



**New Jersey's Clean Energy Program™**

**Honeywell's  
Residential Energy Efficiency and  
Renewable Energy Program Plan Filing  
For Fiscal Year 2015**

**(7/1/2014 through 6/30/2015)**

**September 17, 2014**

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## **New Jersey's Clean Energy Program™**

# **Honeywell's Residential Energy Efficiency and Renewable Energy Program Plan for FY2015**

### **Introduction**

This Program Plan provides program descriptions, goals, marketing plans, and budgets for the four residential energy efficiency and two renewable energy programs offered by New Jersey's Clean Energy Program (NJCEP) and to be managed by Honeywell in FY 2015:

#### Residential Energy Efficiency Programs

- Residential New Construction (New Jersey ENERGY STAR® Homes) Program
- Residential Gas & Electric HVAC (COOL and WARMAdvantage) Program
- Energy Efficient Products Program
- Existing Homes Program (Home Performance with ENERGY STAR®)

#### Renewable Energy Programs

- Renewable Energy Incentive Program (REIP)
- Solar Renewable Energy Certificate (SREC) Registration Program

The following Program Plans begin with narrative descriptions of each program, including the overall strategy, key activities, and program goals expressed as energy savings. Each program has been evaluated by the Honeywell Market Manager team for effectiveness, market impact, and overall success. In this compliance filing, Honeywell is recommending program adjustments that balance the need for market and participant continuity with national trends and cost efficient energy efficiency.

The energy efficiency program plans presented here for FY2015 represent offerings which together will:

- Result in energy savings of 1,903,157 MWh and 10,817,194 Dtherms over the lifetime of the measures employed.
- Continue the transition to upstream incentives versus direct to consumer incentives as related to appliance and equipment based programs.

- Foster loan programs through interest rate buy-downs to remove barriers to customer participation.
- Streamline, automate, and aggregate program processes in order to increase effectiveness and reduce program transaction costs.
- Refresh the marketing approach through new customer and market research, identification of behavioral drivers and implementing new sales tools.
- Continue to support coordination with New Jersey Utility Companies and their respective Residential Energy Efficiency Programs.
- Continue to provide services to eligible customers while improving New Jersey's position as a national leader in forward facing initiatives that support new technologies and market transformation.

### ***Sandy Storm Response***

At the end of October 2012 many New Jersey homes were severely impacted by a storm of historical proportions referred to as "Sandy". Many homes experienced flooding that damaged heating, cooling, hot water and appliance equipment. Some homes were completely destroyed. Recovery efforts range from replacing damaged equipment to efforts to rebuild homes destroyed by the storm.

The need to replace damaged equipment and homes offers the opportunity for the NJCEP to play a vital role in assisting in the rebuilding efforts and to encourage the installation of energy efficient equipment. This will reduce energy costs for homeowners over the life of the equipment being replaced and result in environmental benefits through reduced air emissions.

The FY2015 programs will see the continuation of a series of Storm Response incentives which targets participants' whose residences are within storm damage areas noted by the Office of Energy Management. Participants in these areas who demonstrate that they have incurred storm related damage are considered qualifying participants for enhanced Sandy incentives. Specific information on the Sandy response programs is provided within each program description to follow.

Following the program descriptions are three Appendices. **Appendix A** represents the FY 2015 residential energy efficiency and renewable energy Marketing Plan. **Appendix B** provides a summary of total FY 2015 program budgets, broken down by budget category. **Appendix C** presents the electricity

and gas savings targets associated with the Energy Efficiency Program Plans for the FY 2015 program.

**New Jersey's Clean Energy Program™**  
**FY2015 Residential New Construction Program**  
“New Jersey ENERGY STAR® Homes”

## **Description**

The NJ Clean Energy Program's (NJCEP) Residential New Construction Program is designed to maximize participation as well as increase the energy efficiency and environmental performance of residential new construction in New Jersey.

The Program has the long-term objective of transforming the market to one in which a majority of residential new construction in the state is “net zero-energy,” i.e. extremely efficient buildings whose low energy needs can be met by on-site renewable energy generation. The Market Manager will continue to track the implementation of new construction code changes and will propose incentive modifications as appropriate.

There are a number of market barriers to efficiency investments in new construction in New Jersey. Key among these are:

1. A slow return from the sharp impact of the economic downturn on the housing market. Although this is expected to improve in the FY2015 program, housing starts are still lower than in past years;
2. Builders do not yet value the additional administrative procedures and associated costs of ENERGY STAR Version 3 especially where the upgrade requirements are not linked specifically to energy savings;
3. Conflicting design criteria (i.e. builders who make design and procurement decisions do not pay the homeowner operating costs associated with those decisions);
4. Lack of information regarding the benefits of efficiency and environmental performance on the part of consumers, builders, lenders, appraisers, realtors and others;
5. Limited technical skills on the part of some of the builders and their subcontractors to address key elements of efficiency; and
6. Inability of consumers, lenders, appraisers and others to differentiate between efficient and standard homes.

This program employs several key strategies to overcome these barriers

including:

- Direct incentives to builders of homes that meet program standards.
- A multiple tiered approach that allows participation across efficiency levels, entices new builders to the program, and promotes increased efficiency and quality-assurance with higher incentives.
- Expanded marketing assistance to builders to promote the energy and environmental benefits of NJ ENERGY STAR Homes participating projects.
- Utilization of ENERGY STARS's website to help promote all residential Energy programs.
- Providing technical assistance to inform builders and their subcontractors on details of the program tiers and how to comply with the rigorous performance requirements.
- ENERGY STAR certification, inspections and testing through third-party rating companies, competing in an open market for services and Market Manager program certifications.

In response to builder and market feedback on EPA's transition to ENERGY STAR New Homes Version 3 standard, the FY2015 program will continue to offer three tiers of efficient new home construction and applicable incentives as well as a multifamily high rise program. The three tiers are NJ *ENERGY*Efficient Home (Tier 1), ENERGY STAR Homes (Tier 2) and New Jersey Zero Energy Ready Home (Tier 3) which was formerly called Climate Choice Homes.

***NJ ENERGYEfficient Home (Tier 1)***

This tier supports the long term transition to ENERGY STAR Version 3 by providing waivers for some of the more onerous inspection checklist requirements. While these homes will not be ENERGY STAR qualified they will allow builders to gain the skills to fully transition to full ENERGY STAR implementation. These homes will carry the NJ *ENERGY*Efficient Home label. The incentive structure within this tier will be performance based with higher incentives for higher performance using the HERS index as the indicator.

***ENERGY STAR Homes (Tier 2)***

Builders that enroll in tier 2 will satisfy the full check list requirements of Version 3 and will be ENERGY STAR qualified. The incentive structure within this tier will be performance based with higher incentives for higher performance using the HERS index as the indicator.

***New Jersey Zero Energy Ready Home (Tier 3)***

This tier of the program recognizes the highest energy efficiency achievement in new homes. It is an example of New Jersey's national leadership in residential new construction, and has been showcased at several energy efficiency industry

conferences as an example for other programs to follow. Current program requirements include an approximately 50% reduction in energy use compared to IECC 2009, before the addition of on-site renewable energy generation. The incentive structure for Tier 3 rewards higher performance through a sliding scale based on HERS index.

### ***ENERGY STAR Multifamily High Rise Program***

Multifamily buildings at 4 to 6 floors are eligible for ENERGY STAR Multifamily High-Rise program. The incentive structure within this program is set at \$1,000 per qualifying unit.

## **Target Market and Eligibility**

Single family, multi-single (“townhome”) and low-rise multi-family buildings (up to 3 stories) are eligible for NJ ENERGY STAR Homes program benefits if the home uses natural gas and/or electricity supplied by a New Jersey public utility and if each unit has its own gas or electric heating and/or central air conditioning system and its own domestic hot water system.

For multi-family buildings between 4-6 stories, the program uses the EPA ENERGY STAR Multifamily New Construction Program Decision Tree (the “Decision Tree”) to determine eligibility.<sup>1</sup> This decision tree indicates which properties are appropriately assessed through tiers 1-3 of the ENERGY STAR Homes Program or through the Multifamily High Rise program. Select components of the Decision Tree are described below.<sup>2</sup>

The Program will also enroll any existing home undergoing substantial (“gut”) renovation or remodeling that meets the above criteria.

New homes are not eligible for participation or incentives under the Residential Gas and Electric HVAC program (COOLAdvantage/WARMAdvantage).

Rebate incentives for new construction, including those offered under this program, were previously limited to buildings constructed in State designated “Smart Growth” areas. To better promote the State's objectives of encouraging energy efficient new construction and to encourage and support job creation, by Order dated 5/29/13 the Board modified its policies such that any new construction or gut rehabilitation project that did not commence construction prior to June 7, 2013, located anywhere in the State, or any new construction or gut rehabilitation project in Sandy Storm Response areas designated by the NJ BPU

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<sup>1</sup>The EPA ENERGY STAR Multifamily New Construction Program Decision Tree is available at: [http://www.energystar.gov/ia/partners/bldrs\\_lenders\\_raters/downloads/mfhr/MFHR\\_Flowchart\\_Version\\_1.0.pdf](http://www.energystar.gov/ia/partners/bldrs_lenders_raters/downloads/mfhr/MFHR_Flowchart_Version_1.0.pdf)

<sup>2</sup> Multifamily Buildings over six floors may participate in the C&I Smart Start Buildings Program.

that enroll and/or commence construction on or after October 29, 2012 and otherwise meet all program requirements will be eligible for NJCEP incentives.

## **Program Technical Requirements**

To qualify for the FY2015 Program, a home must meet NJ *ENERGY*Efficient Home (Tier 1), ENERGY STAR Homes (Tier 2), New Jersey Zero Energy Ready Home (Tier 3), or ENERGY STAR Multifamily High Rise requirements.

The technical detail presented for each tier is a summary that represents the majority of the program requirements. The full technical specifications for ENERGY STAR and New Jersey compliance can be requested from the Market Manager. The EPA ENERGY STAR program requirements (e.g. checklists, standards and modeling inputs) are periodically updated and supersede ENERGY STAR technical requirements listed in this Compliance Filing. The NJ ENERGY STAR Homes program automatically adopts the updates which can be found at: <http://energystar.gov>.

### **1. NJ *ENERGY*Efficient Home (Tier 1) Requirements:**

Meet all Energy Star v2.0 requirements, including:

- Comply with v2.0 Thermal Bypass Check list
- Duct leakage to outside:  $\leq 6$  CFM25 per 100ft<sup>2</sup> CFA (No maximum total leakage. CFM25 is defined as the air flow (in cubic feet per minute) needed to create a 25 Pascal pressure change in the ductwork. CFM25 is one of the most basic measurements of ductwork air tightness.)
- Up to 25% of Slab edge in CZ 4 & 5 may be un-insulated.

Additional New Jersey requirements:

- HERS index must not exceed 75 (2009 IECC base)
- Comply with NJ program specific HVAC check list
- Fully duct all HVAC supplies and returns and fully seal all duct system joints and seams with mastic compound (no tapes) as applicable
- Install ENERGY STAR qualified HVAC equipment (or highest available alternative)
- Install ENERGY STAR qualified mechanical ventilation with automatic 24-hour control, as required by ASHRAE 62.2 as applicable
- Install only direct or power vented space heating, water heating and/or fireplace combustion appliances, when present

- ENERGY STAR lighting: 60% of all light sockets including interior and exterior, or EPA Advanced Lighting Package (ALP) for fixtures
- House size capped at  $\leq 4000$  sq. ft. Over 4000 sq. ft. requires  $\leq$  HERS 65

## 2. ENERGY STAR Homes v 3 (Tier 2) Requirements<sup>3</sup>

Meet all EPA ENERGY STAR Homes v 3 standards including:

- Meet a site specific (variable) HERS index target
- Comply with all EPA mandated checklists
- Install ENERGY STAR qualified HVAC equipment (or highest available alternative)
- Install ENERGY STAR qualified mechanical ventilation with automatic 24-hour control, as required by ASHRAE 62.2 as applicable
- Install only direct or power vented space heating, water heating and/or fireplace combustion appliances, when present
- Duct leakage to outside:  $\leq 4$  CFM25 per 100ft<sup>2</sup> CFA
- Total Duct Leakage:  $\leq 8$  CFM25 per 100ft<sup>2</sup> CFA

Additional New Jersey requirement:

- Fully duct all HVAC supplies and returns and fully seal all duct system joints and seams with mastic compound (no tapes) as applicable

## 3. New Jersey Zero Energy Ready Home Tier 3 requirements

This technical specification consists of a set of requirements for meeting energy performance approximately 50% better than IECC 2009 before the addition of on-site renewable energy generation.

## 4. Multifamily High-Rise Program Requirements

Requirements for applicable multifamily buildings based on the EPA ENERGY STAR Multifamily High Rise (MFHR) Program standards including:

- 15% more energy efficient than MFHR buildings built to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2007
- Follow Performance Path which utilizes ASHRAE approved energy modeling software to determine energy savings of a customized set of measures

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<sup>3</sup> ENERGY STAR v 3.0 Standards: [http://www.energystar.gov/index.cfm?c=bldrs\\_lenders\\_raters.nh\\_v3\\_guidelines](http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.nh_v3_guidelines)

## Incentives

The program will continue to offer incentives for Tier 1 and Tier 2 ENERGYEfficient and ENERGY STAR Homes based on HERS scores (see below).

**Table 1: FY2015 Financial Incentives per Single Family Unit for NJ ENERGYEfficient Home (Tier 1) and ENERGY STAR Homes (Tier 2)**

Incentives by Tier & Index, based on IECC 2009		
HERS	Tier 1 NJ ENERGYEfficient Home	Tier 2 ENERGY STAR
85		
80		
75	\$1,250	\$2,250
70	\$1,500	\$2,500
65	\$1,750	\$2,750
60	\$2,000	\$3,000
55	\$2,250	\$3,250
50	\$2,500	\$3,500

Multi-single units receive 75% and low-rise multi-family units receive 50% of the incentive levels listed above.

**Table 2: Financial Incentives for NJ Zero Energy Ready Home Tier 3<sup>4</sup>**

Building Type	FY2015 NJ Zero Energy Ready Home (Tier 3)
Single Family	\$10,000 to achieve 50 points, plus \$800 per index point below 50 points (maximum incentive is \$26,000/unit)
Multiple Single Family ("Townhouse")	\$7,000 to achieve 50 points, plus \$500 per index point below 50 points (maximum incentive is \$17,000/unit)
Multiple-Family Building ("Multifamily")	\$4,000 to achieve 50 points, plus \$400 per index point below 50 points (maximum incentive is \$12,000/unit)

Note: Incentive payment for tier 3 is payable for qualified units at the completion of all requirements and inspections.

**Table 3: FY2015 Financial Incentives for ENERGY STAR Multifamily High-Rise**

<sup>4</sup> The per point incentives for HERS indices below 50 is for efficiency improvements only, not including renewables.

<b>Multifamily High-Rise</b>	<b>Incentive</b>
Incentive per Qualifying Unit	\$1,000

A cooperative marketing offer for participating builders will drive homebuyer demand for qualifying homes. This co-op marketing offer will supplement a Residential New Construction component within the overall marketing campaign of the NJCEP in order to further raise consumer demand. These efforts will work together with the EPA’s plans for an aggressive national campaign to promote the new ENERGY STAR standard and will facilitate the program’s efforts to maintain builder participation in the face of the broader economic downturn and increased requirements.

***Financial Incentives for Legacy Climate Choice Homes***

Effective July 1<sup>st</sup>, 2014 the Market Manager ceased to provide ratings services for Climate Choice Homes (CCH) units in anticipation of the transition of Tier 3 to the open rater marketplace. To provide builders with these legacy ratings processes for CCH units enrolled prior to the implementation of the new Tier 3 Zero Energy Ready Home (ZERH), the program will provide an additional incentive of \$1,600.00 to for each completed legacy CCH unit. It is expected that there will be a limited number of CCH units that are not completed prior to the implementation of the ZERH tier.

**Planned Program Implementation Activities for FY2015**

***Continue to Support Tiered Specifications while Supporting Carryover Tiers***

As specified in the 2012 compliance filing, the program began to offer three tiers plus ENERGY STAR Multifamily High-Rise (as described in the “Offerings and Incentives” section above). The program will continue to provide technical assistance and guidance on the standards and requirements of those tiers.

In addition, the program will continue to support previous commitments to homes that were certified under the standards that were in effect at the time the commitment was made. The ENERGY STAR Homes program is unique relative to other NJCEP offerings because of the level of carryover from year to year. The

“permit date” triggers the new construction building code to which new homes must comply. The New Jersey residential new construction codes based on IECC 2009 will be used as the baseline in FY2015. In addition, permit date, date of enrollment and date of completion determine whether a home can be certified under ENERGY STAR Homes version 2.0, 2.5 or the FY2015 program offerings of NJ *ENERGY*Efficient Home (Tier 1) and ENERGY STAR Homes version 3.0 (Tier 2). In FY2015, there may be some limited administrative carry over for homes previously certified to ENERGY STAR Homes version 2.0 or 2.5.

### ***Fully Transition all Services to an Open Rater Market***

For ENERGY STAR Homes Tier 1 and Tier 2, implementation services including project review and verification are provided by the open market for HERS rating services and certifications. In addition to the standard home energy rating requirements defined by RESNET, qualifying raters will comply with NJCEP criteria to ensure quality services within the Program. Multifamily High-Rise project implementation services will also be provided by open market and verified by ENERGY STAR MF-HR program using the ASHRAE 90.1 modeling methodology.

For New Jersey Zero Energy Ready Home (Tier 3), implementation services to date have been provided by the Market Manager team due to the level of technical support typically needed by builders to meet the required efficiency level. Honeywell is currently leading a working group to formalize a process that will allow for an open ratings process for Tier 3. Transitioning to an open rater market requires support and some training for raters and builders on the advanced technical requirements and building science knowledge necessary to successfully build homes at this performance level. It is anticipated that this process will be completed in the third quarter of 2014.

## **Quality Control Provisions**

Market-based delivery of rating services and certifications requires an effective set of standards for quality assurance. While the responsibility for ratings rests with Providers and RESNET, it is incumbent upon the program to assure that a robust system for identifying and communicating quality issues exists to manage the credibility of the savings and certifications offered.

To maintain a robust rating marketplace, the Market Manager will perform inspections and conduct oversight processes on raters. Quality Assurance activities will continue to be performed by the Program, in proportion to the track records of raters measured through program inspections. Errors and/or inappropriate rating procedures identified by the Market Manager through QA inspections will subject rating companies to actions as defined in the contractor remediation process.

In addition to data reviews for completeness of forms and applications, on-site inspections and technical review of buildings and rater files will be required in proportion to the demonstrated proficiency of the builders and raters. Inspection requirements will be adjusted based upon the track record of the program participants. Initial inspection rates for new builders and rating companies will be higher and will decrease as they demonstrate proficiency in proper building techniques and the qualifying requirements of the Program.

## **Budget**

A detailed budget for this program for FY2015 is attached in Appendix B.

The FY2015 budget includes direct incentive costs for units both planned to be completed in FY2015 and for homes committed but that may not be completed in FY2015. Commitments are issued for a period of twelve months and are included as committed incentive funds until they expire.

## **Goals and Energy Savings**

Program goals for FY2015 are as follows:

- Approximately 4,130,803 in Lifetime DTh savings or the conversion to accepted equivalents such as MMBtu;
- Approximately 362,964 in Lifetime MWh savings;
- Approximately 5,000 new enrolled units for qualifying residential new construction types in the current year (i.e. single family, townhouse and multi-family buildings eligible to participate in the Program) for projects that have committed to build to NJ *ENERGY*Efficient Home (Tier 1), ENERGY STAR (Tier 2), ), New Jersey Zero Energy Ready Home (Tier 3) or ENERGY STAR Multifamily High Rise standards;
- Approximately 4,500 completed units for qualifying residential new

construction types in the current year (i.e. single family, townhouse and multi-family buildings eligible to participate in the Program) for projects that have committed to build to NJ *ENERGY*Efficient Home (Tier 1), ENERGY STAR (Tier 2), Tier 3, or ENERGY STAR Multifamily High Rise standards;

- Maintain a sufficient number of HERS rating companies to actively conduct rating activities in NJ.

**New Jersey's Clean Energy Program™**  
**FY2015 Residential Gas & Electric HVAC Program**  
"New Jersey *WARMA* Advantage & *COOL* Advantage"

## **Description**

The New Jersey Residential Gas & Electric Heating, Ventilation, and Air Conditioning (HVAC) Program promotes the selection and purchase of efficient home heating, cooling and water heating equipment, and the quality installation of such equipment. Its long-term goal is to make selection and quality installation of high efficiency residential HVAC equipment the norm in the NJ market. For this program, the market is considered transformed when rebates can be reduced or eliminated without a decrease in market penetration for targeted HVAC equipment or products.

The program must continue to address several market barriers to achieve its goals:

- High upfront cost of new efficient systems compared to repair of older equipment and new inefficient systems;
- Consumers' inability to differentiate, and therefore value, the difference between good and poor quality HVAC installation;
- Consumers' lack of information on the benefits (both energy and non-energy) of efficient equipment and quality installations, particularly during renovation and remodeling;
- HVAC contractor perception of low value and/or sense of difficulty about program participation; and
- On-going training needs for HVAC contractors on key installation issues including proper installation methodologies, proper unit sizing and utilization and health and safety issues including proper venting of equipment.

The program employs several key strategies to address these barriers:

- Financial incentives for the purchase of ENERGY STAR-qualified gas heating and energy-efficient water heating equipment;
- Financial incentives for the purchase of high efficiency electric cooling and heating equipment and controls;
- Financial incentives and program support for HVAC equipment installation that optimizes operating efficiency at time of installation, including Manual J load calculations (including use of software applications) and Manual S equipment selection for cooling equipment;

- Co-operative marketing assistance to trade allies in the direct promotion of high efficiency HVAC equipment;
- Information aimed at consumers to help them make energy saving purchasing decisions;
- Outreach and education for - as well as in collaboration with - HVAC manufacturers, distributors and contractors;
- ENERGY STAR sales training for contractors (i.e. how to sell efficiency);
- Technical training for HVAC contractors on the proper sizing, selection and installation of HVAC equipment and health and safety concerns regarding orphaned gas appliances; and
- Promotion of HVAC technician certification in coordination with nationally recognized technical associations to help raise the knowledge base on NJ contractors on the proper installation of HVAC equipment.

New Jersey's Clean Energy Program will continue to support efforts, where technically and economically justifiable, to upgrade federal appliance efficiency standards. The Program also provides, when necessary, technical support for the development of such upgrades, tracking of activities and monitoring developments, and review and modification of program designs to integrate changes to the standards and codes.

## **Target Market and Eligibility**

*COOL*Advantage promotes the installation of new, energy efficient, residential electric air conditioners and heat pumps. The program covers conventional, centrally ducted air conditioning systems and "ductless mini-split" systems. The program also covers both air-source heat pumps, and ground-source (geothermal) heat pumps.

*WARM*Advantage promotes energy efficient natural gas-fired furnaces, boilers and water heaters for use in residential buildings. The *Warm*Advantage program specifically addresses water heating units that are not planned to be replaced when a furnace is replaced, which can pose a combustion appliance safety issue for the customer, by offering additional incentives for participants that change both heating and water heating units at the same time. This is an industry-leading program design that safeguards customers and delivers greater energy savings through the program.

NJ Residential Gas & Electric HVAC program will also, contingent upon availability of funds, continue to support the State's SEP Programs targeting non-IOU electric, oil and propane customers. Should any applications be processed under SEP, the fee for processing these applications will be charged to NJCEP.

In FY2015, the solar domestic water heating (SDHW) initiative will continue to be offered to both residential electric and gas water heating customers.

## **Offerings and Incentives**

### **COOLAdvantage**

In FY2015, the Program will offer incentives for super-efficient Central Air Conditioners, mini-split units, and heat pumps. New program requirements, procedures and/or incentives will take effect after a notification period to program participants (i.e. contractors, etc.) and posting at njcleanenergy.com. Any completed application received after the notification period will be subject to new program rules. Rebate applications for cooling system equipment purchased prior to the end of the notification period will continue to be processed.

Contractor and customer outreach and education on the benefits of efficient HVAC equipment will continue to be supported. Incentives levels offered through the COOLAdvantage Program are noted in Table 4.

**Table 4: COOLAdvantage Customer Incentives<sup>5</sup>**

Eligible Equipment Requirements	Full Incentive Amount	Confirmation Documentation
<p><b>For Central A/C:</b> Statewide SEER ≥ 17 EER ≥ 13</p>	<p>\$500</p>	<ul style="list-style-type: none"> <li>• Efficiency Rating</li> <li>• Compressor/ coil combination ratings (To be replaced as a matched set)</li> <li>• Proper sizing and selection</li> </ul>
<p>For Central A/C: For qualifying Sandy participants SEER ≥16 EER ≥ 13</p>	<p>\$500</p>	<ul style="list-style-type: none"> <li>• Efficiency Rating</li> <li>• Compressor/ coil combination ratings (To be replaced as a matched set)</li> <li>• Proper sizing and selection</li> <li>• For qualifying Sandy participants.</li> </ul>
<p><b>For Mini-Split Units<sup>6</sup></b> SEER ≥ 17 EER ≥ 13 <b>For Air-source Heat Pumps:</b> SEER ≥ 17 EER ≥ 13 &amp; HSPF ≥ 8.5 <b>For Ground-source (Geothermal) Heat Pumps:</b> ENERGY STAR Qualification</p>	<p>\$500</p>	<ul style="list-style-type: none"> <li>• Efficiency Rating Compressor/ coil combination ratings<sup>7</sup></li> <li>• Proper sizing and selection<sup>8</sup></li> </ul>

<sup>5</sup> From AHRI directory, CEE-AHRI directory or equivalent ENERGY STAR listing.

<sup>6</sup> Mini-Split and Heat Pump incentives continue into 2015.

<sup>7</sup> For ASHPs to be replaced as a matched set.

<sup>8</sup> Ductless mini-split (DMS) systems do not require sizing and selection documentation.

***Sandy Storm Response***

The \$500 incentive for high efficiency Central AC Units at the 16 SEER/13 EER efficiency level that was offered initially in 2012 will be continued for qualifying Sandy participants.

In addition, qualifying Sandy participants will be entitled to an enhanced HVAC rebate for qualifying heat pumps and mini-split units of \$200 additional per unit over the incentive in place at the time of purchase.

***WARMAdvantage***

Continuing in FY2015 *WARMAdvantage* will offer incentives for efficient furnaces, boilers and hot water heaters. The program will also continue to offer an incentive to promote the combined upgrade of qualifying space and water heating equipment with the goal of achieving greater savings and facilitating the informed and appropriate treatment for any potential combustion appliance safety issues.

**Table 5: WARMAdvantage Direct to Customer Incentives for FY2015<sup>9</sup>**

<b>Equipment</b>	<b>Minimum Efficiency</b>	<b>Incentive Levels</b>
Gas Furnace – Tier 1	≥ 95% AFUE	\$250
Gas Furnace – Tier 2	≥ 95% AFUE and ENERGY STAR certified	\$500
Furnace & DHW Combination	Qualifying Gas Furnace (see Minimum Efficiency for Furnaces noted above); <u>AND EITHER</u> : <ul style="list-style-type: none"> <li>• a qualifying standalone water heater (see Minimum Efficiency for water heaters below)</li> <li>• <u>OR</u> an indirect-fired water heater attached to the qualifying furnace</li> </ul>	\$900 <sup>10</sup>
Boiler	HYDRONIC ≥ 85% and ENERGY STAR certified STEAM ≥ 82%	\$300
Boiler & DHW Combination	Qualifying Boiler (see Minimum Efficiency for Boilers noted above) and water heating as noted below: <ul style="list-style-type: none"> <li>• Integrated water heating and boiler unit (Combi Boilers)</li> <li>• <u>OR</u> a qualifying stand alone water heater (see Minimum Efficiency for water heaters below)</li> </ul> <u>OR</u> an indirect water heater attached to the qualifying boiler	\$900 <sup>11</sup>
Water Heater	≥ 0.82 Energy Factor AND ENERGY STAR CERTIFIED or, ≥ 90% Thermal Efficiency w/sealed combustion.	\$500
Power Vented Water Heater	≥0.67 EF Power-Vented Water Heater and ENERGY STAR certified	\$500

<sup>9</sup> Incentives in effect for purchases made after the FY2015 notification period.

<sup>10</sup> This is the total combined incentive amount for qualifying furnace and hot water heating equipment, and may not be combined with individual NJCEP incentives for furnaces or water heaters.

<sup>11</sup> This is the total combined incentive amount for qualifying boiler and hot water heating equipment, and may not be combined with individual NJCEP incentives for boilers or water heaters.

Boiler Reset Controls Pilot	Automatic, inferred-heat load control operationally meeting federal criteria* <sup>12</sup> compatible with qualifying boiler <sup>13</sup>	\$175.
Heat Pump Water Heater	ENERGY STAR certified	\$500
Solar Domestic Hot Water	ENERGY STAR certified SRCC OG-300 listed; and SF ≥ 0.5)	\$1,200

***Sandy Storm Response***

Qualifying Sandy participants will be entitled to an enhanced HVAC rebate for qualifying boilers, furnaces, water heaters, boiler-DHW combinations and furnace-DHW combinations, of \$200 additional per unit over the incentive in place at the time of purchase.

**Incentive Details**

Incentives provided for HVAC State Energy Program (SEP) participants will be identical to those provided by the NJCEP Program for similar equipment while funds are available.

COOLAdvantage and WARMAdvantage incentives will be paid directly to homeowners, or with written consent, assignable to contractors.

***COOLAdvantage and WARMAdvantage Pilots***

The Market Manager is continuing incentives in FY2015 for the Boiler Reset Retrofit Controls pilot. We will evaluate savings and participant data through FY2015 and issue a recommendation on this technology in FY2016.

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<sup>12</sup> PART 430- "Energy Conservation Program For Consumer Products" Department of Energy Federal Register/Vol.73, No. 145/Monday, July 28, 2008/Rules and Regulations

<sup>13</sup> Boiler must have an AFUE <85%

## **Planned Program Implementation Activities for FY2015**

The following program implementation activities will be undertaken in FY2015:

- Continue processing incentives for heating, water heating and cooling equipment.
- Continue processing solar water heating incentives as a *WARMA* Advantage program measure.
- Provide co-operative marketing incentives to support approved trade ally promotions of high efficiency space heating, cooling, and water heating equipment. The program will also pursue opportunities for enhancing cross-marketing with other programs; particularly the Utility approved enhanced incentive and on-bill financing programs.
- Support the training of HVAC contractors and technicians on the proper calculation of heating and cooling loads, system design, installation techniques, and consumer benefits of high efficiency gas heating and cooling equipment and/or any other substantial form of training that is directly related to the promotion of energy efficiency and quality equipment installation. The Program will also support training in the recognition and proper techniques to deal with atmospherically drafted furnace and boiler replacements that result in a stand-alone water heater.
- Provide monetary incentives and education to participants to replace both heating and water heating systems with high efficiency equipment at the same time to safeguard against potential combustion appliance safety issues.

## **Quality Control Provisions**

### ***HVAC Quality Assurance***

The Market Manager maintains documented policies and to ensure consistency in the processing and quality control for all incentive program participants. All applications are reviewed for verification of the qualifying equipment efficiency rating, proper sizing and proper installation. Qualifying equipment efficiency levels are verified with the AHRI, AHRI/CEE directory of air conditioning and heat pump equipment and/or the eligible products list from ENERGY STAR. Each application and its information are entered into a database which checks for duplicate applicants through an equipment serial number comparison.

On an ongoing basis, units from both electric and gas rebate applications are selected for an in-depth quality assurance review and inspection. Assurance includes a paperwork review of the application and a field inspection to verify qualifying equipment installations and proper installation. A field inspection report is prepared for each inspection.

## **Budget**

A detailed budget for this program for the FY 2015 program is attached in Appendix B.

## **Goals and Energy Savings**

Program goals for FY2015 are as follows:

- Achieve approximately 4,425,168 in Lifetime DTh savings or the conversion to accepted equivalents such as MMBtu;
- Achieve approximately 159,190 in Lifetime MWh;
- Process applications for approximately 1,800 efficient central air conditioner and heat pump equipment installations statewide;
- Process approximately 17,500 energy efficient gas space heating and/or water heating equipment incentive applications statewide; And
- Conduct approximately 125 HVAC trainings on either Manual J load calculations (including use of software applications), Manual S equipment selection, proper charging and airflow, technical material that must be understood to pass the North American Technician Excellence (NATE) and/or Building Performance Institute (BPI) certification tests, duct sealing, duct design using ACCA Manual D, ENERGY STAR sales techniques, high efficiency gas heating system installation and selection practices, and any other substantial form of training that is directly related to program goals. Any training conducted using the same curricula provided by the program, including training provided by industry allies, shall count towards the goal.

## **New Jersey's Clean Energy Program™**

### **FY2015 Energy Efficient Products Program**

#### **Description**

The Energy Efficient Products Program promotes the sale and purchase of ENERGY STAR qualified and other energy efficient products including lighting, appliances and consumer electronics. The long-term goal of the Program is to transform the market for energy efficient products in New Jersey by removing barriers to new technologies and providing participants with the knowledge and motivation they need to make cost-effective purchases. The program employs several key strategies to deliver energy savings to New Jersey residents including:

- Educating consumers on the energy usage of common household appliances and the role that energy efficiency can play in reducing home energy consumption;
- Supporting a retail infrastructure that offers a range of energy efficient qualified product choices to consumers;
- Offering marketing and training support for retailers, manufacturers and contractors selling energy efficient products;
- Moving beyond traditional retail outlets by working with event-based initiatives and other innovative approaches to bring energy efficient technologies to target populations that do not respond to conventional, retail-based marketing approaches;
- Offering consumer access to energy efficient products through an online “store”;
- Supporting the development of NJ State appliance standards, minimum federal appliance efficiency standards and ENERGY STAR appliance specifications, as appropriate;
- Helping to develop and introduce new, energy efficient technologies such as super-efficient clothes dryers and set top boxes;
- Supporting and making consumers aware of product recycling and disposal services to address product lifecycle environmental impacts;
- Leveraging national energy efficient programs, promotions, marketing materials, and advertising as appropriate;
- Transitioning from end-user rebates to upstream incentives to reduce first cost barriers of energy efficient lighting and appliances; and
- Coordinating with NJ Utility sponsored programs to co-brand and leverage customer participation and savings.

NJCEP will continue to support efforts, where technically and economically justifiable, to upgrade federal appliance efficiency standards. The program also

provides, when necessary, technical support for the development of such upgrades, tracking of activities and monitoring developments, and review and modification of program designs to integrate changes to the standards and codes.

## **Target Market and Eligibility**

In FY2015 the Energy Efficient Products Program will continue to provide some targeted rebates to consumers and retailers for the purchase/sale of selected energy efficient products. At the same time, the program will continue the transition towards greater upstream and midstream initiatives that leverage manufacturer, distributor and retailer incentives and marketing dollars. This strategy, which has been pioneered by New Jersey and a select group of other efficiency programs, is being adopted by other programs across the country given that it increases available funds for incentives and decrease program operating costs. The program will also offer marketing and training support to new retailers, manufacturers, contractors, and other organizations while continuing to maintain existing partner relationships. The program will continue to support incentives for non-IOU customers paid with federal SEP funds provided such funds are allocated to programs managed by Honeywell. Should any applications be processed under SEP, the fee for processing these applications will be charged to NJCEP.

## **Offerings and Incentives**

In FY2015 the Energy Efficient Products Program will continue to offer retail price incentives through upstream and midstream markdown promotions for qualified lighting products and advanced power strips and will also offer midstream promotions for clothes washers, clothes dryers and refrigerators with retail partners based on market opportunities. For customers of retailers unable to participate through the midstream promotions, the program will offer the opportunity to apply for energy efficient clothes washer, clothes dryers and refrigerator incentives through a direct mail-in process. These incentives will be supported with a variety of promotional approaches, including leveraging Environmental Protection Agency (EPA) national ENERGY STAR campaigns. The FY2015 budget also includes provisions for continuing the promotion of energy efficient consumer electronics and an “early-retirement” program for refrigerators and freezers.

### ***On-line Energy Audit***

During FY2015 the program will coordinate with utility sponsored audits and home energy reports, providing links from the NJCEP website and marketing NJCEP offerings to the extent possible.

***Incentives for ENERGY STAR qualified lighting products***

In FY2015, the Program will increase focus on incentives of ENERGY STAR qualified Solid State Lighting (SSL) products also known as LEDs, while continuing to reduce retail prices and incentives for the most common, most easily available, regularly lowest price CFLs. Through an RFP process, incentives will be applied to eligible products (up to a negotiated volume) sold by selected New Jersey retailers during promotional periods.

Incentives will vary by type of product and/or distribution channel, based on negotiations with manufacturers and/or retailers. Based on experience with the earlier initiatives and regional promotions, the FY2015 mark down incentives will be a maximum of \$0.60 per standard CFL bulb, \$2.00 per specialty CFL bulb, and in the range of \$1.00-\$15.00 per LED bulb or energy efficient light fixture, including qualifying SSL fixtures. These incentives reflect the program strategy of ramping down support for CFLs while providing greater support for newer, more efficient LED products. Additionally, the program will identify opportunities to develop new potential distribution channels for lighting in order to accelerate the market adoption of SSL and other high efficiency lighting products.

***Incentives for ENERGY STAR qualified appliances and equipment***

The FY2015 program will continue its partnerships with New Jersey retailers for promotions of higher performance ENERGY STAR clothes washers and refrigerators. The Program will offer midstream incentives for ENERGY STAR qualified clothes washers, refrigerators, and will add ENERGY STAR clothes dryers for FY2015. In addition to including this new product category, the Program is planning for several updates to specification levels to keep the Program in step with national market trends and ensure that it continues to promote the highest efficiency levels to New Jersey residents.

The current clothes washer specification is 2.2 MEF (Modified Energy Factor) or higher. This specification level will be used for the majority of the FY 2015 program year. However, the eligibility level will change to reflect a new Energy Star V7.0 specification that uses a new efficiency metric referred to as IMEF (Integrated Modified Energy Factor) that is expected to become effective in March 2015.

For refrigerators, the current requirement is for ENERGY STAR qualified refrigerators that are 25% better than the 2001 federal minimum standard. This specification will remain in place through the first part of the program year. However, the eligibility level will change to reflect a new Energy Star V5.0 specification for refrigerators that is expected to become effective in September 2014. This new level requires ENERGY STAR qualified refrigerators to be 20% better than the 2014 federal minimum standard.

The new ENERGY STAR clothes dryer initiative is an example of New Jersey leading the industry. The New Jersey Clean Energy Program invested in research on the market potential for super-efficient clothes dryers in 2010. That effort grew into a nationwide initiative, the Super Efficient Dryer Initiative, which resulted in manufacturers making investments in bringing new technologies to market and in the ENERGY STAR Program developing specifications to recognize the newly released more efficient products. In the FY 2015, the program will provide incentives for two tiers of qualified dryers: those meeting the new ENERGY STAR V1.0 specification, which was released in May 2014, and those meeting the even more efficient 2014 ENERGY STAR Emerging Technology Award criteria.

The specific timing of the change in eligibility for qualifying refrigerators and clothes washers, as well as the introduction of ENERGY STAR clothes dryers, will be driven by the availability of products certified to the new ENERGY STAR specifications in participating retail stores in New Jersey. In addition, the program will offer mail-in, direct to consumer incentives for clothes washers, refrigerators and dryers to support customers of those retailers unable to participate through the midstream promotion process. The program will select participating retailers based on ability to participate during the promotional periods. In addition, the program will continue to review new opportunities for introducing advanced power strips with a maximum incentive range of \$7.00 - \$10.00.

**Table 6: ENERGY STAR Qualified Appliances and Equipment Incentives for FY2015**

Equipment	Minimum Efficiency	Incentive Levels
Clothes Washers (Current)	ENERGY STAR qualified: 2.2 MEF or higher	\$50
Clothes Washers (New)*	ENERGY STAR qualified: 2.38 IMEF or higher	\$50
Refrigerators (Current)	ENERGY STAR qualified 25% better than the 2001 federal minimum standard. =>7.75 cu ft	\$50
Refrigerators (New)*	ENERGY STAR qualified 20% better than the 2014 federal minimum standard. =>7.75 cu ft	\$50
Clothes Dryers – Tier 1	ENERGY STAR qualified	\$100
Clothes Dryers – Tier 2	ENERGY STAR 2014 Emerging Technology Award Recipients	\$300

\* Planned transitions to new minimum efficiency levels for clothes washers and refrigerators to reflect new Energy Star specifications and federal standards later in 2014 and early 2015. Timing of these changes will be based on product availability in New Jersey retail stores.

### ***Appliance Early Retirement***

In FY2015 the Program will continue the initiative to offer a \$50 incentive to New Jersey residents for turning in their working old, inefficient secondary refrigerators and freezers for recycling as well as an incentive of up to \$107 for the removal and recycling of that equipment.

### ***Creative Initiatives & Consumer Electronics***

The goals of the Creative Outreach and Education Promotion are to:

- Create awareness of NJCEP programs through events that attract consumers and provide opportunities to disseminate program information and interact with consumers to answer questions.
- Educate consumers on the benefits of energy efficient lighting (primarily LEDs) and appliances. Encourage consumers to move beyond the “first step” of using energy efficient lighting products and to take the next step to adopt more significant energy efficiency measures.
- Create awareness of no/low cost methods of reducing energy consumption (such as addressing standby loads, the use of advanced power strips etc.).
- Focus underserved residential markets, for example, but not limited to, low-income customers, residents affected by Superstorm Sandy, students, etc.

In FY2015, the Program will continue this initiative to provide CFLs, LEDs, fixtures, and smart power strips through outreach events aimed at employee distributions or other approved approaches.

In addition, the program will also continue the set top box initiative. The Market Manager will explore the expansion of participating New Jersey service providers within this effort and will consider the inclusion of advanced power strips to maximize the energy savings delivered to the customer. In FY 2015, the Program will also increase eligibility requirements for qualifying high efficiency set top boxes to the new ENERGY STAR V4.1 specification. This change reflects recent increased voluntary agreements by the industry to achieve a minimum ENERGY STAR V3.0 threshold of performance and keeps New Jersey on the forefront of consumer electronics energy efficiency programs. Incentives are negotiated with partners and will vary depending upon the type of product and the market segment targeted.

## **Planned Program Implementation Activities for FY2015**

The Products program will be offered on a consistent program design and implementation basis to ensure retailer support statewide. The following program implementation activities will be undertaken in FY2015.

### ***General Activities***

The Market Manager will maintain existing retailer base and recruit new retailers as needed. In FY2015, the Program will continue to leverage retailer participation in developing and distributing collateral and “point of purchase” (POP) materials for product groups and in providing retail associate training and generating consumer awareness at the point of product display. The Market Manager will also continue to promote the Program on an as-needed basis at NJCEP sponsored events.

### ***Change The World - Start With ENERGY STAR***

The Program will continue to support ENERGY STAR's Change The World – Start With ENERGY STAR program which strengthens diverse lighting promotions throughout the year, including retail price markdowns with select retailers.

### ***Online Store***

Since 2008, the Program has offered an online retail store as part of a creative initiative. In FY2015 the Program will continue to promote energy efficiency through the availability of high quality, energy efficient lighting and other products.

### ***Residential Appliances***

Residential Appliance initiatives will continue the strategy of midstream approaches for residential appliance point of sale incentive. This approach strengthens the Program's partnership with retailers in supporting the most efficient products while reducing the market barriers for consumers. In addition it allows leveraging retailer matching rebates where available. In FY2015, this initiative will continue to support select ENERGY STAR qualified clothes washers, clothes dryers and refrigerators.

### ***Appliance “Early Retirement” Program***

In FY2015 the Program will build on the market-based effort to promote and facilitate the early retirement of inefficient working secondary refrigerators/freezers. Implementation will include:

- A marketing campaign appropriate to the year’s unit goals;
- In-house appliance pickup and direct access to participants to promote other NJCEP referrals;
- Tracking of individual units and recording of the recovery and destruction of all hazardous materials in compliance with the EPA’s Responsible Appliance Disposal (RAD) guidelines by adding CFC removal and incineration to the existing NJ DEP recycling path; and
- Evaluating retail partnerships that support removal and recycling of refrigerators and freezers at the time of new product purchase.

### ***Emerging Technologies and New Initiatives***

Set Top Boxes: In 2012, the program capitalized on the rapid advancements in set top box efficiency, and the participation of national and state level cable and satellite service companies to focus efforts on the dramatic increase of energy consumption within consumer electronics. The set top box program that New Jersey created then remains the leading example of such programs across the country. In FY2015, the Program will increase eligibility requirements for qualifying high efficiency set top boxes to the new ENERGY STAR 4.1 specification. This change reflects recent increased voluntary agreements by the industry to achieve a minimum ENERGY STAR 3.0 threshold of performance. The Program will continue to identify opportunities for cross-cutting NJCEP program promotion through ENERGY STAR qualified set top box service providers.

High Efficiency Clothes Dryers: Since 2010, the Program has been successful in advancing a consortium of efficiency programs, manufacturers, and the ENERGY STAR Program in the introduction of super-efficient clothes dryer to the North American market and dryers were added to the suite of products carrying the ENERGY STAR label. In FY2015, the Program will provide incentives for qualified dryers meeting the new ENERGY STAR V 1.0 specification released in May 2014 and those meeting the even more efficient 2014 ENERGY STAR Emerging Technology Award criteria.

### ***CFL Recycling***

Following the voluntary initiation of an on-site CFL recycling program by a major NJ retailer in 2008, the Program’s FY2015 markdown solicitation’s proposal scoring system will continue to provide a strong preference for proposals for

mark downs that include a recycling option. The Program will also work with the other NJ retailers to offer CFL recycling.

### ***Special Events***

The Program will participate in several NJ based Earth Day events.

### ***National Meetings***

Program staff will attend the National ENERGY STAR Lighting, Appliance and Consumer Electronics Partners Meetings to showcase New Jersey's innovative work on efficient products, to learn new best practices to incorporate with the program, and to meet with national manufacturers and retailers to discuss New Jersey promotions.

## **Quality Control Provisions**

For promotions featuring customer rebates, documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all rebate program participants. All applications are reviewed as they are processed for verification of the documentation that the equipment meets program requirements.

Each application and its information are entered into a database that allows checking for duplicate applicants through an equipment serial number comparison. On an ongoing basis, 2-5% of all rebate applications are selected for a quality assurance review and/or follow-up telephone customer survey to verify the information on the application and to confirm that the rebate was received. In addition to the above, the Energy Efficient Product Program field representatives visit the participating storefronts to verify that Program products have been received and have been displayed properly according to program requirements. If necessary they will help unpack the products, and put them on display with the required program materials, as well as train sales staff about Program rebates and the energy savings a customer might expect from purchasing a Program product. Performance reports are provided to the program managers to assist in developing future promotions and selecting the most effective proposals.

## **Budget**

A detailed budget for this program for FY2015 is attached in Appendix B.

## **Goals and Energy Savings**

Program goals are as follows:

- Achieve approximately 243,119 in Lifetime DTh savings or the conversion to accepted equivalents such as MMBtu;
- Achieve approximately 1,339,454 in Lifetime MWh savings;
- Achieve sales and distribution in excess of 5 million efficient lighting products in NJ in FY2015;
- Provide approximately 27,000 incentives for clothes washers, refrigerators and clothes dryers;
- Remove approximately 12,000 old, inefficient refrigerators and freezers from NJ homes;
- Provide approximately 30,000 rebates for high efficiency set top boxes; and
- Provide efficient products distribution and customer outreach through creative partners.

## **New Jersey's Clean Energy Program™**

### **FY2015 Existing Homes Program**

NJ Home Performance with ENERGY STAR®

#### **Program Description**

Home Performance with ENERGY STAR (HPwES) is a national home performance improvement program developed by the Environmental Protection Agency (EPA) and the Department of Energy (DOE). HPwES helps qualified contractors offer comprehensive energy efficiency improvement packages for existing homes based on sound building science principles that produce predictable savings and improve energy efficiency, comfort, safety, and durability.

The New Jersey Home Performance with ENERGY STAR program (Program) was built on two parallel delivery strategies. Over the past several years, the Program has provided information, education, and incentives directly to participants to encourage them to undertake whole-house energy efficiency improvements to their homes. The Program also has provided contractors with the training and the Building Performance Institute (BPI) GoldStar Contractor Program qualifications necessary to consistently achieve comprehensive energy savings in existing homes. The contractor recruitment and training element of the Program has successfully trained and approved over 200 BPI accredited / GoldStar qualified contractors.

The Program encourages contractors (primarily insulation contractors, HVAC contractors, and remodelers) to pursue an integrated, whole house approach to energy efficiency and home improvement. Participating contractors must meet BPI GoldStar Contractor Program requirements including a requirement that at least one staff member hold BPI certification and that at least two different certification types are held. BPI certifications are based on national standards that ensure that assessors have the skills required to identify and realize savings opportunities and that best practices are met.

The Program has supported the development of a qualified and robust contractor network, contributing to local job growth and boosting local economies. During FY2015, the Program will serve over 4,000 homes/multi-family units in the Program through a combination of:

- Offering incentives to both participants and contractors;
- Offering zero percent interest loans to qualified participants through participating NJ Utilities or directly through the Program;

- Streamlining and implementing automation of processes in order to reduce Program support costs, and to simplify the Program for contractors and participants, including allowing contractors to self-evaluate the energy savings and incentive qualifications and “Auto Proceed” with the Work Scope and claim funding for their projects.
- Providing partial reimbursement for annual BPI GoldStar Contractor Program fees to encourage contractors to participate in the program.
- Continuing to offer contractor training on the Program software and procedures.
- Ensuring participants receive contracted energy efficiency services based on BPI national standards;
- Continuing to conduct Quality Assurance inspections; and
- Continuing to effectively partner with NJ’s investor owned utilities to leverage additional resources and offers.

## **Current Target Market / Eligibility**

The Program is designed to serve existing New Jersey households across all income categories, but particularly the broad market not eligible for low-income program services. The Program targets customers served by an investor-owned utility that reside in existing one, two, three and four-family homes; either attached or detached, and multi-family buildings which are three stories or less. . If available in FY2015 through the use of State Energy Program (SEP) funding, , residential customers using oil, propane and non-investor owned (municipal) electric are eligible for participation until that funding is expended. Should any applications be processed under SEP, the fee for processing these applications will be charged to NJCEP. The Program will also continue to coordinate with the programs funded by investor-owned utilities.

## **Program Implementation**

To initiate participation in the Program, a customer requests an assessment performed by a NJ HPwES registered, and Building Performance Institute (BPI) accredited and certified, contractor. In addition to checking for health and safety issues, the assessment includes recommendations for appropriate energy efficiency improvements relevant to the home. Contractors are trained to promote the installation of comprehensive energy efficiency improvement measures, which may be eligible for Program incentives and financing incentives based upon the total energy savings (TES) estimated for the recommended work scope.

Participating contractors must employ properly trained staff, and must allow inspection of work performed by the Program to ensure that all measures are properly installed and safety precautions are observed. Only contractor firms which are GoldStar Qualified by BPI may participate in the program. These company GoldStar Contractor Program qualification and individual employee certification requirements provide assurance to both participants and the Program as to basic worker competence, that all cost-effective savings opportunities have been identified, and that any health and safety considerations are also included in the report of recommended actions. Participating contractors must guarantee all work, and abide by BPI standards governing health and safety, work quality, insurance coverage, customer service, and complaint resolution.

## **Multi-Family Buildings**

The EPA has determined that small multi-family (MF) building developments may participate in HPwES. The program defines eligibility as buildings that:

- Are no more than three stories high,
- Have single ownership,
- Can provide total building energy usage accessible through individual metering of the units within the multifamily structure, or a master meter at the building (as opposed to sites with multiple buildings heated by a central heating plant),
- Are made up of five or more units in a single building, or multiple buildings (each with five or more units), within a single geographic boundary and with a single property management structure.

Honeywell coordinates with TRC, the Commercial and Industrial (C&I) Market Manager so that Multi-family facilities that do not meet these criteria fall into the C&I Program for Energy Efficient measures.

The total incentive amount for a multi-family project must not exceed 50% of the total costs of approved measures. If the total multi-family project incentive based on the above structure yields an amount greater than 50% of the costs of approved measures, the incentive amount offered will be lowered to the 50% maximum.

The program work scopes **must** consider a whole building approach to be approved. Individual units within a multi-family structure or development are not

eligible for the program independently of the entire building or development; however, they may take advantage of other NJCEP offerings, such as the *WARM* and *COOL*Advantage programs.

Townhouses, as defined by the New Jersey Residential Code<sup>14</sup>, are considered single family homes, and as such the same incentive levels given to single family homes will apply to townhouses.

The Program will work with the contractor of a multi-family project to ensure proper project assessment and approval process. Multi-family buildings are to be addressed in accordance with the BPI Multi-family Building Standards. The Program will only approve such projects for contractors that have at least one staff member holding BPI Multi-family certification.

## **Program Incentives**

Two types of incentives are offered by the program to address both the demand and supply side of the program participation equation:

- Rebates and loans to encourage customer participation and promote energy savings; and
- Incentives to encourage contractor participation and deliver projects that provide energy savings, comfort, plus healthy and safe homes.

Further, incentives are structured to promote comprehensive savings with the highest incentive offered for the greatest energy savings, as well as to accommodate those who participate in other NJ energy efficiency programs. For example, it is possible for a customer to participate in the program by installing tier 2 thermal envelope measures (such as air sealing and insulation) and then at a later date continue along the journey of greater home efficiency by installing properly sized HVAC equipment and applying to *WARM* and/or *COOL*Advantage. Since participants are free to pick and choose among the comprehensive work scope recommendations provided by the participating program contractor, the incentive structure is intended to reward participants who pursue the highest possible savings, and to reward contractors for promoting a comprehensive set of recommendations.

The basic tiered structure has been maintained as below.

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<sup>14</sup> NJ IRC R202: Townhouse: A single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with open space on at least two sides

- Tier 1: Energy audit only and no incentives
- Tier 2: at least 10% but less than 20% estimated Total Energy Savings (TES)
- Tier 3, Level 1: at least 20% but less than 25% estimated Total Energy Savings (TES)
- Tier 3, Level 2: at least 25% estimated Total Energy Savings (TES)

The TES estimates will be determined by use of the Program's software tool (CSG's Real Home Analyzer). Regardless of Tier, BPI GoldStar Contractor Program requirements will and must be enforced, including prohibiting air sealing without first addressing relevant health/safety issues such as failing spillage/back draft testing, and requiring mechanical ventilation to ensure adequate indoor air quality to meet ASHRAE and BPI ventilation requirements.

The following table presents the incentive structure for FY2015.

**Table 7: NJ HPwES FY2015 Incentives and Requirements**

INCENTIVE TIER	REQUIREMENTS	CUSTOMER INCENTIVE	CONTRACTOR INCENTIVE
Tier 1	Energy audit only	No incentives	No incentives
Tier 2	<p>Estimated total energy savings from all work must total at least 10% but less than 20%.</p> <p>Must install air sealing.</p> <p>May install insulation and may also install duct sealing and duct insulation measures.</p> <p>Participants may also include water heater measures from the Eligible Measures List.</p>	<p>For Single Family homes, cash rebate of 50% of the costs of the measures used to calculate TES up to \$2,000, and up to \$5,000 loan at 0% where a utility financing offer is unavailable;</p> <p>For eligible Multi-Family properties, cash rebate of 50% of the costs of the measures used to calculate TES up to \$500 per unit.</p>	<p>Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, a \$700 production incentive will be paid to the contractor.</p> <p>For multifamily projects, the contractors will be paid a \$50 production incentive per unit.</p>
Tier 3	<p><b>Level 1.</b></p> <p>Estimated total energy savings from all work must total at least 20% but less than 25%.</p> <p>Must install at least two measures including air sealing from the Eligible Measures List.</p>	<p>For Single Family homes, cash rebate of 50% of the costs of the measures used to calculate TES up to \$4,000, and up to \$10,000 loan at 0% where a utility financing offer is unavailable;</p> <p>For eligible Multi-Family properties, cash rebate of 50% of the costs of the measures used to calculate TES up to \$1,000 per unit.</p>	<p>Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, a \$700 production incentive will be paid to the contractor.</p> <p>For multifamily projects, the contractors will be paid a \$50 production incentive per unit.</p>
	<p><b>Level 2.</b></p> <p>Estimated total energy savings from all work must total at least 25%.</p> <p>Must install at least two measures including air sealing from the Eligible Measures List.</p>	<p>For Single Family homes, cash rebate of 50% of the costs of the measures used to calculate TES up to \$5,000, and up to \$10,000 loan at 0% where a utility financing offer is unavailable; For eligible Multi-Family properties, cash rebate of 50% of the costs of the measures used to calculate TES up to \$1,500 per unit.</p>	<p>Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, a \$700 production incentive will be paid to the contractor.</p> <p>For multifamily projects, the contractors will be paid a \$50 production incentive per unit.</p>

**Table 7: NJ HPwES Incentives and Requirements Notes:**

1. NJ utilities may offer a 0% loan or on-bill repayment plan up to \$10,000 for Tier 3 projects and/or \$5,000 for Tier 2 projects to underwrite the non-rebated portion of the customer cost for HPwES projects in their service territories. NJCEP will offer a 0% loan for HPwES work for any participants where a utility loan or on-bill repayment program is not in place or in instances where a utility customer has been denied through the utility program.
2. NJ utilities may fund HPwES incentives for Tier 3 and/or Tier 2 projects in their service territories. NJCEP will continue to provide incentives for any project where a utility incentive program is not in place or does not cover the full incentive amount due as scheduled in the table above.
3. The Market Manager will coordinate with the Program Coordinator and the Office of Clean Energy to process and pay incentives from funds supplied by other sources as they may become available.
4. Appliances, lighting, doors, and windows are not measures eligible for Program incentives.
5. The measures used to calculate TES may also include health & safety measures and qualified accessories, as listed on the NJ HPwES Eligible Measures document, as a component to the installations of Eligible Measures.
6. To accelerate consumer awareness while leveraging private investment through program marketing, the Market Manager has set the co-op marketing percentage at 50% of qualifying advertising with a cap of \$75,000 per contractor. Details regarding co-op advertising requirements can be found in the Marketing section of this compliance filing.
7. Projects will continue to have expiration dates. The contractor will need to re-submit projects to the program following the Auto Proceed process for projects not completed and submitted to the program prior to their expiration date, and will be eligible for the incentive levels available at the time of resubmittal.
8. The Contractor production incentive will be eliminated if the project fails an initial quality control inspection. In addition, the contractor will be locked out of the Auto Proceed process if project issues remain unresolved for more than 30-days from the time they are notified of the failed inspection. As soon as the issues are resolved, the contractor will be unlocked from the software. The elimination of the contractor incentive will not be applied to new contractors for their first ten inspections.
9. Incentives are payable only upon satisfactory project completion.
10. A NJ homeowner may apply for a second HPwES project at the same site (home/townhouse) only under the following conditions: 1) The contractor must perform a new audit based on the existing conditions of the home after the first completed HPwES project; and 2) The total incentives from both projects cannot exceed current HPwES incentives caps based on the second project's estimated total energy savings (TES). These rules only apply to a single homeowner for the length of the home ownership. A NJ homeowner may apply for a second HPwES project at a different site (home/townhouse)

To support a robust contractor community, the Program will offer contractor reimbursement for New Jersey BPI GoldStar Contractor Program annual fees and support BPI training and sales trainings, as indicated below.

1. The Program will offer New Jersey BPI annual GoldStar Contractor Program reimbursements for all participating GoldStar contractors who have completed at least 10 projects during FY2015. The New Jersey BPI GoldStar Contractor Program fee reimbursement will be 25% of the annual New Jersey BPI fee, up to a maximum of \$3,000, and will be processed upon presentation of the contractor's paid invoice showing the full amount of the GoldStar annual fee.
2. Training support will be available for the following types of trainings:
  - i. The Program will support sales training webinars to help contractors learn how to best sell HPwES features and benefits to homeowners.
  - ii. The Program will also continue to support Continuing Education requirement classes for contractors who already have BPI certification.

## Other

- As noted, some NJ utilities are coordinating with the New Jersey Home Performance with ENERGY STAR Program to provide either 0% interest loans or on-bill repayment. The Market Manager will continue to work with the NJ utilities to leverage these and any other applicable utility incentives in FY2014.
- The Market Manager will continue to work with the New Jersey Credit Union League (NJCUL) to offer a NJ Credit Union 0% loan option. This loan option for HPwES is offered to any program participant where a utility loan or on-bill repayment program is not in place. Nominal customer incentives will be provided by the NJ CUL from a portion of their administrative fee. These incentives would be issued to consumers by NJCUL to motivate them to gravitate towards loan products with more favorable terms to the program. This incentive will not be considered as a discount to the contractor proposed HPwES contract with the homeowner.
- The Market Manager will continue to evaluate new technologies as they become available. Through a new technology screening process, the Market Manager will develop pilot applications as budget allows and as they fit into the overall program strategy.
- Customers replacing heating and/or central cooling systems who receive incentives on their new HVAC systems under the NJCEP HPwES Program may not apply for or receive additional incentives from the NJCEP HVAC program.

## Quality Control Provisions

The Program will conduct Quality Assurance Inspections of at least 10% of all jobs completed. Typically, there is a 100% inspection rate for the first 10 jobs that each contractor performs, with the percentage dropping for subsequent jobs in inverse proportion to the level of contractor performance. These inspections guard against misuse of Program funds. If a job, or an important aspect of the job, fails, a Quality Assurance Inspection Report will be given to the contractor which details the necessary corrective action that must be taken. Once the corrective work is done, a Quality Assurance Inspection Report must be signed by the contractor and customer and sent to the Program, which may schedule a re-inspection to ensure compliance. Contractors that are not meeting Program standards will be subject to the Contractor Remediation Procedures which could include denial of access to the Program's software tool (CSG's Real Home Analyzer), removal from the Auto Proceed process and ultimately termination from the program. The Market Manager will continue to work with contractors to resolve inspection failures as quickly and reasonably as possible.

The integration of these procedures, along with contractor incentives reductions for failed QA inspections, is expected to lower the overall percentage of projects that must receive an inspection from the Program, recognize and reward high performing contractors, and significantly reduce overall Program administration costs.

## Budget

A detailed budget for this program during the FY2015 is attached in Appendix B.

## Goals and Energy Savings

The goals for FY2015 for the HPwES Program are as follows:

### **Single Family**

- Achieve approximately 2,018,104 in Lifetime DTh savings or the conversion to accepted equivalents such as MMBtu;
- Achieve approximately 41,549 in Lifetime MWh savings or the conversion to accepted equivalents such as MMBtu;
- Tier 3, level 1 and 2: Approximately 5,530 participants including FY 2014 carryover will receive improvement packages, such as air sealing, insulation and/or heating system replacements, that achieve at least 20% TES, and a portion of which will achieve at least 25% TES.

***Multi-Family***

- Tier 3, level 1 and 2: Approximately 150 multi-family units will receive improvement packages, such as air sealing, insulation and/or heating system replacements, that achieve at least 20% TES, and a portion of which will achieve at least 25% TES.

## New Jersey's Clean Energy Program™

### FY2015 Renewable Energy Programs

#### Program Description

New Jersey's Clean Energy Program (NJCEP) offers market services to New Jersey electric utility customers investing in renewable electricity generation. Through the NJCEP program administrative services performed by the Market Manager on behalf of the Office of Clean Energy, the staff works on a daily basis to reduce and remove market barriers to the development of robust and self-sustaining clean energy markets by providing incentives for eligible systems that offset a portion of the initial capital cost, making on site renewable energy generation more affordable and accessible.

The Market Manager also delivers a wide range of market development support services, including consumer education and outreach, inspections, and the facilitation of registration for renewable energy certificates. The market facilitation activities include 'upstream' market outreach and communications to help lay the foundation for long term market growth, including promoting best practices, building the supply base and technical infrastructure, defining and removing structural obstacles to project development, and promoting effective business networks between site hosts, developers, manufacturers and financiers.

There are two programs in the NJCEP Renewable Energy portfolio for FY2015.

#### **1) SREC Registration Program (SRP):**

Provides registration for solar renewable energy certificates (SRECs) for solar projects, including both behind-the-meter and direct grid-supply projects connected to the New Jersey distribution system.

#### **2) Renewable Energy Incentive Program (REIP):**

In Fiscal Year 2015, the REIP program will offer incentive funds for biopower projects and energy storage projects. Currently, the customer-sited wind program is on hold.

## **SREC Registration Program (SRP) – Solar Projects**

### ***Overview of New Jersey's Solar Market***

The solar market in New Jersey remains robust for both residential and non-residential markets. In calendar year 2013, more than 202 MW of new solar capacity was installed in New Jersey. Although this was less than half of the 417 MW of capacity installed in the previous calendar year, the number of projects completed in 2013 reached an all-time high of 6,543. The reduced capacity is primarily due to restrictions placed on the development of large direct grid-supply projects by the Solar Act of 2012, while the higher project completion number attests to the vitality of the behind-the-meter market, primarily driven by the residential projects. Approximately 113 MW of additional capacity was reported as installed as of May 31, 2014, bringing total installed capacity in New Jersey through May 31, 2014 to approximately 1,298 MW.

New Jersey's installed solar capacity is comprised of more than 28,300 projects, with over 90% of the capacity delivered through the SREC Registration Program. These project investments have propelled New Jersey's clean tech growth industry, created several thousand jobs, and enhanced New Jersey's image as a market leader. Among all 50 states, New Jersey is third only to California and Arizona in the amount of solar capacity installed. In addition, through the end of May 2014 the solar project pipeline remains strong with nearly 353 MW of project capacity that has been accepted by the NJCEP Market Manager.

During calendar year 2013, the Market Manager received 7,481 SRP registrations – a decline of approximately 18% from the 9,136 registrations received during 2012. In the first quarter of 2014, the Market Manager received 1,742 SRP registrations, compared with 1,609 received in the first quarter of 2013.

### **Program Description**

In FY2015, the focus of the SRP will be on sustaining the growth of New Jersey's solar markets while communicating accurate, objective information with respect to SREC prices.

The eventual transition to electronic registration and processing and the ongoing requirement that all SRP projects install a revenue grade meter to measure the system output will ultimately allow for a more streamlined and automated registration submittal and acceptance process and will allow the program to manage the robust registration volumes, while reducing costs and improving the experience of program participants.

On July 23, 2012, L. 2012, c. 24 (“Solar Act”) was signed into law by Governor Chris Christie. The Solar Act amends certain aspects of the statute governing generation, interconnection, and financing of renewable energy. Among other actions, the Solar Act requires the New Jersey Board of Public Utilities (“Board”) to conduct proceedings to establish new standards and to develop new programs to implement the directives.

Certain grid-supply projects must receive Board approval of a designation as “connected to the distribution system” in order to receive Solar Renewable Energy Certificates (SRECs) useful in the NJ Renewable Portfolio Standard. The Act provides the Board discretion in approving solar on certain farmland under subsection s while it required the development of an escrow and application process for other grid-supply projects in EY14, EY15 and EY16 under subsection q and requires the Board to determine that relevant criteria are met for projects proposed in EY17 and beyond under subsection r in order to qualify for SRECs.

The Board established a program to provide SRECs to owners of solar electric power generation facilities certified as being located on a brownfield, historic fill area, or properly closed landfill in consultation with the NJDEP and NJEDA. Grid-supply projects meeting these criteria must apply under subsection t. For projects certified under this section, the Board has approved EDC SREC based finance programs to serve as a financial incentive to cover additional costs.

The Market Manager will continue to work closely with Board Staff to administer the processes necessary to register projects in the SREC Registration Program in accordance with directives established by the Board for grid-supply projects. Grid-supply project registrants must work with their EDC and PJM to provide a document to verify that the generating facility is interconnected to the electric distribution system in New Jersey.

In addition the Market Manager will continue to work closely with Board Staff to update and modify SRP registration submittal requirements as necessary to adhere to applicable rule amendments that may occur. Based upon the current rules, the following items are among the requirements of the SREC Registration process:

- SREC Registrations must be received 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 (N.J.A.C. 14:8-2.4(c)).
- SREC Registrants may remedy a project's lack of compliance with the above requirement by revising the SREC Registration packet and resubmitting it to the Market Manager.

- Construction on a solar project may not begin prior to the date of the SRP Acceptance letter. If a revised SRP registration was submitted, then construction of the applicable solar project may not begin prior to the date of the SRP Acceptance letter resulting from the revised registration submittal.
- All solar energy systems eligible to earn SRECs, regardless of size, must report system production based upon readings from a revenue-grade meter (RGM) that meets the American National Standards Institute (ANSI) Standard C12.1-2008.

Please refer to N.J.A.C. 14:8-2.4 for the full rule re-adoption and amendments, including penalties for non-compliance, and to the SRP Guidebook for complete and specific details on processes related to the Market Manager's implementation of these requirements.

## **FY2015 Program Changes**

In response to stakeholder feedback, market conditions, and policy developments, the Market Manager proposes a number of enhancements and changes in the FY2015 Program Plan. These include:

1) A competitive solicitation for energy storage will be administered by the Market Manager. The development of this program began in FY2014 when Board Staff and the Market Manager conducted research and held discussions with interested stakeholders to develop a straw proposal that was issued January 28, 2014 for a solicitation to provide incentives for commercially available application of this technology.

Following public comment and further stakeholder discussion, the Market Manager staff is working with Board Staff to issue a revised straw proposal. Staff will present a proposed solicitation to the Board for review and approval at a regularly scheduled Board meeting that will be based on the revised straw, public comments submitted in response to it, and data compiled from submittals by stakeholders to a Request for Information/Survey.

2) For FY2015, the biopower competitive solicitation will again be administered by the Market Manager. The FY2015 solicitation will be similar to the FY2014 program's solicitation, with the potential for some revisions based on the experiences of FY2014. Staff will present a proposed solicitation to the Board for review and approval at a regularly scheduled Board meeting as was done for the FY2014 solicitation.

3) All solar direct grid-supply projects and behind the meter projects greater than 1 MW must submit a SRP Milestone Reporting Form (Milestone Report) as a baseline with their initial registration packet and then on a quarterly basis following acceptance of the registration. Quarterly Milestone Reports must be submitted to the Market Managers within two weeks after the end of the March 31, June 30, September 30 and December 31 quarters.

4) All biopower projects must submit a Milestone Reporting Form (Milestone Report) as a baseline with their initial application packet and then on a quarterly basis following project approval. Quarterly Milestone Reports must be submitted to the Market Managers within two weeks after the end of the March 31, June 30, September 30 and December 31 quarters.

5) The Market Manager is proposing the following changes to the SRP registration process, which are in alignment with the Chapter 8 Rules:

- Streamline the current SRP Final As-Built forms and process and reduce the amount of paperwork required.
- Expand on the Final As-Built Technical Worksheet to eliminate previously required back up documentation (PV Watts, Shading Summary Report and PV Commissioning Form).
- Work toward a more electronic process using writable forms and auto calculations to ease the paperwork requirements for the installers. This step will serve as an interim step in the transition to the submittal of new SRP registrations via an online process.

Although the PV Watts, Shading Summary Report and PV Commissioning Form would no longer be required, the NJCEP still reserves the right to request a complete copy of production estimates, a full shading report or any relevant documentation from the installer at any time.

6) Develop and implement an online application procedure for new SRP registrations.

## **Target Markets and Eligibility**

Eligible solar technology is defined as systems that utilize semi-conductor technologies to produce electricity directly from sunlight. All systems must meet program requirements regarding equipment certification, proper installation practices and compliance with program procedures and processes. Solar PV systems connected to the distribution system in New Jersey can participate in New Jersey's SRP Program.

Photovoltaic electric systems are well suited to any site with proper orientation, roof or land availability, and a minimum of shading obstacles. The technology is well established, and easy to install with almost no ongoing maintenance required. With its established and growing contractor base and innovative policy framework, New Jersey is well-positioned to continue as a national and global leader in the installation of customer-sited solar systems.

The solar market in New Jersey was completely transitioned to a non-rebated, performance-based incentive structure in 2011. The combination of declining panel prices, more efficient installation techniques, federal tax incentives such as the Federal Investment Tax Credit (ITC) and depreciation, and the SREC market provide sufficient incentives to support solar project economics without the need for rebates.

## **Offerings and Customer Incentives**

In FY2015, the SREC Registration Program (SRP) continues to be available for new solar registrations. Solar generating facilities that are interconnected with the electric distribution system in New Jersey and that meet all applicable rule requirements as well as all SREC Registration Program requirements will be eligible to generate NJ SRECs upon successful completion of all said requirements.

SREC stands for Solar Renewable Energy Certificate and is a tradable certificate that represents all the clean energy benefits of electricity generated from a solar electric system. Each time a solar electric system generates 1,000kWh (1MWh) of electricity, an SREC is issued which can then be sold or traded separately from the power. The revenues from SREC generation can make it easier for individuals and businesses to finance and invest in clean, emission-free solar power.

The New Jersey SREC Registration Program (SRP) provides a means for SRECs to be created and verified. The Generation Attribute Tracking System

(GATS) operated by PJM Environmental Information Services is used for tracking and trading of SRECs and Class I and Class II RECs.

## **REIP Rebate Program – Wind, Biopower and Energy Storage Projects**

### **Wind Program Description**

New Jersey's small wind program has experienced difficulties related to safety, production and consumer protection issues which have led to a hold on the acceptance of new applications.

The BPU has conducted stakeholder meetings while Staff and the Market Managers have researched the consumer protections existing in other state wind incentive programs. The BPU will decide if and when the program will re-open to new applicants.

Meanwhile, the program remains closed to new applications.

### **Biopower Program Description**

The BPU desires to continue to grow the biopower market in New Jersey. To that end, the REIP will continue to offer financial incentives for sustainable biopower projects through additional competitive solicitations. The amount of available funding and the number of solicitations offered in FY2015 will be dependent upon the available incentive funds and market demands. Board staff and the Market Manager will provide advanced notification to the Biopower Technical Working Group and the appropriate NJCEP email distribution lists to notify interested stakeholders of future solicitations and the amount of funding available for each solicitation.

Based upon the Biopower Evaluation Committee recommendations and stakeholder input from the Biopower Technical Working Group regarding the first solicitation issued on February 20, 2014, Board staff and the Market Manager will issue a revised straw proposal to consider some of the changes discussed at the meeting. The FY2015 solicitation which Board staff intends to present to the Board will be similar to the one approved for FY2014 with the potential for some changes resulting from the stakeholder process.

This program is designed to meet the following goals:

- Focus on sustainable biopower projects, defined consistently with the New Jersey RPS definition of biopower as a New Jersey Class I renewable energy resource, which are “ready to build” and can be completed as expeditiously as possible.
- Establish maximum incentive amounts which will allow the limited amount of funds to be committed to a broader number of projects.
- Prioritize facilities that are defined as “public and critical” (see solicitation document for definition) with the goal of keeping critical systems functionally operational during power outages.

The specific eligibility requirements and submittal instructions for each solicitation will be specified within the solicitation. The items listed below are intended to provide an overview of the solicitation process:

- The solicitation relies upon past project eligibility requirements and program application forms, with some revisions. Applications must be submitted by the designated deadline and include all required forms and documents.
- The Market Manager will review all applications for completeness, and will identify incomplete applications as such prior to forwarding all applications to the Solicitation Evaluation Committee, which consists of Board staff, the Market Manager, the Program Coordinator, the NJ DEP and other entities as applicable. Incomplete applications may be evaluated at the discretion of the Committee.
- The Solicitation Evaluation Committee will evaluate the solicitation responses following the Market Manager’s initial review and make recommendations to the Board for incentive commitments. The evaluation criteria and available budget will be described within the solicitation documents.
- The recommendations made by the Solicitation Evaluation Committee will be presented to the Board at one of the Board’s regularly scheduled Agenda meetings. Applicants will be notified in writing of the Board’s determination by the Market Manager following the issuance of a Board Order. Applicants that are awarded an REIP biopower incentive commitment as a result of the competitive solicitation process will have 18 months from the date of the approval letter to complete their project.
- All biopower projects must submit a Milestone Reporting Form (Milestone Report) as a baseline with their initial application packet and then on a

quarterly basis following project approval. Quarterly Milestone Reports must be submitted to the Market Managers within two weeks after the end of the March 31, June 30, September 30 and December 31 quarters.

## **FY2015 Biopower Program Changes**

As previously mentioned, the FY2015 biopower solicitation will draw upon past experiences from the EY2014 solicitation and future recommendations derived through the public stakeholder process. Upon the conclusion of the stakeholder process for each solicitation round, Board staff will present its recommendation on program changes to the Board within the proposed solicitation. For historical reference, the items listed below were included in the FY2014 Biopower solicitation and will be addressed in subsequent solicitations.

- The maximum incentive commitment per project under the FY2014 solicitation was \$750,000 or 30% of the project's total installed cost after deducting other incentives, whichever is less. The maximum incentive per entity was \$1,125,000. An entity is defined as the site host for a project and does not apply to project developers.
- To encourage prompt completion, projects that are completed in less than 12 months from the approval date are eligible to receive 110% of their approved incentive commitment; projects completed in 12 to 18 months from the approval date are eligible for 100% of their approved incentive commitment; and projects requiring a six-month extension beyond the 18-month approval period are eligible for only 90% of their approved incentive commitment.
- Projects that are awarded an incentive commitment equal to the cap established for a given solicitation are eligible for 110% of the cap value if the project is completed in less than 12 months from the approval date.
- Previously, only net metered projects were eligible for REIP Biopower incentives. Based upon discussion during the previous stakeholder meeting held on June 26, 2014, Staff is considering a modification of this requirement.

## **Biopower Target Markets and Eligibility**

Sustainable biopower has the potential of being a significant renewable resource for New Jersey because of the variety of facilities in the state that produce or process large amounts of organic waste while having a high demand for energy. The Market Manager has taken an active role in identifying those industries with the greatest potential for biopower development and has directed its education and outreach efforts toward them.

<b>Target Market</b>	<b>Potential Technologies</b>
Food processing facilities	Anaerobic digestion or gasification of organic waste
Wastewater treatment plants	Anaerobic digestion of wastewater
Dairy farms	Anaerobic digestion of cow manure
Hospitals and healthcare facilities	Gasification of food and medical waste
Hotels	Anaerobic digestion or gasification of food waste
Colleges and universities	Digestion/gasification/pyrolysis of food and other waste
Military installations	Digestion/gasification/pyrolysis of food and other waste
Breweries and wineries	Anaerobic digestion of fermentation wastes

REIP incentives are contingent upon the applicant meeting all program requirements and compliance with all applicable local, state and federal laws, permit requirements and regulations.

Biopower systems are also eligible for Class 1 RECs.

## **Biopower Offerings and Customer Incentives**

The solicitation document will specify the available biopower incentive and eligibility requirements for each round as previously described in the “Biopower Program Description” section. REIP biomass projects will be inspected at a 100% inspection rate to ensure that the equipment described in the paperwork is actually installed at the site.

Although there is no limit on the size of the system itself, a maximum incentive amount for each solicitation will be established as previously noted. Project installation costs utilized in the determination of the alternate payment cap derived from total installation costs will include all documented capital costs to supply and operate the system. Those cost items shall include feedstock collection, fuel conversion technology, storage, refining, power generation, and

monitoring systems. In situations where power generation units or equipment that enhances the performance of power generation units (i.e., siloxane cleaning equipment) are being added to existing biomass-producing systems (i.e., anaerobic digesters), incentive payments will not be made on the value of any existing facilities, but will be applied only to the cost of new equipment.

The incremental costs associated with heat recovery will be eligible for inclusion in the calculation. However, the value of any existing biomass-producing systems (i.e., anaerobic digesters) to which power generation or CHP equipment is being added will not be eligible for inclusion in calculating the total project incentive. Incentive payments will not be made on the value of any existing facilities but will be applied only to the cost of new equipment.

Applicants proposing CHP systems which may operate on a combination of biogas and natural gas will be referred to the CHP incentive program administered by TRC (<http://www.njcleanenergy.com/commercial-industrial/programs/combined-heat-power/combined-heat-power>), since such hybrid systems are expected to be eligible for incentives under that program in FY2015.

Applicants representing public and critical facilities, as defined by the BPU, may wish to review the offering and requirements for the Energy Resiliency Bank (ERB) being established by the BPU and the New Jersey Economic Development Authority to help finance distributed generation projects and water and wastewater treatment plants, hospitals, schools, long term care institutions. Further information on the ERB may be found at: <http://www.nj.gov/bpu/commercial/erb/index.html>.

## **Energy Storage Program Description**

The Office of Clean Energy began developing a new incentive program for energy storage technology during FY2014 that will be implemented in FY2015. Board Staff and the Market Manager held discussions with interested stakeholders to develop program guidelines, incentive structure and target markets. The findings of these stakeholder meetings provided valuable input to a straw proposal for a competitive solicitation process that was issued by Board Staff on January 28, 2014.

Following the submittal of written comments and further discussion at a March 13, 2014 stakeholder meeting, the Market Manager staff is working with Board Staff to issue a revised straw proposal. The revised straw proposal, the public comments submitted in response to it and data compiled from a Request for Information/Survey of energy storage opportunities submitted by the stakeholders will form the basis of a proposed competitive solicitation that Staff

will present to the Board for its review and approval at one of the regularly scheduled Board Agenda meetings.

The responses to the solicitation will first be reviewed for completeness by the Market Manager before being reviewed by a Solicitation Evaluation Committee which will consist of the Office of Clean Energy, the Market Manager, the Program Coordinator and other entities as applicable. The awards will be based upon the evaluation criteria established within the solicitation. All incentive awards recommended by the Solicitation Evaluation Committee will require approval by the Board at one of the regularly scheduled Board Agenda meetings prior to the issuance of the incentive commitment. The Energy Storage competitive solicitation process will mirror the Biopower competitive solicitation process.

## **Planned Program Implementation Activities for FY2015**

The Renewable Energy Programs will have the following areas of focus in FY2015:

- 1) Sustain the growth of New Jersey's solar markets, while communicating accurate and objective information on market development activity and NJ SREC prices.
- 2) Manage internal resources to redirect efforts toward market development activities that are complimentary to NJCEP objectives and Energy Master Plan goals. Focus market development efforts on biopower and energy storage projects.
- 3) Continue to administer carryover biopower rebate projects approved under the previous REIP biopower program.
- 4) Continue working with the appropriate stakeholder working groups to follow the process necessary to issue a competitive solicitation for the REIP Biopower program and the REIP Energy Storage Program as described within this plan.

In FY2015 the Market Manager will administer the programs as summarized below:

### ***New SREC Registrations and Final As-Built Paperwork for all SRP Projects***

The rules governing the submittal of new SREC Program Registrations and Final As-Built paperwork may be referenced at N.J.A.C. 14:8-2.4. Amendments to these rules were approved by the Board on May 1, 2012 and became effective

upon publication in the New Jersey Register on June 4, 2012. The SRP guidelines will continue to conform to these rules and will be modified as required to reflect any changes to the rules as they become effective. These guidelines are contained within the SRP registration forms and checklists posted on the NJCEP website and within the SRP Guidebook which is also posted on the NJCEP website.

N.J.S.A. 45:5A-2(d) states that solar PV systems installations are by definition electrical work and requires any person engaged in installing, erecting, or repairing such equipment to be an electrical contractor under the provisions of the Act. The Market Manager will continue to collect the name of the NJ electrical license holder and NJ license number on the SREC 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.

***Final As-Built Paperwork for all REIP Rebate Projects***

Requirements for submitting Final As-Built paperwork may be found on the NJCEP website.

***Extension Policy for SRP Projects***

To remain consistent with the amendments to the Renewable Portfolio Standard at N.J.A.C. 14:8-2.4, the extension policy for SRP projects will require only the documentation that supports the likely completion of the project. A complete description of the extension policy for SRP projects may be found in the SRP Guidebook, which is available on the NJCEP website.

***Extension Policy for REIP Biopower Projects Approved Prior To 7/1/13***

The Market 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. If granted, the extension will be provided for a period of six (6) months from the expiration date of the initial 18-month approval period. Only one extension may be granted by the Market Manager for any project.

***Other Program Services***

In addition to incentives, the Market Manager will continue to offer the following additional services to stimulate interest in renewable energy projects, improve the technical quality and performance associated with installations, improve market transparency, build the NJ renewable community, support the development of new policies which facilitate long term growth, and promote New Jersey and its clean energy efforts to broader national audiences.

- 1) Provide inbound call center to educate the public on the New Jersey market and programs, and to provide customer support to installers and project owners on project status, and troubleshooting issues.
- 2) Facilitate industry working groups, including the Renewable Energy Committee meetings, the solar technical, the biopower, and the energy storage working groups. The small wind working group will reconvene if and when the program reopens.
- 3) Support BPU marketing efforts in providing quick response to support media inquiries, and ad hoc requests for market statistics.
- 4) Perform outreach efforts to promote all renewable markets, including speaking engagement and presentations.
- 5) Monitor policy development processes and inform the market of key outstanding questions and decisions (e.g. new RPS levels, net metering, Community Energy) and translate new policies into program operational procedures as required.
- 6) Provide timely and accurate market information on past, current, and projected renewable energy project development with respect to the fulfillment of New Jersey RPS obligations: number of projected REC and SREC requirements in each year, number of new certificates created and traded, and retired over time, SREC trading prices and volumes, and the project pipeline based on SREC registrations and REIP project incentive applications and approvals. Ongoing analysis and regular reporting on market activity and trends will enhance market transparency, and ready access to data will help create an efficient market for Renewable Energy Certificates and should lower the ultimate costs for compliance with the RPS requirements.
- 7) Provide information to increase awareness of renewable technologies and promote best practices.

## **Quality Control / Quality Assurance Provisions**

All renewable energy systems facilitated through the REIP and SRP programs must be installed in accordance with program equipment requirements, program performance requirements, manufacturer specifications, and provisions of the National Electrical Code (NEC). The Installer is required to have a Home Improvement Contractor (HIC) license and/or an Electrical Contractor License for residential applications.

Quality Control (QC) serves as a check to ensure specific parameters of a renewable energy installation have been achieved. Quality Assurance (QA) defines processes that ensure quality standards using efficient and cost effective mechanisms.

The QA protocol requires greater diligence on the part of the “in-office” processing team to ensure the “Final As-Built” project information submitted as part of the final application paperwork is complete, correct and in compliance with all program requirements. This review process is critical for the success of the QA program, which complements the on-site QC inspection process to ensure program compliance.

The Market Manager staff will perform on-site verifications for approximately 10% of the SREC Registration Program projects. An on-site verification will be performed for all grid-supply projects. The Market Manager may also conduct on-site verifications upon written request from the OCE or PJM-GATS to verify the cause for high meter reads or system production reading anomalies. The Market Manager will submit written explanation of the findings to the OCE and PJM-GATS. The scope of work for on-site verifications will include the following items:

- Collecting inverter make and model information
- Verifying inverter operation and recording output reading
- Verifying the revenue grade meter and obtaining a reading
- An estimation approach to panel tilt and orientation versus the more precise measurement approach.

The Market Manager staff will continue to randomly select and review 25% of the projects that receive an inspection waiver to perform a more in depth paperwork review. The Market Manger reserves the right to request additional information, including PV watts, shading analysis, photos, etc. All other registrations will be reviewed only for panel count and manufacturers information.

In putting greater reliance on the QA model and more reliance on an honor system in the industry, it should be recognized that a layer of consumer protection may be sacrificed, and that despite best efforts, the chances of incorrect installation data may increase. Negative publicity which may result from the lack of oversight may ultimately damage the reputation of stakeholders in the industry. With increased reliance on contractor self-reporting, the Board granted the Market Manager the authority to implement Contractor Remediation Procedures against contractors who willingly and consistently violate program rules or misrepresent information. The Contractor Remediation Procedures were approved on October 5, 2010 and became effective on November 7, 2010 for all NJ Clean Energy Programs.

## Budget

A detailed budget for the FY2015 Honeywell Renewable Energy programs is attached in Appendix B.

## Goals and Renewable Generation

The REIP program supports the goals outlined in the New Jersey Energy Master Plan, which defines aspirational goals for renewable energy technologies which are updated periodically.

In FY2015, the NJCEP renewable energy programs support the goals outlined in New Jersey's Renewable Energy Portfolio Standards (N.J.A.C. 14:8-2):

### RPS Requirements for Energy Years 2014-16

<b>Energy Year</b>	<b>Solar Electric*</b>	<b>Class I Renewable Energy</b>	<b>Class II Renewable Energy</b>
June 1, 2013-May 31, 2014	2.05%	7.977%	2.5%
June 1, 2014-May 31, 2015	2.45%	8.807%	2.5%
June 1, 2015-May 31, 2016	2.75%	9.649%	2.5%

\*The Solar Act signed by Governor Christie on July 23, 2012 replaced the gigawatt-hour goals of the RPS with percentage-based goals.

## **Appendix A: FY 2015 Residential & Renewable Marketing Plan**

### **Executive Summary**

The Honeywell Market Manager Team has outlined a high level approach for continued support and consumer/contractor participation in *New Jersey's Clean Energy Program* as part of the Fiscal Year 2015 (FY15) program year. Honeywell's marketing plan includes event support, marketing materials for consumers and contractors, point of purchase materials for upstream and midstream incentive partners, and contractor cooperative marketing incentives derived from analysis of past program participation. Additionally, Honeywell is developing a marketing plan that is data driven, relies on NJ based customer and market research, drives strategic planning and helps develop messages based on testing and customer behaviors.

To support *New Jersey's Clean Energy Program* (NJCEP), the program staff is planning a FY15 marketing and communications effort that will:

1. Increase energy savings (in kWh's) in the residential sector for new and existing homes.
2. Conduct customer research and data analysis to further understand consumer insights and behavior of NJ residents and potential program participants.
3. Integrate and cross-promote residential energy efficiency and renewable energy programs, as well as commercial and industrial programs offered by *New Jersey's Clean Energy Program* and the New Jersey Board of Public Utilities as appropriate.
4. Increase awareness and participation by New Jersey residents of current and future energy efficiency and renewable energy offerings.
5. Use an integrated communications plan that includes broad based customer education and public relations to effectively communicate a "whole house" approach to maximize energy savings.
6. Work with utilities to coordinate and promote their programs, regional and national agencies; e.g., EPA, DOE, local and national stakeholders, and trade allies, including manufacturers and distributors, to cross-promote and market services where applicable.
7. Increase workforce development and economic growth opportunities in the energy efficiency and renewable energy industries.
8. Demonstrate the value of *New Jersey's Clean Energy Program* to combat energy prices and to help mitigate climate change.

## **FY15 Marketing Plan**

This marketing plan will include:

- Conducting cost-effective marketing tactics that will generate program leads.
- Develop mass media campaigns that will raise overall program awareness directing consumers to the NJCEP website; guiding residents for more information.
- Enhancing contractor participation by offering training to contractors and builders on a quarterly basis. Marketing support will continue to reinforce the use of direct mail and print ad templates as additional contractor incentives for program participation.
- Supporting municipalities to help drive residential program participation, including increasing local involvement through distribution of printed materials and targeting local and community opportunities with the widest and most relevant audiences.
- Evaluate event participation based on potential audience size and interest in NJCEP participation.

### ***Summary of Scope of Work***

Below are the expectations of the New Jersey Board of Public Utilities for the Honeywell Market Manager marketing and communications team to conduct and produce as part of the marketing and communications plan.

### **Customer Research and Data Analysis**

Honeywell has accounted for analysis and research as part of the FY 2015 marketing plan. Honeywell understands that successful marketing is driven from research, key analytics, and segmentation to identify customers likely to participate in residential programs. As part of our recruitment approach to energy efficient program marketing, Honeywell will conduct research and analysis of potential program participants to understand key drivers that lead to energy efficient behaviors that will ultimately deliver results that are highly cost effective. Honeywell will utilize a mix of best practices to eliminate high cost per lead rates and identify successful, cost-effective outreach tactics necessary for program marketing and awareness. This includes the ongoing analysis and monitoring of campaign performance, response rates and reviewing leads generated by each tactic against their contribution and cost to the overall plan.

The following tasks will be completed on an ongoing basis in support of each residential energy efficiency program and renewable energy program, as needed.

- Collateral – Program brochures, fact sheets, case studies, white papers, applications, signage, monthly e-blasts, etc.

- Public Relations – Event support, press releases, maintenances of trade show displays, awards and photography expenses.
- Contingency Reserve - A small reserve for special requests.
- Website Maintenance – Updates to content, graphics, notices, etc.
- Program Specific Requirements – Point of purchase displays, Spanish translations, etc.

Tracking and Reporting – ongoing tracking and reporting of all marketing efforts will be presented to Board staff and will support strategic development and planning throughout the year.

#### Mass Media & Digital Advertising

Tactics and media buys will be evaluated on an ongoing basis and recommendations for future campaigns will be provided to Board staff. Analysis and review will be tracked and assessed for each campaign. Below are some (but not limited to) examples of marketing tactics that will be considered.

- Digital media
- Radio
- Billboards
- Transit

#### Direct Marketing

Direct mail campaigns will be used to target New Jersey homeowners that have not previously participated in residential programs, as well as to target previous participants that may be likely to participate in other programs. Mail plans will be based on seasonality and program specific energy savings. Unique 800 numbers and vanity URLs will be used to track response. We will then match the address lists with program completions to track the conversion rates. Specific messaging will be identified through the research that will be conducted.

#### Social Media

Social media will be used as a component of the overall marketing mix to help drive program awareness. However, social media will not be relied on as a primary recruitment tactic, rather a secondary support function for greater program participation.

#### eBlasts

Targeted Email communications will be implemented as a cost-effective means for program outreach. Email blasts will contain relevant program information and links that take consumers directly to the NJCEP website. Honeywell will leverage existing email addresses available, and/or purchase additional email addresses as needed. Email campaigns will be sent in waves and include appropriate opt out requests. . Specific messaging will be identified through the research that will be conducted.

#### ***Variable Marketing Costs***

As with previous program years, variable marketing costs will be reviewed by the NJCEP Marketing Communications Coordinator, and Program coordinator prior to spend. Variable marketing costs will include media buys, program production materials, collateral items, and additional materials as requested.

***Trade Shows and Workshops***

Trade shows and/or monthly meetings have been valuable to the awareness of *New Jersey's Clean Energy Program*. The following table details the conferences that the Market Manager expects to support in FY 2015, which fall under the fixed marketing budget. Events of equivalent cost and scope may be supported in exchange or in place of any of these events. All other shows that program staff participates in will be reviewed on a case by case basis, approved by Board staff and funded through marketing contingency funds.

<b>Event</b>	<b>Sponsor</b>
2014 Governor's Conference on Housing and Development	Governor, NJHMFA, NJDCA
2014 New Jersey League of Municipalities	NJLM
2014 Association of New Jersey Environmental Commission	ANJEC
2015 Atlantic Builders Convention	New Jersey Builders Association
2015 AEA Utility Management Conference	AEA (Association of Environmental Authorities)
2015 NJ Association of Counties	NJAC
2015 New Jersey Conference of Mayors	New Jersey Conference of Mayors

**Call Center**

Honeywell's Call Center responds to customer and vendor inquiries and questions regarding residential and renewable programs and applications. Callers are prompted through an automated menu to select their area of interest and are then transferred to an appropriate customer service representative (CSR). Honeywell maintains sufficient CSR staff to support a 90% live call answer rate, and to return calls to customers leaving voice mail within 24 hours. Honeywell reports the live call service level weekly and makes staffing adjustments based on monthly results.

**Budget**

A detailed budget for this program for FY2015 is attached in Appendix B.

**Conclusion**

In FY15 Honeywell is proposing NJ based research into the drivers, motivating factors and behaviors of potential program participants. We will submit detailed plan and timeline for the research component of the FY15 marketing plan for BPU staff review

and approval. We anticipate that this research will be conducted and completed by the end of 2014.

The output of this research will help the Honeywell team develop an enhanced marketing plan that strategically utilizes fresh messaging, intelligent customer segmentation and potential behavioral modification targets that will inform the marketing of residential energy efficiency programs going forward. Further, upon review and coordination with BPU staff, Honeywell envisions that the research output could suggest short term improvements to the balance of the FY15 plan.

## Appendix B: FY2015 Residential Energy Efficiency and Renewable Programs Budgets

Table 1: FY 2015 Renewable Energy Programs Budget

Program	Total	Administration, IT and Program Development	Sales & Marketing	Training	Rebates, Grants, and Other Direct Incentives	Rebate Processing, Inspections and Other Quality Control	Performance Incentives	Evaluation and Related Research
REIP	\$17,786,240.68	\$1,376,206.92	\$0.00	\$0.00	\$14,503,700.00	\$1,906,333.76	\$0.00	\$0.00
Marketing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub Total RE Programs	\$17,786,240.68	\$1,376,206.92	\$0.00	\$0.00	\$14,503,700.00	\$1,906,333.76	\$0.00	\$0.00

Table 2: FY 2015 Residential Efficiency Programs Budget

Program	Total	Administration, IT and Program Development	Sales & Marketing	Training	Rebates, Grants, and Other Direct Incentives	Rebate Processing, Inspections and Other Quality Control	Performance Incentives	Evaluation and Related Research
Residential HVAC - Electric & Gas	\$14,918,261.75	\$1,306,764.00	\$0.00	\$755,203.84	\$11,326,815.07	\$1,529,478.84	\$0.00	\$0.00
Residential New Construction	\$19,945,445.33	\$1,249,392.00	\$0.00	\$0.00	\$18,016,500.00	\$679,553.33	\$0.00	\$0.00
Energy Efficient Products	\$20,101,711.09	\$2,001,756.59	\$0.00	\$0.00	\$17,667,050.00	\$432,904.50	\$0.00	\$0.00
Home Performance with Energy Star	\$43,222,934.12	\$1,044,421.08	\$0.00	\$0.00	\$40,242,274.71	\$1,936,238.33	\$0.00	\$0.00
Marketing	\$1,309,984.00	\$0.00	\$1,309,984.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub Total Residential Programs	\$99,498,336.29	\$5,602,333.67	\$1,309,984.00	\$755,203.84	\$87,252,639.78	\$4,578,175.00	\$0.00	\$0.00

## Appendix C: FY2015 Energy Savings Table

Efficiency Savings By Program and Category		100% of Budgeted Goal							
		Annual		Lifetime					
		Measures	MWh	DTh	Measure Lives	MWh	DTh		
<b>All Programs</b>			273,282	556,423		1,903,157	10,817,194		
Energy Efficient Products		5,259,000	244,690	22,102		1,339,454	243,119		
Residential New Construction		11,442	18,148	206,540		362,964	4,130,803		
Heating, Ventilation and Air Conditioning		28,592	8,366	226,876		159,190	4,425,168		
Home Performance with ENERGY STAR		5,680	2,077	100,905		41,549	2,018,104		
<b>Total FY2015 NJCEP Energy Efficiency:</b>			Annual kWh	Annual Therms	Measure Lives	Lifetime MWh Saved	Lifetime MMBtu Saved		
Total FY2015 NJCEP Energy Efficiency at use						1,903,157	10,817,194		
T&D Loss adjustment factor						1.11	1.00		
Net to Gross Ratios						1.00	1.00		
Total Adjustments						1.11	1.00		
<b>Total FY2015 NJCEP Energy Efficiency at Gen.</b>						<b>2,112,504</b>	<b>10,817,194</b>		
Efficiency Savings By Program and Category		Participants	Energy Efficiency Units	Annual		Measure Lifetimes	Lifetime		
				MWh	DTh		MWh	DTh	
Energy Efficient Products	2015 EE Lighting CFL markdowns (Std & Spclty)	2,150,000	5,000,000	205,000	0	5	1,025,000	0	
	2015 EE Lighting Fixture & SSL markdowns	50,000	50,000	2,750	0	20	55,000	0	
	Creative (Lighting)	97,500	120,000	4,920	0	5	24,600	0	
	Refrigerators CEE Tier 2	9,500	9,500	1,245	0	12	14,934	0	
	Clotheswasher Tier 2 (MEF 2.2)	17,500	17,500	2,240	15,750	11	24,640	173,250	
	Refrigerator/Freezer Early Retirement Program (JACO)	13,500	13,500	12,825	0	8	102,600	0	
	Other Upstream Incentives - Clothes Washers	6,000	6,000	768	5,400	11	8,448	59,400	
	Other Upstream Incentives - Clothes Dryers	1,500	1,500	330	0	12	3,960	0	
	Other Upstream Incentives - CEE Tier 2 Refrigerators	5,100	6,000	786	0	12	9,432	0	
	Energy Efficient Set-Top Box (ENERGY STAR Tier 1&2)	35,000	35,000	3,290	0	4	13,160	0	
<b>TOTAL Energy Efficient Products</b>		<b>2,385,600</b>	<b>5,259,000</b>	<b>234,154</b>	<b>21,150</b>		<b>1,281,774</b>	<b>232,650</b>	
Contingency Savings				10,537	952		57,680	10,469	
<b>Total</b>		<b>2,385,600</b>	<b>5,259,000</b>	<b>244,690</b>	<b>22,102</b>		<b>1,339,454</b>	<b>243,119</b>	
Residential New Construction	Tier 1 (ENERGY Advantage)	3,315	3,315	4,472	43,095	20	89,439	861,900	
	Tier 2 ENERGY STAR v3.0	2,210	2,210	4,091	43,758	20	81,814	875,160	
	Tier 3 CCH	7	7	18	224	20	358	4,480	
	MFHR	869	869	940	22,507	20	18,805	450,142	
	<i>2014 Commitments (carried forward)</i>		<b>6,401</b>	<b>6,401</b>	<b>9,521</b>	<b>109,584</b>		<b>190,416</b>	<b>2,191,682</b>
	Tier 1 (ENERGY Advantage)	2,250	2,250	3,035	29,250	20	60,705	585,000	
	Tier 2 ENERGY STAR v3.0	2,250	2,250	4,165	44,550	20	83,295	891,000	
	Tier 3 CCH	41	41	105	1,312	20	2,098	26,240	
	MFHR	500	500	541	12,950	20	10,820	259,000	
	<i>2015 Enrollments/Commitments</i>		<b>5,041</b>	<b>5,041</b>	<b>7,846</b>	<b>88,062</b>		<b>156,918</b>	<b>1,761,240</b>
Contingency Savings				782	8,894		15,630	177,881	
<b>Total</b>		<b>11,442</b>	<b>11,442</b>	<b>18,148</b>	<b>206,540</b>		<b>362,964</b>	<b>4,130,803</b>	
Heating, Ventilation and Air Conditioning	A/C SEER 17 (with proper sizing)	3,000	3,000	978	0	15	14,670	0	
	A/C SEER 16 (with proper sizing)	500	500	130	0	15	1,950	0	
	Mini-Split SEER 16	665	665	173	0	15	2,594	0	
	ASHP 16 (with proper sizing)	264	264	187	0	15	2,801	0	
	GSHP ENERGY STAR	23	23	54	0	30	1,631	0	
	HP Water Heater	100	100	169	0	10	1,687	0	
	Solar Domestic Hot Water for Electric Applications	5	5	12	0	10	123	0	
	<i>Electric Applications</i>		<b>4,557</b>	<b>4,557</b>	<b>1,703</b>	<b>0</b>		<b>25,456</b>	<b>0</b>
	Gas Furnace: 95% AFUE	10,500	10,500	4,158	107,100	20	83,160	2,142,000	
	Gas Furnace: 95% AFUE; 2% ECM (New E*); 2% Cabinet L	6,000	6,000	2,388	69,000	20	47,760	1,380,000	
	Gas Furnace/Boiler & .82EF or 90%TE Combo or 0.67 PV	2,225	2,225	0	28,480	20	0	569,600	
	Boiler: 85% AFUE (Hydronic)\	2,225	2,225	0	5,340	20	0	106,800	
	Boiler: 82% AFUE (Steam)	710	710	0	1,917	20	0	38,340	
	Power Vented .67 EF (to support orphan WH issue)	625	625	0	1,625	10	0	16,250	
	Water Heater: 0.82 EF or 90% TE w/sealed combustion	1,725	1,725	0	9,315	10	0	93,150	
	Solar Domestic Hot Water for Gas Applications	10	10	0	170	10	0	1,700	
<i>Gas Applications</i>		<b>24,020</b>	<b>24,020</b>	<b>6,546</b>	<b>222,777</b>		<b>130,920</b>	<b>4,346,140</b>	
Pilot new measures (boiler controls)	15	15	0	87	9	0	783		
HVAC Financing Pilot	0	0	0	0	10	0	0		
<i>Other</i>		<b>15</b>	<b>15</b>	<b>117</b>	<b>4,012</b>		<b>2,815</b>	<b>78,245</b>	
Contingency Savings				117	4,012		2,815	78,245	
<b>Total</b>		<b>28,592</b>	<b>28,592</b>	<b>8,366</b>	<b>226,876</b>		<b>159,190</b>	<b>4,425,168</b>	
Home Performance with ENERGY STAR	Tier 3: Insulation, HVAC, DHW, other eligible measures	5,530	5,530	1,936	94,010	20	38,710	1,880,200	
	Tier 3: Multi-family	150	150	53	2,550	20	1,050	51,000	
	Contingency Savings				89	4,345		1,789	86,904
<b>Total</b>		<b>5,680</b>	<b>5,680</b>	<b>2,077</b>	<b>100,905</b>		<b>41,549</b>	<b>2,018,104</b>	
<b>Total Emissions Savings (lbs reduction)</b>				Annual Lbs Reduction		Lifetime Lbs Reduction			
				Electric	Gas	Electric	Gas		
CO2 (Carbon Dioxide)				415,388,661	65,101,453	2,892,798,749	1,265,611,739		
NOx (Nitric Oxide)				765,190	51,191	5,328,840	995,182		
SO2 (Sulphur Dioxide)				1,776,333		12,370,521			
Hg (Mercury)				10		68			
<b>Total Program Savings</b>		<b>2,431,314</b>	<b>5,304,714</b>	<b>273,282</b>	<b>556,423</b>	<b>1,903,157</b>	<b>10,817,194</b>		