

October 31, 2007



Customer Onsite Renewable Energy Program

Market Manager Operations Manual

Table of Contents

Overview.....	3
Purpose.....	3
Program Description.....	3
Participation Overview.....	4
Management Staffing.....	7
New Jersey Clean Energy Program.....	7
Marketing And Enrollment Requirements.....	7
Eligibility.....	7
System and Technology Requirements and Eligibility.....	9
Program And Rebate Delivery.....	13
Basic Solar Rebate Calculations.....	13
Non-Solar Rebates.....	15
Past Participation: Calculations for Systems Installed at the Same Site.....	16
Past Participation: Rebate Limits per Entity.....	16
Rebate Enhancements.....	18
Rebate and Inspection Processes.....	20
Rebate Application Form and Requirements.....	21
Program Budget Categories.....	23
Reservation Queue Process and Procedures.....	23
Rebate Reservation Approvals.....	25
Rebate Confirmation and Final Application Form.....	28
Interconnection and Inspections.....	29
Rebate Payment.....	39
Check Creation and Processing.....	39
Other CORE Program Processes.....	41
Disclaimers.....	42
Tracking And Reporting.....	43
Reporting.....	43
Budget Tracking.....	43
Appendix.....	45

References

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

- “CORE”: Customer Onsite Renewable Energy Program
- “OCE”: The Office of Clean Energy
- “BPU”: The Board of Public Utilities
- “SBC”: Societal Benefits Charge
- “HIC”: Home Improvement Contractor
- “CEP”: Clean Energy Program
- “DC”: Direct Current
- “AC”: Alternating Current
- “DEP”: Department of Environmental Protection
- “KW”: Kilowatts
- “KWH”: Kilowatt Hours
- “SREC”: Solar Renewable Energy Certificate

This document frequently refers to webpages and materials contained in the New Jersey Clean Energy website, which is located at www.njcep.com.

Overview

Purpose

This Operations Manual contains the processes and procedures by which the Customer Onsite Renewable Energy Program is administered. The Operations Manual and the processes and procedures contained herein are open to periodic revision subject to review and approval by the Office of Clean Energy and/or the Board of Public Utilities. The Manual will be available electronically and/or via mail by request.

Program Description

The CORE Program offers incentives to customers of the utilities regulated by the NJ BPU who invest in eligible electricity-producing equipment. CORE incentives make renewable energy investments more cost-effective by offsetting a portion of the initial cost of system installation. As a key component of New Jersey's Clean Energy Program, the CORE Program offers financial incentives for ratepayers to assist in the creation of a thriving renewable energy market in the State.

The CORE Program is considered one market development tool in the suite of New Jersey's Clean Energy Program initiatives offering financial incentives, educational resources, and information on renewable energy systems, energy efficiency measures,

and combined heat and power technologies. These programs are available to all New Jersey ratepayers, including residential customers, businesses, schools, and municipalities served by regulated electric and gas utilities.

Applicants requesting funding through the CORE Program must satisfy all of the eligibility requirements contained in the application forms and Technical Worksheets and adhere to all of the processes and procedures contained in this Operations Manual. System applications approved under previous program processes and procedures remain governed by those processes until the projects are completed, expired, or cancelled.

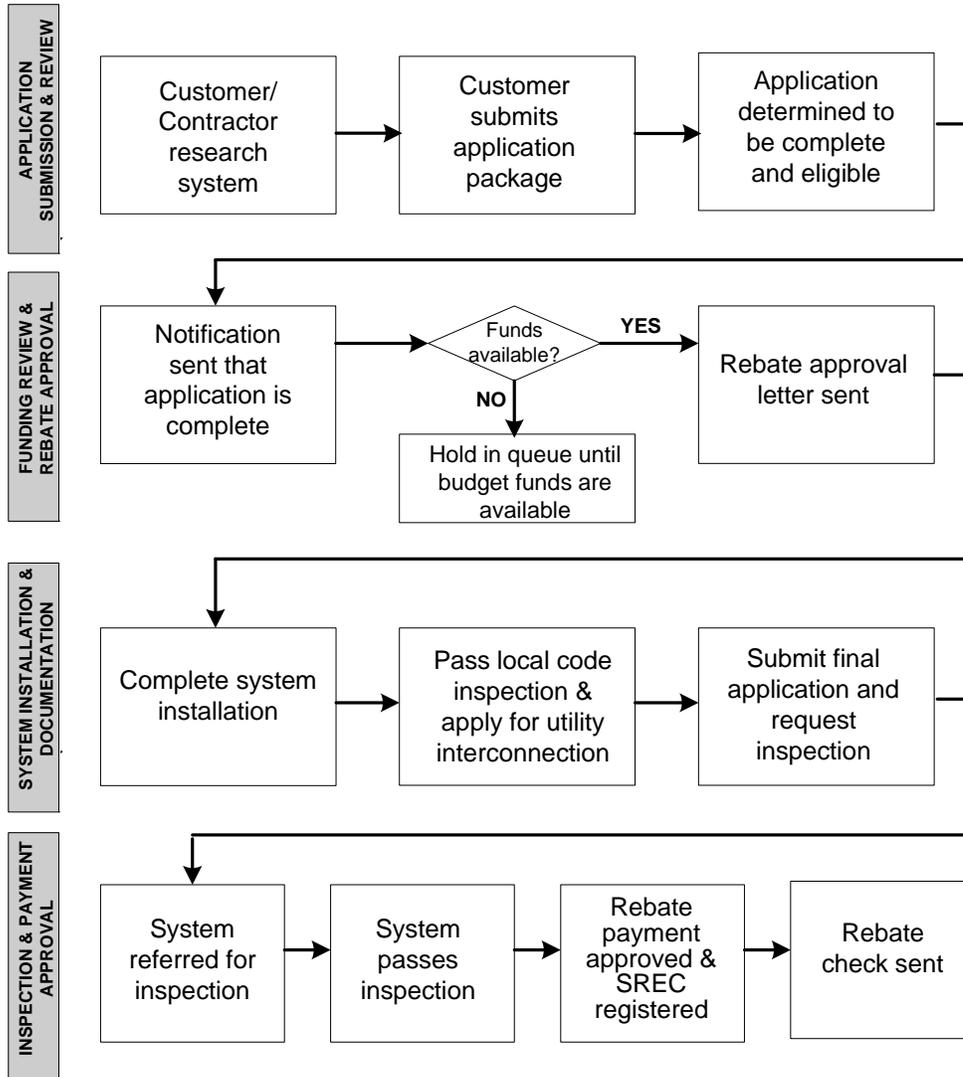
Market updates and information on installed capacity, program participation, budgets and project approval queues are available at www.njcleanenergy.com.

Participation Overview

To participate in the CORE Program, applicants must demonstrate an intention to install an onsite solar electric, sustainable biomass, fuel cell, or wind energy generation system in New Jersey. This section provides a brief overview of the program participation process. Additional details on program procedures and processes are provided in the remainder of this Operations Manual.

A potential CORE Program participant starts by identifying the type and size of system appropriate for their situation and submitting a completed rebate application package. The contents of a completed application package generally include an application form, the appropriate technical worksheet, documentation of annual electric consumption, a signed contract for the system to be installed, and a site map. Most commonly, a participating vendor who has experience with the program requirements will assist the customer with these steps. All new applications are time-stamped when they are received by the CORE Program Manager and reviewed to determine if they are complete. Applicants who have provided an email address will be notified that their application package has been received, reviewed, and found to be either complete or incomplete (and, if so, what additional material needs to be submitted).

NJ CORE PROGRAM SUMMARY OF PARTICIPATION STEPS



Once the initial application package is complete, and if sufficient program funds are budgeted and available, the participant will receive a rebate approval letter. This letter represents a commitment of program rebate funds to the participant, contingent upon the timely and proper completion of the project. If sufficient program funds are not available, the project will be assigned a queue number based on the date the application is deemed to be complete. As program funds become available, projects will be approved from the queue on a first-in, first-out basis, based upon the order in which they were approved as complete (for details on queue process and procedures see Section 4c).

Depending upon project size and type, the project has a 9 to 12 month time period in which to complete the installation and submit final project documentation. After the system is installed it must pass a local code inspection. A utility interconnection application must also be submitted to the participant's utility. Once these and other project documentation are completed and submitted, the project can be approved for final program inspection. After a successful final program inspection, the project is approved for rebate payment. Expected turnaround time for review, approval, and payment is 60 days. Sections 2 through 4 of this Operations Manual provide further details on program eligibility requirements, processes, and procedures.

Management Staffing

The Market Management team responsible for managing the CORE Program is listed below:

Larry Barth, CORE Program Manager (“Program Manager”); larry.barth@veic-nj.org; 732-218-3413

Tammy Gray; CORE Program Operations Specialist; tammy.gray@veic-nj.org; 732-218-3412

Jessica Cooney; CORE Administrative Assistant; Jessica.cooney@veic-nj.org; 732-218-3411

David Hill; CORE Program Advisor: dhill@veic.org; 802-658-8080 ext 1034

Charlie Garrison; Renewable Market Manager (“Market Manager”):
Charlie.j.garrison@honeywell.com; 973-890-9500 ext 3070

Maureen Quaid; Renewable Market Lead (“Market Manager Lead”);
Maureen.quaid@csgroup.com; 732-218-3408

New Jersey Clean Energy Program

Application forms, eligibility processes, and information about the New Jersey Clean Energy Program, and all of its component programs, can be found at www.njcleanenergy.com.

Marketing And Enrollment Requirements

To qualify for a rebate under the CORE Program, both the consumer and the renewable energy system must satisfy a number of requirements. This section outlines the details of these requirements.

Eligibility

Applicant Eligibility

To be eligible for a CORE rebate, an applicant must be a ratepayer of a New Jersey Board of Public Utilities-regulated electric and/or natural gas utility. An applicant must demonstrate payment into the Societal Benefits Charge through submission of a utility bill from the site of installation. If the applicant is the customer of an electric Municipal

Utility Authority or electric cooperative and a BPU-regulated gas utility, he/she can demonstrate evidence of paying into the SBC with a gas utility bill for the site of the proposed installation. Only systems installed in New Jersey are eligible for a rebate.

The CORE Program accepts applications for renewable energy systems proposed for a structure that has yet to be built and therefore has not yet received a utility bill. Section 4A outlines documentation needed for new construction projects.

Vendor Eligibility

To help consumers make wise renewable energy purchase decisions, a list of active solar photovoltaic and wind installers is available on the CORE Program section of the New Jersey Clean Energy website. The only requirement for installers to be listed on the website is the demonstration of three successful system installations, specifically through demonstration of three completed inspections within the CORE Program. 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 CORE Program Manager or the New Jersey Office of Clean Energy. While the State of New Jersey requires that solar installers doing residential work have a Home Improvement Contractors license, the CORE Program Manager and the New Jersey Office of Clean Energy do not certify or otherwise qualify installers and therefore recommend that prospective customers contact several installers for information. All solar installers doing residential work must have a Home Improvement Contractors license and will be required to list their license Number on the CORE application for the application to be deemed complete.

As a prerequisite to being included on this list, all vendors of OCE-qualified clean energy generation equipment will be required to agree to indemnify, defend, and hold the New Jersey BPU and their representatives, including the Program Manager, harmless from any act or omission resulting in personal injury (including death) or property damage. This agreement is detailed in the NJCEP Vendor Agreement.

Once the Vendor has completed to the NJCEP Vendor Agreement, he/she must submit an online application, which will be reviewed by the Account Manager. If the application is approved, the vendor will be notified and their listing will be added to the vendor listing.

Contracting firms can be listed as distributors, installers, manufacturers, and/or licensed electricians in New Jersey who also have experience working with solar electric systems. On future applications, the HIC License Number will be required for all residential applications.

The vendor agreement and online applications are available at www.njcep.com/html/fav_sign.html

Self-Installations

Systems may be self-installed by the purchaser (owner) but will be eligible for reduced rebate funding (reduced by 15% from calculated amount). This “Self-Install Adjustment” will be in effect whenever there is a material interest between the applicant and the installer, with a material interest defined as including any financial, business, and/or immediate family relationship between installer and customer. For example, the self-install rebate adjustment would apply to a rebate application for an installation at the site of an employee of the installing firm. This program procedure applies even if an approval letter was issued without CORE Program Manager knowledge of the material interest between the owner and installer of the system.

System and Technology Requirements and Eligibility

System Types

Financial rebates are available exclusively for renewable energy systems that meet all of the following eligibility requirements. There are four types of renewable energy systems currently eligible to receive CORE rebates.

1. Solar Electric (Photovoltaic, or PV) – Systems that produce electricity directly from sunlight
2. Sustainable Biomass – Systems that use a sustainable and renewable supply of organic material to produce electricity
3. Fuel Cell – A fuel cell is an electrochemical energy conversion device. It produces electricity from external supplies of fuel (hydrogen) and an oxidant. These react in the presence of an electrolyte. To be eligible for participation in the CORE Program the Fuel Cell must use a renewable source to produce the hydrogen fuel.
4. Wind Generation – Generators that convert the kinetic energy of wind, captured by turbines, into electricity

Equipment 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:

- Solar electric (photovoltaic) modules
- Wind turbine generators
- Fuel cell reformers and cells
- Inverters
- Transformers

All major system components must be Underwriters Laboratory (“UL”) listed (or another nationally recognized testing lab) and comply with the requirements detailed in the technology-specific Technical Worksheets.

Solar Electric Systems

Independent solar lighting systems that are not connected to a building's electric distribution system are ineligible for CORE rebate as they are generally cost-effective and therefore not in need of a rebate. While stand-alone and battery back-up systems are eligible for rebate, the application must be a permanent installation located on the site of an eligible public utility ratepayer. Portable systems are not eligible for rebate under the CORE Program.

To qualify for an incentive, the default output of a solar electric system, as estimated and verified by the program inspector using PVWATTS, must 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). Systems expected to produce below eighty percent (80%) of the reference system design output do not qualify for an incentive.

Reference design output can be determined by entering a system's DC rated capacity with southern orientation and latitude tilt into PVWATTS or the Clean Power Estimator at www.njcep.com. The comparative estimated output for a proposed system must include shading details, actual orientation and tilt, and any other expected variation from the PVWATTS default de-rate parameters. No array facing north of east or west is allowable unless the slope of the photovoltaic modules is less than five (5) degrees. All photovoltaic modules in a string must be in the same plane.

Wind Systems

Applicants intending to install wind energy systems must provide a detailed site map of the proposed system location, including proposed turbine hub height and the height of any obstructions within 500 feet of the turbine location.

Additionally, applicants must also provide 'landscape' formatted photographs depicting a 360° view of the proposed turbine location to the CORE Program Manager with their initial application package. The best method of producing these photographs is to stand at the proposed turbine location, face north, and take a picture every 45° until facing north again. This will result in approximately eight photos detailing the installation site.

If an individual wishes to test the wind site prior to incentive application, the Office of Clean Energy sponsors an anemometer loan program. For details on the anemometer loan program see: <http://www.njcep.com/wind/index.html>.

Sustainable Biomass

Sustainable biomass facilities incorporating the following methods of electricity generation, and complying with all New Jersey Department of Environmental Protection air pollution control regulations outlined in the State of the Art Manual ("SOTA") eligible for CORE incentive:

- Biogas, including captured methane from animal waste or sewage treatment
- Digestion of sewage sludge
- Combustion, as long as all matter used directly as biomass fuel was cultivated and harvested in a sustainable manner in accordance with the state environmental or agriculture agency in the state in which the plant was grown
- Landfill gas (facilities of up to 4MW-dc are eligible, pending review of the incremental value of the project's environmental benefit)

Any facilities that use municipal solid waste combustors, sludge incinerators, or mass burn *will not* receive incentives under CORE and will not qualify as Class I renewable energy generation facility in the state of New Jersey.

Biomass-fueled generation facilities are required to obtain a determination of biomass sustainability from the NJDEP prior to applying for a CORE incentive. Requests for a sustainability determination should be sent to:

New Jersey Department of Environmental Protection
Office of Innovative Technology
P.O. Box 409
Trenton, NJ 08625

Incentive applications for biomass projects will be evaluated based on the following three criteria:

1. **Fuel Sustainability:** Each project must document the sustainability of the fuel source. This required information includes the percentage of fuel input that is derived from a certified, sustainable source. Landfill gas facilities should document that the methane fuel has a minimum availability of five years.
2. **Close Loop Operational Process:** Documentation must include a description of the operational process and the associated equipment. A functional use for any refuse by-products must be documented. Landfill Gas Facilities must describe current process/use of flare gas and document incremental benefits related to the proposed application and comply with all of NJDEP policies for ash management.
3. **Proper Emission Levels:** The project must meet the emission standards specified in SOTA. A CORE incentive application will not be approved until permit documentation has been reviewed and found to be sufficient.

Fuel Cells

In addition to meeting all the requirements spelled out in the Fuel Cell Application Technical Worksheet, fuel cell energy systems must use a sustainable fuel source, such as landfill gas, to be eligible for CORE incentive.

System Monitoring

Systems must have monitoring capability that is readily accessible to the owner. The monitor must be capable of displaying instantaneous and cumulative production. Inverters serving this function are sufficient.

System Size

The CORE Program is intended to support systems that serve to offset the customer's own onsite electric consumption and do not produce net excess generation from the site on an annual basis. These are typically net-metered systems. Dependent upon the customer's annual electric consumption, CORE Program rebates are available to support solar electric systems up to 700 kW-dc rated capacity. Note that larger systems, of up to 2 MW-dc for PV installations are eligible to participate – in accordance with New Jersey net metering regulations and based on expected annual output being less than on-site consumption, but incentives are only offered for the first 700 kW-dc of rated capacity.

Incentives for non-solar installations are available to support up to 1 MW-dc of rated capacity. Eligible systems cannot be sized to produce *more* than 100% of the historical or expected amount of electricity consumed at the site of installation.

Residential rebates are limited to 10 kW-dc of rated capacity. An exemption to this limit is available for farms and non-profit organizations (including houses of worship) on residential electric rates. To be eligible for this exemption, farms must submit tax forms demonstrating that they spend \$1200 or more on electricity; churches and non-profits must submit 501c-3 forms. Multi-family residential installations are not subject to the 10 kW-dc cap, but must be sized so that total output is less than annual site consumption, and each individual array is sized to procure no more than the annual electric consumption at the meter to which it is connected.

For new construction and additions, or any other applications where one full year of electricity consumption cannot be documented, the CORE Program Manager shall have the discretion of estimating annual consumption based upon applicant submission of a list of onsite loads with expected annual operating hours, building use, and square footage data. The CORE Program Manager shall determine whether the documentation supplied justifies the system size proposed considering all other CORE application requirements and limitations. See Section 4Aii for further calculation information.

Installation Requirements

All systems must be installed in accordance with manufacturer specifications and the provisions of the National Electrical Code. System installation must match the

information submitted with the final project documentation and meet all applicable local, state, and federal codes.

Warranties

Eligible 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.

Certification that Systems are to remain in New Jersey

A completed application package must include a signed certification from the applicant stating that if the rebated equipment is sold or transferred outside of New Jersey with 10 years of the rebate payment date, the applicant is required to repay a pro-rated share of the rebate amount.

Program And Rebate Delivery

A number of factors, including current market prices, program budgets, electricity costs, and the availability of other incentives (including federal tax credits) contribute to overall system economics, and therefore influence program rebate levels. The objectives of the CORE Program are to support the sustained and orderly development of a vibrant renewable energy industry in New Jersey.

CORE rebates are not intended to cover the entire system cost. Rather, they are intended to reduce installation costs of a renewable energy system to enable cost-effective investments for as wide an array of ratepayers as possible. Rebate levels are calculated on a per-site basis and are dictated by the type of applicant, type of equipment, and the size of the system installed.

Basic Solar Rebate Calculations

This section provides information on the current program rebate levels and examples of rebate calculations. Depending upon the specific project, the following factors are used to determine the proper rebate calculation:

1. System type

2. System size
3. Whether the applicant is a private or public/non-profit entity
4. Whether tax-advantaged financing is used for the project
5. Whether the system is “self installed”
6. Past participation (annual and aggregate)
7. Public school district annual aid limits
8. Use of major components manufactured in New Jersey

To provide a specific example, the CORE rebates currently available for solar electric applications are listed in the table below. These rebate levels became effective September 1, 2007. (Older rebate schedules are available on the CEP website: www.njcep.com)

All examples reference system sizes in DC capacity.

CORE Rebate Schedule - Effective September 1, 2007

	Column A: Private Sector Solar PV Applications	Column B: Public and Non-profit Sector Solar PV Applications
0 to 10,000 watts	\$3.80 per watt	\$4.40 per watt
10,001 to 40,000 watts	\$2.75 per watt	\$3.45 per watt
40,001 to 100,000 watts	\$2.50 per watt	\$2.80 per watt
100,001 to 500,000 watts	\$2.25 per watt	\$2.60 per watt
500,001 to 700,000 watts	\$2.00 per watt	\$2.05 per watt

Two examples of the basic solar rebate calculation are provided below.

Example #1: A home-owner wants to install a 4,000 watt system at his residence. To calculate the rebate, use column A in the table above for Private Sector installations. The system is below 10,000 Watts, so the calculation is simply:

# of Watts	X	\$/Watt	=	Total Rebate
4,000	X	\$3.80	=	\$15,200

Example #2: A business owner wants to install a 45,000 watt system at her retail store. Use column A in the rebate table for Private Sector installations. Since the system size is over 40,000 Watts, the rebate calculation requires three steps, one for each size category: 0 to 10,000; 10,001 to 40,000; and 40,001 to 100,000. The first 10,000 watts receive \$3.80 per watt. The next 30,000 watts (between 10,001 and 40,000 watts) receive \$2.75 per watt. The last 5,000 watts fall in the 40,001 to 100,000 watt category, and so receive \$2.50 per watt. The sum of each of these steps yields the total rebate amount.

# of Watts	X	\$/Watt	=	Rebate
10,000	X	\$3.80	=	\$38,000
30,000	X	\$2.75	=	\$82,500
5,000	X	\$2.50	=	\$12,500

Total Rebate				\$133,000
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If either project were installed at a location owned by a public or non-profit entity, use column B in the rebate table for all steps of the rebate calculation.

As indicated in the rebate table, there are two different sets of incentive levels, one for private entities and one for public/non-profit entities. An entity's private or public/non-profit status is determined according to tax filing status and must be communicated during the application process.

Rebates for self-installed systems (as defined in Section 2C) are reduced by 15% of the total rebate as calculated according to all other program rules. This reduction is intended to offset the lower costs likely to be associated with self-installed systems.

Non-Solar Rebates

The following table indicates the CORE rebate levels for non-solar projects. The rebates for these projects are the same for private and public/non-profit entities. Other program guidelines and procedures, such as entity caps, and requirements for systems installed at the same site, do apply to non-solar projects.

New Jersey Clean Energy Program Non-Solar Rebates

Wind, Fuel Cell and Sustainable Biomass Systems	
Systems Up to 10 kW	
Watts	Rebate Level
1-10,000 watts	\$5.00/watt
Maximum rebate as percentage of eligible system costs	60%
Systems Greater than 10 kW	
Watts	Rebate Level
1 – 10,000 watts	\$3.00/watt
10,001 to 100,000 watts	\$2.00/watt
100,001 to 500,000 watts	\$1.50/watt
500,000 watts, up to 1,000,000 watts	\$0.15/watt

Maximum rebate as percentage of eligible system costs	30%
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Past Participation: Calculations for Systems Installed at the Same Site

Rebate levels are calculated on a per-site basis. The definition of a site for the purposes of rebate eligibility and calculation is a parcel of real property including any adjacent or contiguous property under common ownership. A rebate request for multiple systems to be installed on one site - under common ownership - regardless of the number of meters, should be contained in one application, and the rebate commitment should be calculated as if it is one system in aggregate.

CORE rebates are calculated incrementally based upon the size of a system. All phases of system installation will be considered as a whole system and subject to per-site limits. Any additional output capacity added to that same system or site will be considered an extension of the previously existing system or capacity.

Should an applicant wish to install a system in phases or to install subsequent systems on one site, rebate calculations will be calculated including consideration of previously installed capacities. The dollar-per-watt allocation will apply according to the system-size requirements of the current rebate levels and the appropriate capacity tiers.

For example, if a site has been previously given a rebate for a 9 kW solar electric system and its owner wishes to add another 9 kW to the site, 1 kW of the new system will be calculated in the first rebate tier (0 to 10 kW), and the remaining 8 kW will be calculated according to the next funding tier (10,001 to 40,000 Watts).

To expand an already existing system, an applicant must submit a new application, technical worksheet, and other required application documents for the additional system phase. The applicant must indicate on the application form that a previously rebated system already exists at the same site. If an applicant fails to notify the CORE Program Manager of a pre-existing system at the site of installation, the rebate may be denied and/or adjusted.

Expansions to systems are subject to the same size caps as other CORE Program installations. Therefore, the total expected output of the expanded system cannot be greater than the sites annual electric consumption. Also, any expansion for a residential system is limited to a total (original plus expanded capacity) of 10 kW of installed capacity.

Past Participation: Rebate Limits per Entity

To ensure that the CORE Program achieves its goals as equitably and efficiently as possible, the New Jersey Board of Public Utilities has established maximum per-entity annual rebate caps. The table below defines entities, gives examples, and describes their caps (public K-12 schools have their own caps and are discussed below).

	Public	Private
Definition of entity	Distinct and separate budgetary authority	Corporate parent or holding company – includes all related subsidiaries and affiliates regardless of separate EIN numbers or locations within New Jersey
Examples	<ul style="list-style-type: none"> • New Jersey state entities: New Jersey has 18 departments comprising 57 agencies.¹ For CORE purposes, departments are considered distinct budget entities • US Government: The US government has 15 departments and 56 agencies². For CORE purposes, all departments and agencies are considered distinct budget entities • Municipalities • Public colleges and universities 	<ul style="list-style-type: none"> • Corporation or holding company composed of several subsidiaries. Examples: <ul style="list-style-type: none"> • Wal-Mart and Sheraton have many stores and hotels. The entity cap should apply to the corporation overall, not at a store level. • Federated Department stores is the parent of Bloomingdale's and Macy's. The cap applies to the Federated parent. • Non-profit organizations • Private residences • Private schools (including parochial schools, colleges, and universities)
Annual rebate cap (\$M/yr)	\$2.5 million over 12 months	\$5.0 million over 12 months
Aggregate rebate cap	\$5 million over 2 years	\$20 million over 4 years

Additional details

- **Entity Cap “year”** – The CORE Program uses a rolling 12-month period (or “anniversary” basis) for tracking entity cap limits. Once the entity cap limit for applications has been reached, the earliest an entity may apply for subsequent rebate funding is 12 calendar months from the last application.
- **Public school district cap** – Public school districts are considered distinct entities subject to a different per-entity rebate cap. The maximum annual CORE rebate commitment is adjusted for public school districts to allocate CORE funds to districts with the greatest need. The tables necessary to calculate a school

¹ See <http://nj.gov/nj/deptserv.html>

² See http://bensguide.gpo.gov/files/gov_chart.pdf

incentive are included with the Customer On-Site Renewable Energy Program
Public School Application Addendum

(http://www.njcep.com/media/2005School_Application_Form.pdf)

The calculations of a public school district's maximum annual CORE rebate are based on the Comprehensive Educational Improvement and Financing Act (CEIFA) of 1996 and enrollment.³ Enrollment of 10,000 or more students and more than 75% of EEIFA aid enables a district to be eligible for \$2.5 million per year of program rebates.

- **Power purchase agreements** – The entity cap for a power purchase agreement applies to the host site, rather than to the project developer or financier.
- **Exemptions to entity caps** – In a 7/7/2005 Order, the BPU outlines conditions allowing for exemptions to the maximum funding amount per entity per year and in aggregate over the four-year funding level described above.

Conditions for which an exception may be considered include that the project site be located within a designated smart growth area and one or more of the following criteria:

- The project creates or retains jobs in New Jersey
- It assists in the expansion of economic growth for the entity
- It contributes to meeting a statewide or regional greenhouse gas commitment
- It provides case-specific substantive congestion mitigation of local electric distribution or regional transmission system
- It provides case-specific substantive tax relief benefits

To obtain an exception, the applicant must submit a detailed description to the CORE Program Manager explaining how and why the project meets the criteria listed above. After receiving a favorable review by the Program Manager and by the Clean Energy Council, the Office of Clean Energy would present the exemption to the Board for its consideration and final approval.

Rebate Enhancements

Additional rebate amounts are available to encourage applications that use solar modules assembled in New Jersey. Specifically, an additional \$0.25 per watt is available for projects using solar PV modules manufactured in New Jersey.

An additional \$.25 per watt rebate amount is also available for customers who

³ <http://www.haddonfieldnj.org/pdf/CEIFA.pdf>

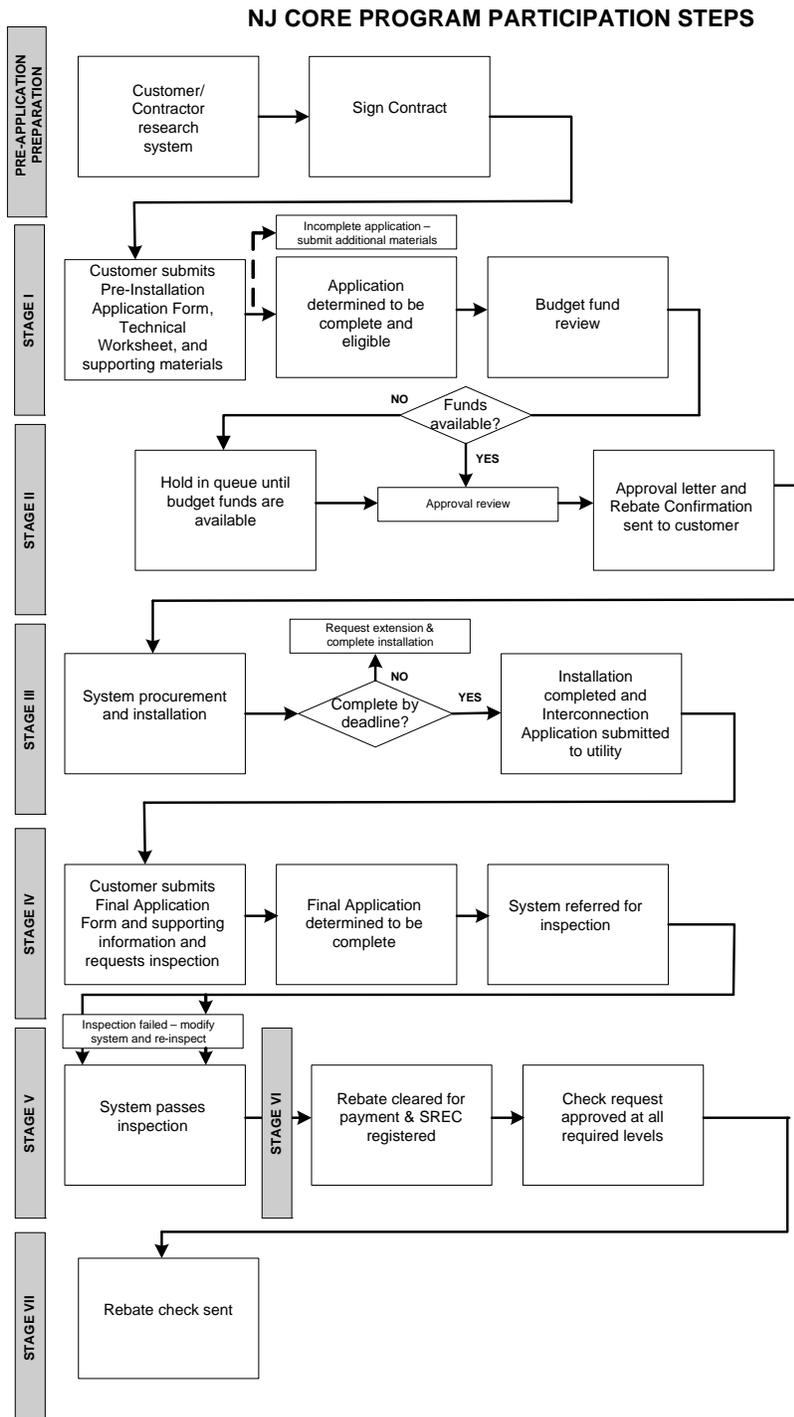
participate in both the CORE and the Home Performance with Energy Star (HPwES) For existing homes, qualification for the extra incentive will require a diagnostic audit on the customer's home, followed by the completion of all cost-effective efficiency upgrades. New homes built to Energy Star specifications will qualify for the extra solar incentive without an additional audit.

The extra incentive will be available only to current or potential CORE participants. Customers who have already received a CORE incentive, or who have installed systems and received a CORE inspection but not yet been paid, will not be eligible for the extra incentive.

Questions on eligibility and specific requirements for the enhanced rebates should be directed to the CORE Program Manager.

Rebate and Inspection Processes

The figure below summarizes the steps for participation in the CORE Program. This section provides details on each stage of the process.



Rebate Application Form and Requirements

Participants must submit a completed New Jersey Clean Energy Program CORE Rebate Application Form and all required supporting documents (listed below) to the CORE Program Manager.

Application Completion Requirements

To reserve a rebate for an onsite renewable energy generation system, a complete and accurate application must be submitted to the CORE Program Manager at:

**New Jersey Clean Energy Programs
Customer On-Site Renewable Program
c/o Conservation Services Group
75 Lincoln Highway, Suite 100
Iselin, NJ 08330**

All CORE applications must be mailed, preferably typewritten, and legible. Applications that are faxed or emailed will not be considered. Applications are time stamped and reviewed upon receipt. Any application that is illegible or found to be incomplete will be returned to the sender.

Complete initial applications must include all of the following documents:

1. Completed CORE Rebate Application
2. Completed CORE Technical Worksheet for applicable renewable technology
3. Site map (one page)
4. Information on the last 12 months' electric usage in kilowatt hours (either a copy of recent electric bill with yearly usage in kilowatt hours, or copies of all electric bills for the previous 12 months). If the system is to be connected to a newly constructed building (or a new addition to an existing building), then proper breakdown of expected usage, including lists of loads and the building's square footage, is required (see below for calculation process).
5. Proper signatures on all forms
6. Federal Tax I.D. Number
7. Warranty information for main system components
8. Home and daytime phone numbers of applicant
9. Signed certification that the applicant agrees to repay a pro-rated share of the rebate if the installed equipment is sold or transferred outside of New Jersey within 10 years of the rebate payment date (contact CORE Program Manager for standard format)
10. Copy of signed contract between customer and installer.

Electric Load Estimates for New Construction Projects

Applications for new construction projects must include a detailed list of estimated electricity consuming loads at the site of system installation. This should include a breakdown showing expected annual consumption derived from appliance volts × amps = watts × expected annual operating hours. If this documentation cannot be supplied, as may be particularly true for residential applications, a default standard maximum capacity size that references the square footage of the residence can be used: less than 2500 square ft. of habitable dwelling will be limited to a maximum of 5kW; 2501-5000 square ft. will be limited to a maximum of 7.5 kW; and over 5000 square ft. will be capped by the 10 kW residential cap. Estimated electricity consumption should be based on the square footage of the entire building for new construction of building additions. Applicants must also demonstrate that the new construction is within the service territory of a public electric or gas utility. At the time of funding approval, utility consumption history for new construction projects that have been completed will be requested.

Contract Requirements

The requirements for Contracts vary according to customer type and project financing.

- a. For ALL private sector applicants and all public entity applications for systems less than 10kW in size, a copy of the signed contract between the customer and installer **must be included** with the initial application package.
- b. For public entity applications greater than 10 kW, a copy of a Public Resolution to Solicit Bids **must be included** with the initial application package. A signed contract between the customer and installer is due to the CORE Program Manager within 180 days of approval date.

All contracts must include a complete breakdown of costs including, but not limited to: installation costs, customer cost, and estimated CORE rebate. Contract language must also indicate that incentive levels may change in the future, and that final contract terms may need to be adjusted to reflect any such changes.

Contracts Containing Vendor Payments over Time

Project financing structures such as “Lend/lease”, “extended payment terms”, “installment purchases”, and similar mechanisms that reduce the up front payments due from the customer at the time of installation, or any other contractual arrangement that leaves no evidence of payment of the balance due (after rebate) by the customer, must comply with the following processes:

- a) The installer must submit a final invoice with the final rebate application showing the balance due under the payment term contract
- b) The vendor must provide the applicant a formal contract that specifies all terms of payment post-installation.

c) Such contracts must conform to consumer fraud law in NJ.

Program Budget Categories

The following table lists the budget categories used in the CORE Program. New reservation approvals are counted against the appropriate budget category. The amount of funds available in each of the budget categories is determined by BPU action which may include taking into consideration funds carried forward from previous years, outstanding commitments, and project completions. The Program Manager will calculate the amount remaining in each Board approved budget category based on reconciliation of program accounts with the Office of Clean Energy, and then track all project activities towards the appropriate budget category. All budget category system size references are based on kw-dc.

<u>Budget Category Name</u>	<u>Projects Assigned to this Budget Category</u>
Private: Less than 10 kW	All private projects less than or equal to 10 kW of rated capacity. This category includes all single-family residential projects. Any public project that uses tax-advantaged financing is also assigned to the appropriate private rebate category (depending on size). Non-profit organizations, which are eligible for the public/non-profit rebate levels, are also charged against the appropriate private budget category.
Private: Greater than 10 kW	All private projects greater than 10 kW of rated capacity. This category includes some residential projects that were given approval letters before the residential 10kW limit was established. Any public project that uses tax-advantaged financing is also assigned to the appropriate private rebate category (depending on size). Non-profit organizations, which are eligible for the public/non profit rebate levels, are also charged against the appropriate private budget category.
Public: Other	This category includes municipalities, public colleges and universities, and other government installations regardless of project size.
Public: Schools K-12	Includes any public school (K-12) regardless of project size.
SUNLIT	Includes projects forwarded to the program by the New Jersey Housing and Mortgage Finance Agency regardless of project size.

Reservation Queue Process and Procedures

Rebate approvals are released as funds are available in each of the categories listed above. Several factors influence the current availability of funds for new rebate reservations, including:

- Total budget approved (by the New Jersey Board of Public Utilities) for renewable energy rebates across all programs and resources
- Approved (by BPU) annual program rebate budget – including carry-forward from previous year budgets
- Allocation (by BPU) of available rebate funds between project classes (e.g., Private: Less than 10 kW and Private: Greater than 10 kW)
- Type of renewable technology
- Total applications by budget category received by the program
- Cancellation or expiration of projects with existing rebate commitments

Due to levels of participation that have exceeded annual program budgets, the CORE Program has established a queue system to allow new applications for solar electric systems to be received and proceed through initial review and processing at times when immediate funding approval for the new application is not available.

Applications are time stamped upon receipt and reviewed in order of receipt. Acknowledgment that an application has been received and determined to be complete will be sent by email to the customer. When necessary, projects are assigned a queue number, based upon the date that the application package is determined to be complete. If an application is deemed to be incomplete, an electronic notice and phone call will be made to the installer informing them of the missing information. Once all missing material is received, the application will again be time stamped and reviewed for completeness in appropriate order.

The most recent updates to the CORE rebate commitment queues are available on the njcep.com web site.

The CORE Program Manager makes new funding commitments, and sends funding approval letters, based on final review of project applications and available program funds within each budget category.

In order to encourage greater development of non-solar market activity in the CORE program, applications for the following types of project are moved to the front of the funding commitment queues:

- Wind Projects
- Sustainable Biomass Projects
- Fuel Cell Projects

The applications for these projects are reviewed in the order received. Once they are deemed complete, they are processed for rebate approval, and assigned to the appropriate budget category and placed at the top of the queue list for the round of funding approvals.

Rebate Reservation Approvals

The CORE Program Manager issues funding Approval Letters to the customer and installer and, if different from customer or installer, the assigned rebate recipient. The approval letter includes the rebate commitment amount, the approval date, the length of commitment, expiration date, and the Rebate Confirmation and Final Application Form (to be submitted at completion).

The Approval Letter represents the Program's commitment of funds for the project as specified on the application. This commitment is limited to the completion of the project, in compliance with all Program processes and procedures, and the submission of a complete Rebate Confirmation and Final Application Form on or before the expiration date as designated in the Approval Letter.

The CORE Program Manager will not issue rebate approval letters that could result in commitments exceeding the Board approved budget in any budget category.

1Ai) Reservation Commitment Periods and Extensions

The reservation approval procedures and installation deadlines are designed to strike a balance between the need for rigorous and efficient program administration, including the need to strongly discourage speculative project applications 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 describes the processes for completion deadlines and extensions for all CORE applications. In all cases, rebate reservation periods begin with the date of the CORE rebate reservation Approval Letter.

For **ALL projects under 10KW-dc** in size:

- Projects will be given 9 calendar months to complete, as measured from the date on the Approval Letter to the date the final rebate application is received by the Program Manager.
- No extensions will be granted, but projects may reapply under rebate levels in force at the time of reapplication.

For all **Private projects over 10KW-dc** in size:

- Projects will be given 12 calendar months to complete, as measured from the date on the Approval letter to the date the final rebate application is received by the Program Manager.
- If the project cannot complete within the initial 12-month period, the customer/contractor may apply for an extension. Extension requests must be received before 5:00 PM on the expiration date of the initial rebate commitment, and must include detailed documentation regarding the reasons for the delay. Progressive documentation of project issues to the Program Manager as they occur throughout the project will significantly improve the case for a project extension.
- The Program Manager will consider extensions in cases where significant progress has been made toward completion of the project, and where the delay was unavoidable and unforeseeable at the time of the rebate application. Approval of any extension will depend on the totality of circumstances related to reasonable progress toward each of the items listed below and the reason why the delay was unavoidable and unforeseeable as demonstrated through documentation provided with the extension request.
 - a. Physical construction has started at the customer's site, which means that: a) construction permits have been granted (where applicable); b) project are materials either onsite or in storage; and c) installation work has started
 - b. Irrevocable orders have been placed with the manufacturers of the major items of equipment (PV modules and inverters)
 - c. Construction permits have been approved by the authority having jurisdiction (where applicable)
 - d. Engineering and design work has been started and progressed to a significant degree
 - e. Material and/or equipment have been received from the manufacturer, and are either onsite or in storage

If granted, the extension will be for 6 calendar months; no 2nd extensions are permitted.

For all **Public (School, State, County, and Municipal) projects over 10KW** in size:

- Projects will be given 12 calendar months to complete, as measured from the date on the Approval Letter to the date the final rebate application is received by the Program Manager.
- If the project cannot complete within the initial 12-month period, the customer/contractor may apply for an extension. Extension applications must be received before 5 PM on the expiration date of the initial rebate commitment, and must include detailed documentation regarding the reasons for the delay.

Progressive documentation of project issues to the Program Manager as they occur throughout the project will significantly improve the case for a project extension.

- The Program Manager will grant extensions using the same approval processes established above for Private sector projects over 10KW, with additional consideration for documentation of procurement (i.e., customer contracting) and/or related litigation delays. Documented evidence of contracting and/or litigation delays will be strongly considered in the extension approval.
- If granted, the extension will be for 12 calendar months.
- After the expiration of the extension, a further extension may be granted only in cases where litigation related to public entity contract award can be documented. If granted, the further extension will be for 6 months; no further extensions are permitted.

Project Cancellations

The CORE Program team should be promptly notified of projects that are in the queue, or have been approved, and have been cancelled by the project owner. This will enable these funds to be released to support other projects.

In order for a project to be considered cancelled, the CORE Program Manager must receive an email or signed letter from the project owner indicating that the project is cancelled.

If the CORE Program team is given verbal indication that a project is cancelled, but does not receive written confirmation, the CORE Program team will prompt the project owner with an email, followed by a phone call requesting a written confirmation of project cancellation. If no response is received from the customer, a certified letter will be sent giving the customer 15 calendar days to provide written notification. If no response is received, then the CORE Program Manager will cancel the project.

Project Expiration Procedures

The CORE Program Account Manager monitors project expiration dates. If the CORE project office has not received the final rebate application or a request for extension by one month before the expiration date, the Account Manager will send an email notice to the customer reminding them of the deadline. If the expiration date passes, the Account Manager and Program Manager will send an expiration letter via certified mail to the applicant and the installer. Funds will be returned to the appropriate budget category for use in funding new approvals.

Rebate Confirmation and Final Application Form

Once the Approval Letter is received, project installation can begin. Before submitting the Rebate Confirmation and Final Application Form, the following activities must be completed:

1. Project installation complete
2. Utility Interconnection Application Completed and submitted
3. Successful completion of a local code inspection and submission of the UCC certificate (see Code Inspection details in following section)

Once these steps have been completed, the applicant can submit the Rebate Confirmation and Final Application Form. This form, with all required paperwork, must be submitted and time stamped by the Program Manager before 5 PM on the expiration date indicated on the Approval Letter (see preceding section for more details on commitment periods and extensions). These documents should be mailed to the Program Manager at:

**New Jersey Clean Energy Programs
Customer On-Site Renewable Program
c/o Conservation Services Group
75 Lincoln Highway
Iselin, New Jersey 08830**

Status of final system completion must be certified by submission of the ALL of the following documents to the CORE Program Manager:

1. A completed New Jersey Clean Energy Program Final Application (sent to applicant with the Approval Letter)
2. A copy of the original (and revised if applicable) Rebate Application Form and/or Technical Worksheet
3. A copy of the signed Electrical Code Inspection (“UCC”) Certificate
4. A copy of the complete utility Interconnection Agreement

Once these materials are received, reviewed, and deemed complete, a program inspection will be scheduled. Rebate payments will not be released until the system has passed final program inspection.

System as Installed Differs from Documentation in Approved Application

We expect that system design and initial applications will in general reflect the system as it is installed. The CORE Program Manager recognizes that changes to the system components, system size, and rebate recipient are occasionally necessary after rebate

approval has been received. To accommodate necessary changes, the Program Manager will consider reasonable amendments to previously approved applications.

Additional incentive funds will not be awarded to systems that are of a greater size than proposed on the approved application; changes to the system design that were beyond the control of the customer and installer may be reviewed for consideration up to a maximum increase of 5% of the original system approved. Systems that are installed at a smaller size than indicated in the initial application will have their rebate decreased accordingly.

Interconnection and Inspections

Completed systems installed with CORE Program funding require three independent review and approval processes:

1. The interconnecting electric utility must receive and approve an Interconnection Application. A copy of the signed Interconnection Application must be provided to the CORE Program as a condition of scheduling the CORE Program final inspection.
2. Local code officials must review and approve the system. A copy of the local electrical code inspection certificate (UCC certificate), indicating approval of the system as installed, must be provided to the CORE Program as a condition of scheduling the CORE Program final inspection.
3. A CORE Program final inspection must be scheduled and the system approved.

The installer shall make professional efforts to design and install each renewable energy generating system according to all applicable codes, standards, and CORE Program requirements. The installer shall bear responsibility for identifying and obtaining all relevant local, state, and federal permits for the system. Upon completion, the installer shall obtain all relevant inspections and approvals from the local jurisdictions and local electric utilities.

Utility Interconnection

All applicants for completed systems must submit an Interconnection Application directly to the appropriate electric utility company. Interconnection applications are subject to review by the electric utility company and must comply with all utility interconnection requirements.

To ensure that a proposed renewable energy system is eligible for interconnection and net metering, all CORE rebate applicants are encouraged to contact their local utilities *prior* to submitting a rebate application to the CORE Program Manager.

A copy of the signed Interconnection Application must be provided to the CORE Program as a condition of scheduling the CORE Program final inspection.

Other Required Inspections

It is the installer's responsibility to identify all applicable permits required for any proposed 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. All applicable permitting authorities must review and approve the system.

For grid-connected systems, a copy of the local electrical code inspection certificate, indicating approval of the system as installed, must be provided to the CORE Program as a condition of scheduling the CORE Program inspection.

CORE Program Inspections

In addition to the approvals listed above, eligible systems must pass an inspection conducted by the CORE Program Inspector prior to issuance of a rebate payment. If a system deficiency is found, the installer must correct the problem and request a re-inspection.

Targets for CORE Program Inspections

In general the goals of CORE Program inspections are as follows:

- Ensure best design and installation practices are followed
- Ensure systems meet the minimum requirements of the CORE Program
- Verify consistency of installed systems with specifications provided to the CORE Program via rebate application forms

CORE Program Inspection Responsibilities

This section lists fundamental program responsibilities that must be verified during field inspections. In general, these responsibilities are not defined in program literature, but are necessary to program function and are unlikely to be challenged.

1. *Verify that equipment (module and inverter, manufacturer, model, and quantity) qualifies for participation in the program and is as specified on the inspection work order form.*

This function ensures the program collects accurate data regarding fielded equipment and that rebates are properly calculated. The inspection work order form prompts inspectors to verify these items.

2. *Verify tilt, orientation, and shading on each array.*

This function ensures the program collects accurate data relevant to estimating system production, a function performed by the SREC Administrator, and for verifying compliance with minimum design standards (see B.3. below).

3. *If necessary, analyze expected performance using PVWATTS or, when shading is a factor, with Solar Pathfinder and Solar Pathfinder Assistant software.*

This function ensures the program collects accurate data relevant to estimating system production, a function performed by the SREC Administrator, and for verifying compliance with minimum design standards (see B.3. below).

4. *Verify system operates properly.*

If the system is not running, the inspector shall turn it on to verify proper operation considering the availability of sunlight at the time of the inspection. Systems that are locked and cannot be turned on would fail. This brings up the necessity of communicating with installers and/or customers during scheduling the need to be able to turn on the system, and of installers' and/or customers' responsibility to provide access during the inspection.

Additional Installation Requirements

This section lists applicable program requirements derived from current and past published program rules, processes, application forms, and other sources.

The requirements listed below are derived from the Installation Requirements section of the Solar Technical Worksheet.

Equipment installation must meet the following minimum requirements in order to qualify for payment under the provisions of the New Jersey Clean Energy Program; proposed changes to the requirements will be considered, but they must be documented by the Applicant or Installation Contractor and approved by the BPU. These requirements are not all-encompassing and are intended only to address certain minimum safety and efficiency standards.

A. 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 system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

2. *All required permits must be properly obtained and posted.*

Information on the local electrical inspection should already be in the file in order for the site to have been scheduled for inspection. If a local inspection sticker can be found and matched to the solar installation job in question, the CORE inspector's

responsibility is to document and/or verify information on the local inspection sticker matches that which is printed out on the inspection work order form, noting and correcting any differences. If no inspection sticker is found, or if the sticker cannot be matched with certainty to the solar installation job in question, program inspectors are to simply write “NA” on the work order form. Other permits that 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 system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction’s UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports. 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.

B. 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. NJCEP program inspectors will review installations against manufacturer’s instructions. Exceptions to these instructions will be noted and will constitute grounds for failure of the program inspection.

2. *The maximum amount of sunlight available year-round on a daily basis should not be obstructed. All applications 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 the New Jersey Clean Power Estimator on the program website www.njcep.com.*

This should be reviewed upon initial application, and the relevant documentation should be supplied to the inspector with the work order form. In the event the supplied impact analysis is found to have left out materially significant information, the inspector may fail a job pending submission of a more accurate impact analysis.

3. *In order to qualify for program incentives, the solar electric system must adhere to a minimum design threshold, relative to the estimated system production using PVWATTS.*

Solar electric array orientations require that the calculated system output must be at least 80% of the default output calculated by PVWATTS. Additionally, all individual series strings of modules output must be at least 70% of the default output calculated by PVWATTS.

For building-integrated solar electric systems (i.e., part of the building envelope materials includes solar electric components), the estimated system output must be 40% of the default output estimated by PVWATTS.

Inspectors will measure and record array tilt, orientation, and shading. Shading and its effect on annual system output will be analyzed with a Solar Pathfinder and the Solar Pathfinder Assistant software or Solemetrics Sun Eye, using an average of readings taken from the lower corners of the array, and the combined effect shall not reduce annual output to less than the defined percentage of the default for an optimally tilted and oriented system, as calculated by PVWATTS.

Current program processes applying to applications filed on or after April 7, 2006, are subject to the 80% system/70% string threshold stated above; applications received prior to that date are subject to a 75% system/70% string threshold. Building-integrated PV systems are subject to the 40% system threshold.

4. *System wiring must be installed in accordance with the provisions of the NEC.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

5. *All modules installed in a series string must be installed in the same plane.*

Program inspectors will consider variation of less than or equal to 10 degrees in tilt and orientation to be acceptable.

C. 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. Program inspectors interpret this to include a review of the system design using the inverter manufacturer's string sizing calculator, if provided.

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.

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, ETC, CSA, and TUL, and program inspectors will recognize any of these certifications on an inverter. Inspectors will also look for and confirm the term “utility interactive” on the product label starting in 2008.

- 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.*

Program inspectors will 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. Program inspectors will 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.*

Program inspectors 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, program inspectors will accept any revenue-grade PV-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.

D. CONTROL PANEL TO SOLAR ELECTRIC ARRAY WIRE RUNS

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

Program inspectors will enforce this program requirement at any point of penetration.

2. *All interconnecting wires must be copper. (Some provisions may be made for aluminum wiring; approval must be received from utility engineering departments prior to acceptance.)*

Program inspectors will verify copper interconnection wires where the PV system interconnects with copper utility service wires. When other materials are observed, program inspectors will check for an approval from the utility for any other material.

3. *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 sealed and gasketed.*

Program inspectors will enforce this program requirement at any point of penetration.

4. *Wiring connections must be properly made, insulated, and weather-protected.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

5. *All wiring must be attached to the system components by the use of strain relief or cable clamps, unless enclosed in conduit.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

6. *All outside wiring must be rated for wet conditions and/or encased in liquid-tight conduit.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will

continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

7. *Insulation on any wiring located in areas with potential high ambient temperature must be rated at 90° C or higher.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

8. *All wiring splices must be contained in UL-approved workboxes.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

E. 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. NJCEP program inspectors will review installations against manufacturer's instructions. Exceptions to these instructions will be noted and will constitute grounds for failure of the program inspection.

2. *Battery terminals must be adequately protected from accidental contact.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

3. *DC-rated over-current protection must be provided in accordance with the provisions of the NEC.*

The system must have passed local electrical inspection and we accept as evidence of passing the submittal of the local jurisdiction's UCC certification, which normally will have been received prior to scheduling the inspection. Program inspectors will continue to review NEC requirements during inspections and will communicate possible exceptions to installers and/or customers on inspection reports.

Relationship of CORE Program Inspections to Local Electrical Inspections

Although there often may be overlap in the contents of inspections, the CORE Program renewable inspectors do not replace the role of local code officials (such as electrical or building inspectors), and their determinations do not supersede those of local code officials. There may be instances in which a renewable energy system that has been accepted by the local code official is not accepted by the CORE Program inspector. In these cases, the CORE Program inspector's determination affects only the system's status in the CORE program application process.

The CORE program intends to work with local code officials and the contractor community by providing resources and training to ensure the safety of all renewable energy generating systems installed under the program.

Requesting a CORE Program Inspection

It shall be the responsibility of the installer to notify the CORE Program Manager when the system is ready for inspection. CORE Program inspections can be requested by installers only when the installer can attest that each of the following requirements has been met:

- The Rebate Confirmation and Final Application form has been filed
- The system is complete and operational
- The system has passed the local electrical inspection, and evidence of passage is either:
 - Provided to the CORE Program Manager along with the final inspection request; or
 - Is available onsite

In addition the installer will be required to provide the BPU # of the relevant application and the identification of person making the inspection request.

All communications regarding CORE Program inspections, including requests to schedule inspections and questions regarding inspection results, should be directed to:

By Email: NJCEPinspections@csgroup.com
By Phone: (732) 218-3412

Inspection Timeliness

Within 5 days of receiving an inspection request, the CORE Program will attempt to contact the system owner to schedule and complete a renewable inspection. All inspections will be scheduled with the owner, the installer will be notified when an inspection is scheduled. The aim is to schedule and complete all inspections within 10 business days after successfully contacting the customer.

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:

- Inspections of systems greater than 10 kW-dc
- Inspections which require special equipment beyond that normally carried by the inspectors (i.e., a 20-foot ladder) to safely access the array, roof, or other locations

If the installer is not present during the renewable inspection, he or she may run the risk of requiring a follow-up inspection the cost of which may be charged to the installer.

Repeat Inspections

The CORE Program provides two inspections performed by the CORE Program inspector at each site free of charge. Any further inspections of the same installation will be subject to a fee of \$400 per additional inspection to be subtracted from the total rebate sum.

Inspection Status

Within 10 days of performing an inspection an inspection status will be assigned. This status will be assigned as follows:

PASS – The system status in the CORE Program application process has passed inspection and the system will be submitted and reviewed for final check processing.

FAIL – The system status in the CORE Program application 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 10 day inspection status window the inspection status will reflect this).

Inspection Sampling

The CORE Program inspector reserves the right to require inspection before rebate payment for all installations.

Rebate Payment

After a project has passed final program inspection, it will be submitted and reviewed for final check request approval.

Assignment of Rebate Payment

Applicants designate their desired rebate recipient in Section B of the CORE Rebate Application Form. If an applicant wishes to change the rebate recipient after submitting the initial application, an amended and signed CORE Rebate Application Form should be submitted to the CORE Program Manager well in advance of requesting payment.

Dealings between installer, system owner, and a third party are solely the business of the involved parties. The CORE Program Manager requires a copy of the customer contract for verification purposes, but is not responsible for upholding contractual agreements between customers and vendors. Additionally, the Program Manager will only remit rebate payments to the party specified by the applicant in the CORE Rebate Application Form on file.

1Aii) Submission of data for SREC issuance

At the later date of a completed CORE Inspection, or the Interconnection activation date as provided by the local utility, the CORE Program team will submit system information, and initiate a process to acquire and provide an Attestation form, to the relevant SREC issuing authority.

1Aiii) Tax considerations

Applicants should consult a tax professional regarding the eligibility of their installation for federal tax credits, treatment of depreciation, and the taxability of program rebates.

Check Creation and Processing

Account Funding

The Market Manager has established a bank account for the purpose of issuing the NJCEP's incentive funds. This account is maintained as a distinct and separate account within Honeywell which will allow for better visibility of transactions. Honeywell utilizes Bank of America, including their highest levels of security for this account. The "positive pay process" through Bank of America interfaces with our own tracking systems (when utilized), as well as Honeywell's finance software, ACOM, which all contribute to the system's security.

Funding requests are initiated and submitted to OCE for records having passed all eligibility checks and awaiting incentive payments. The funding request, in the form of an invoice provides a subtotal of records and dollars for each program and a total dollar amount for that request. Each individual program segment is backed up by a report

supplying supporting detail appropriate to that program, containing the customers for which this request is being made, individual record detail, and the individual incentive due each customer. Some programs may also include other supporting documents as defined for those programs.

Upon review and approval of the request, OCE processes the payment electronically through Treasury. Funds are wired electronically into the Bank of America account for disbursement.

Incentive Payment Processing

Deposits into the Bank of America account are electronically recorded. Once funding is received and verified in the account, the check creation process is initiated.

Numerous fiscal controls are applied to the production and release of checks. The Market Manager employs a “head count” requirement, which requires that several different individuals must be involved in producing a check run. Release and return of check blanks will be formally passed through to the manager who is responsible for determining that all checks are accounted for. Pre-approval of check runs is necessary for the fiscal manager to determine how many checks to release and compare to the post check run upon completion. The fiscal manager and program managers cannot be check signatories, requiring an additional outside management individual to approve and release the automated signatory card and retrieve it afterwards. Other similar multiple personnel controls apply within the checking account reconciliation process, essentially creating a situation where many individuals have visibility within the account maintenance and funds disbursement processes.

Upon initiating the check production process the system produces a trial check report that is matched with the applications approved and waiting for payment from the original batch. Following this, the check printing process begins and the central system will transfer data for approved records to Honeywell's ACOM system.

The records from the batch file, now approved for payment, are passed through Honeywell's ACOM software for the purposes of assigning check numbers to each record, formatting the check print document with the account number and bar coding, and applying the appropriate program logo and messaging (check stubs contain a congratulatory message for participation in the program and the check itself includes the Clean Energy Program logo). This software also requires a secure signatory card to be installed in the printer before the checks are actually printed. This card is removed afterwards. The card stores critical data required to produce the check, such as the account number and authorizing signature. Without this card, critical information is not provided and viable checks cannot be printed. The checks blanks themselves employ several safeguards against duplication, and do not have the account/routing numbers, bar coding, logos etc. on them prior to printing. As such, it is impossible to produce the check without this secure card either within the system or manually outside the system.

Once a check is produced and before it is released, the system then automatically initiates the “Positive Pay” process through Bank of America. This is an additional control that electronically details the check number, payee and amount of the check from BCS to Bank of America’s system prior to the check being released. Checks submitted for payment at the bank cannot be cleared at the bank unless they are previously cited through positive pay.

Other CORE Program Processes

Dispute Resolution

Unresolved disputes hurt the success of the program. In this respect, the overriding objective of all the Team members is to achieve 100% customer satisfaction and to satisfactorily resolve any disputes.

Disputes, concerns or complaints that arise will be addressed initially by the Program Manager or Program Staff at the point of contact. Inquiries that can not be resolved at the Call Center level will be forwarded to the Program 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 Program 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 Program Manager shall be responsible to delegate or take action to resolve the issue within 2 business days. Disputes that cannot be resolved nor have future action agreed to by all parties during initial contact will be brought to the second level or Market Manager.

The Market Manager will be responsible to delegate or take action; resolving or escalating the issue within 2 business days. Status, actions and resolution will be communicated to and recorded by the Program Manager.

Disputes that cannot be resolved will be escalated to the third level, or Program Coordinator. The Program Coordinator will then be responsible to take or delegate action, resolving or escalating the issue to the appropriate contact at the OCE.

In cases where a legal action is taken or threatened, we will refer that directly to the OCE, with notification to the Market Manager and Program Coordinator. The Market Manager team will develop administrative processes to handle any class action lawsuits in accordance with DAG recommendations.

Appeal of Application Decisions to the Office of Clean Energy

The Office of Clean Energy expects the Market Manager team to fairly and effectively handle most complaints directly with the party raising the issue.

The Program Manager will document these complaints and resolve where clear direction is provided by CORE Program Guidelines as defined in this Operations Manual.

Where the customer appeal would require a potential change or modification to CORE Program Guidelines, the Program Manager will notify the Program Coordinator of the issue.

The Program Coordinator will review these materials and the situation with the CORE team and/or other members of the Market Manager team. After this review, and any necessary consultation with the OCE, the Program Coordinator will work with the Program Manager to send a communication explaining the OCE's decision to the party raising the issue and to the Market Manager Team.

Further appeals to the Board of Public Utilities

After following the complaint and appeals process outlined above a party can submit further appeals directly to the New Jersey Board of Public Utilities, following the Board's standard requirements and procedures for public appeals and complaints.

Disclaimers

Any questions on the Operations Manual, web site content, or Program Processes and Procedures should be directed to the CORE Program Manger.

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

Tracking And Reporting

Reporting

On a weekly basis, the Market Manager will provide lists of queues by budget category. This report will also include a year to date Budget Report, which lists the following information by budget category:

- total budget approved
- total amounts paid
- outstanding rebate commitments
- uncommitted funds
- rebate dollars in queue
- amount remaining after queue and commitments

On a monthly basis at Renewable Energy Committee (“REC”) meetings the CORE Program Manager will produce reports that include monthly trends in activity including approvals, new applications, deactivations and complete projects. These reports will be supplemented with the latest budget report.

Budget Tracking

The Market Manager Lead will track year to date program expenses and commitments against the overall annual program budget each month in the following categories:

- Total
- Administration and Program Development
- Sales, Call Centers, Marketing and Website
- Training
- Rebates, Grants, and Other Direct Incentives
- Rebate Processing, Inspections and Other Quality Control
- Performance Incentives
- Evaluation and Related Research

This tracking will be maintained for the month to date actual activity as well as the year to date activity and will expressed as a percentage of the year to date budget and the annual budget. As any budget category exceeds 75% of annual budget, the Market Manager Lead will notify the OCE Program Coordinator accordingly. Based on present program activity, planned promotions, historic seasonal trends, and time left in the budget year, it will be determined if there is reasonable concern for the program to exceed budget before year end. The Market Manager Lead will notify the OCE in writing of any budget categories that may be exceeded. This notification will include recommendations to the OCE regarding continued program operation and funding recommendations. Shifts in budget dollars will be recommended in the following order:

- Within the Program from one category to another (example: From RNC Marketing to RNC Training).
- Between Programs (example: From HVAC Marketing to RNC Training).

It is understood that some of these recommendation may require BPU approval. In the event that additional funding for a particular budget category is not approved, the Market Manager will develop a shutdown plan for that particular budget item which may include cessation of program activity. Budget categories that present the potential for run-over include:

- Totals,
- Rebates, Grants, and Other Direct Incentives,
- Rebate Processing, Inspections and Other Quality Control.

Appendix

All current CORE forms are maintained at the New Jersey Clean Energy website, located at: <http://www.njcleanenergy.com/renewable-energy/programs/core-rebate-program/application-and-e-forms/applications-and-e-forms>

Key online forms include supporting CORE rebate applications include:

- Rebate Application form
- Technical Worksheets
 - Wind
 - Solar
- 10 year certification document

Also on the New Jersey Clean Energy website is the key budget and queue reports which are posted weekly.