions will not be grounds for failing inspections.

4. Warning labels must be posted on the control panels and junction boxes indicating that the circuits are energized by an alternate power source independent of utility-provided power.

Warning labels are required under NEC but are often lacking in the field, even on installations that have passed local inspection. This program requirement provides program inspectors with specific authority to review compliance with safety labeling requirements. During an on-site inspection, NJCEP program inspector may review projects for warning labels on disconnects, inverters, the AC tie-in point, and other locations as required under the NEC.

5. Operating instructions must be posted on or near the system, or on file with facilities operation and maintenance documents.

During an on-site inspection, the NJCEP program inspector will check for operating instructions while performing inspections and will note any deficiencies on inspection reports. Deficiencies will not constitute a basis for failing inspections, however, due to the high probability that operating instructions may be located on file or elsewhere in a location not clearly visible to the inspector.

6. Systems must have monitoring capability that is readily accessible to the owner. This monitor (meter or display) must at minimum display instantaneous and cumulative production.

Most modern inverters satisfy this requirement. If the inverter does not, the NJCEP program inspector will accept any ANSI C12.1-2008 revenue-grade system-dedicated kWh meter that displays cumulative production and has a visible pulse (electronic meter) or spinning disk (mechanical meter) from which instantaneous production can be derived.

C. WIRE RUNS

1. Areas where wiring passes through ceilings, walls, or other areas of the building must be properly restored, booted, and sealed.

- 2. Thermal insulation in areas where wiring is installed must be replaced to "as found or better condition". Access doors to these areas must be properly secured and sealed with gaskets.
- 3. Wiring connections must be properly made, insulated, and weather-protected.
- 4. All wiring must be attached to the system components by the use of strain relief or cable clamps, unless enclosed in conduit.
- 5. All outside wiring must be rated for wet conditions and/or encased in liquid-tight conduit.
- 6. Insulation on any wiring located in areas with potential high ambient temperature must be rated at 90° C or higher.
- 7. All wiring splices must be contained in UL-approved workboxes.

D. BATTERIES (IF APPLICABLE)

1. The batteries must be installed according to the manufacturer's instructions.

Manufacturer's instructions might include statements about clearances, minimum and maximum input voltages, ventilation, etc. Solar installations must be installed according to manufacturer's instructions.

- 2. Battery terminals must be adequately protected from accidental contact.
- 3. DC-rated over-current protection must be provided in accordance with the provisions of the NEC.

Solar Technology Specific Requirements

Program on-site inspections will not involve calculating estimated annual production, evaluating manufacturers' specifications, performing on-site shading evaluation, and performing string sizing evaluation. However, compliance with the requirements listed below is still the responsibility of the installer. Non-compliance by installers will be subject to contractor remediation procedures.

Solar Electric Module Array

1. Modules must be UL listed and must be properly installed according to manufacturer's instructions.

Manufacturer's instructions might include statements about the maximum number of modules in series, provisions for mounting and grounding, etc.

2. The maximum amount of sunlight available year-round on a daily basis should not be obstructed.

All registrations must include documentation of the impact from any obstruction on the annual performance of the solar electric array. This analysis can be performed by using PVWATTS, which can be found at: <u>NJCleanEnergy.com</u>. This will be submitted with the Final As-Built packet.

3. Verify tilt, orientation, and shading on each array.

This information must be accurately reflected on the Final As-Built technical worksheet. Photos submitted with the Final As-Built packet should support data represented in the packet. This verification ensures the program collects accurate data relevant to estimating system production. On-site inspections will measure and record array tilt, orientation, and review shading.

- 4. System wiring must be installed in accordance with the provisions of the NEC.
- 5. All modules installed in a series string must be installed in the same plane.

Variations of less than or equal to 10 degrees in tilt and orientation will be acceptable.

Appendix 4

SREC Registration Program Reporting and Tracking

Project Activity Reports

The NJCEP Renewable Energy Program reports are prepared using three distinct report options. Option 1 is for analysis and forecasting of the installed capacity based upon the end of month data. Option 2 is for project participants to look up their projects and get more information about its status at the end of the month with some aggregate project analysis provided. Option 3 is a frequently updated listing of the renewable energy projects which are in progress or have been recently completed.

Project Activity reports are located at: <u>http://www.NJCleanEnergy.com/renewable-energy/project-activity-reports/project-activity-reports</u>

The link to the User's Guide for Renewable Energy Reporting is located at the bottom of Project Activity reports page and it provides an explanation of the NJCEP Renewable Energy reports.

The Updated Project Status List is updated by the Market Manager at least monthly. Registrants can sort this Excel spreadsheet by installer and review the status of all projects. For new registrations, if a project is in the "Data Entry" status, then an acceptance letter for that project will be mailed within about two weeks. This status indicates that the project has been reviewed and the project will be accepted into the program. For Final As-Built submittals, if the status is "Final DE", some items were missing when the Final As-Built packet was submitted.

The Market Manager will send out one email to the installer email address provided on the SREC registration form. This email will identify the missing items and this will be the only notification about the missing items. The registrant will be responsible for sending the missing documents to the Market Manager via hard copy with proper reference to the BPU Project ID and host facility location.

The project will not receive an inspection waiver or enter the QC inspection process until the Final As-Built packet is deemed completed. The Project Status Report can be found at: www.NJCleanEnergy.com/renewable-energy/project-activity-reports/program-status-reports/program-status-reports.

SREC Pricing and Trading Statistics for each Energy Year are available on the NJCEP website at the page shown below.

http://www.njcleanenergy.com/renewable-energy/project-activity-reports/srec-pricing/srec-pricing

Questions about Project Activity Reports or SREC Pricing Reports, contact: Charlie Garrison, Renewable Energy Market Manager; Charlie.J.Garrison@Honeywell.com