

# **New Jersey's Clean Energy Program<sup>TM</sup>**

# Honeywell's Residential Energy Efficiency and Renewable Energy Program Plan Filing for Fiscal Year 2014

(7/1/2013 through 6/30/2014)

**December 6, 2013** 

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# **New Jersey's Clean Energy Program<sup>TM</sup>**

# Honeywell's Residential Energy Efficiency and Renewable Energy Program Plan for FY2014

#### Introduction

This Program Plan provides program descriptions, goals, marketing plans, and budgets for the four residential energy efficiency and two renewable energy programs to be managed and/or supported by Honeywell in FY 2014:

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

As a reminder, with this compliance filing the BPU is transitioning to a fiscal year budget starting July 1, 2013 and ending June 30, 2014. With the 2012 Program being extended to an 18 month budget, from January 1, 2012 to June 30, 2013, there is not a 2013 compliance filing.

The following Program Plans begin with narrative descriptions of each program, including the overall strategy, key activities for this 12 month period, and program goals. To minimize the disruption to the market from these program changes, priority has been placed on continuity for the most impactful, and important measures to facilitate a smooth and productive transition in the future.

The Program Plans presented here for FY2014 represent models which together will:

• Result in energy savings of 1,619,192MWh and 12,755,753 Dtherms over the lifetime of the measures promoted in the 12 month 2014 program period.

- Continue the transition to upstream incentives versus direct to consumer incentives.
- Foster loan programs through interest rate buy-downs to remove barriers to customer participation including a new pilot program supporting efficient HVAC equipment installations.
- Streamline, automate, and aggregate processes in order to increase effectiveness and reduce program transaction costs.
- Increase emphasis on cooperative advertising incentives for contractors, retailers and program sponsors.
- Continue to provide services to eligible customers while continuing to place New Jersey as a national leader in forward facing initiatives that support new technologies and market transformation.

#### Contractor Remediation Procedures

The program will continue to implement the "Contractor Remediation Procedures", which were approved on October 5, 2010 and became effective on November 7, 2010 for all NJ Clean Energy Programs.

#### 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 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 provides the NJCEP to play a vital role in assisting in the rebuilding effort 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.

FY2014 will see the continuation of a series of Storm Response incentives which targets participants' whose residences are within areas designated by the Office of Energy Management and authorized by the NJ BPU. These participants and/or participants 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 below.

Following the program descriptions are three Appendices. **Appendix A** represents the FY 2014 residential energy efficiency and renewable energy Marketing Plan. **Appendix B** provides a summary of total FY 2014 program costs, broken down by cost category. **Appendix C** presents the electricity and gas savings targets associated with the Energy Efficiency Program Plans for the FY 2014 program.

# New Jersey's Clean Energy Program™

# **FY2014 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 Managers will continue to track the implementation of new construction code changes and will propose incentive modifications as appropriate.

In response to builder and market feedback on EPA's transition to ENERGY STAR New Homes Version 3 standard, the FY2014 program will continue to offer two tiers in addition to Climate Choice Homes (Tier 3).

The two tiers are NJ *ENERGY*Efficient Home (Tier 1) and ENERGY STAR Homes (Tier 2). NJ *ENERGY*Efficient Home supports long term transition to ENERGY STAR Version 3 by providing waivers for some of the more onerous inspection checklist requirements, therefore those homes will not be ENERGY STAR qualified but will carry the NJ *ENERGY*Efficient Home label. Homes that enroll in ENERGY STAR Homes (Tier 2) will have full check list requirements of Version 3 and will be ENERGY STAR qualified. The incentive structure within each tier will be performance based with higher incentives for higher performance using the HERS index as the indicator. Climate Choice Homes (Tier 3) continues in FY2014 as does the ENERGY STAR Multifamily High-Rise Program.

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

- 1. The sharp impact of the economic downturn on the housing market. Although this is expected to improve in the FY2014 program, housing starts are still lower than in past years;
- 2. Builders do not 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:

- Direct incentives to builders of homes that meet program standards.
- A multiple tiered approach that allows participation across builder levels (including builders new 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.
- Utilize Energy Star's website to help promote all residential Energy programs.
- Technical assistance to inform builders and their subcontractors on details of the program tiers.
- ENERGY STAR certification inspections and testing through third-party rating companies, competing in an open market for services and Market Manager program certifications.

# **Target Market and Eligibility**

The program uses the EPA ENERGY STAR Multifamily New Construction Program Decision Tree (the "Decision Tree") to determine eligibility. Select components of the Decision Tree are described below.

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

<sup>&</sup>lt;sup>1</sup>The EPA ENERGY STAR Multifamily New Construction Program Decision Tree is available at: <a href="http://www.energystar.gov/ia/partners/bldrs\_lenders\_raters/downloads/mfhr/MFHR\_Flowchart\_Version\_1">http://www.energystar.gov/ia/partners/bldrs\_lenders\_raters/downloads/mfhr/MFHR\_Flowchart\_Version\_1</a>.

its own gas or electric heating and/or central air conditioning system and its own domestic hot water system.

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 (*COOL*Advantage/*WARM*Advantage).

In addition, multifamily buildings with at least 6 floors are eligible for ENERGY STAR Multifamily High-Rise program benefits. Program eligibility for buildings between 4-6 stories varies, depending upon certain factors described in the Decision Tree.

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

# Offerings and Incentives

#### **Program Technical Requirements**

To qualify for the FY2014 Program, a home must meet NJ *ENERGY*Efficient Home (Tier 1), ENERGY STAR Homes (Tier 2), Climate Choice Homes (Tier 3), or ENERGY STAR Multifamily High Rise requirements<sup>2</sup>.

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: <a href="http://energystar.gov">http://energystar.gov</a>.

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

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

Meet all Energy Star v2.0 requirements, including:

- Comply with v2.0 Thermal Bypass Check list
- Duct leakage to outside: ≤ 6 CFM25 per 100ft² CFA (no maximum total leakage)
- Up to 25% of Slab edge in CZ 4 & 5 may be un-insulated.

#### Additional New Jersey requirements:

- HERS index must not exceed 85 (2006 IECC base) or 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 24hour 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: ≤ 4 CFM25 per 100ft2 CFA
- Total Duct Leakage: ≤ 8 CFM25 per 100ft<sup>2</sup> CFA

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<sup>&</sup>lt;sup>3</sup> ENERGY STAR v 3.0 Standards: http://www.energystar.gov/index.cfm?c=bldrs\_lenders\_raters.nh\_v3\_guidelines

#### 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. Climate Choice Homes (Tier 3)

A set of requirements for meeting energy performance at least 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 have transitioned from the previous EPA ENERGY STAR Multifamily High Rise (MFHR) Pilot to the new EPA ENERGY STAR Multifamily High Rise (MFHR) Program standards, released August 30, 2011, 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

#### Incentives

The program will continue to offer incentives for Tier 1 and Tier 2 *ENERGY*Efficient and ENERGY STAR Homes based on HERS scores, following the same incentive table that was used for new enrollments in 2013 (see below).

Table 1: FY2014 Financial Incentives per Single Family Unit for NJ ENERGYEfficient Home (Tier 1) and ENERGY STAR Homes (Tier 2)

Incentives by Tier, Code & Index				
HERS	vs. IECC 2006 vs. IECC 2			009
	Tier 1	Tier 2	Tier 1	Tier 2
	NJ ENERGYEfficient	ENERGY	NJ ENERGYEfficient	ENERGY
	Home	STAR	Home	STAR
85	\$1,250	\$2,250		
80	\$1,500	\$2,500		
75	\$1,750	\$2,750	\$1,250	\$2,250
70	\$2,000	\$3,000	\$1,500	\$2,500
65	\$2,250	\$3,250	\$1,750	\$2,750
60	\$2,500	\$3,500	\$2,000	\$3,000
55	\$2,750	\$3,750	\$2,250	\$3,250
50	\$3,000	\$4,000	\$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 Climate Choice Homes (Tier 3)**<sup>4</sup>

<b>Building Type</b>	2012-13 NJ Climate Choice Homes
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)

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

**Table 3: Climate Choice Homes Staged Incentive Payment Schedule** 

Building Type	At Completion of Enrollment (Sign-In)*	At Completion of Pre- Drywall Inspection(s)*	At Final Certification
Single Family	\$3,000	\$3,000	Balance
Multiple Single Family ("Townhouse")	\$2,000	\$2,000	Balance
Multiple-Family Building ("Multifamily")	\$1,000	\$1,000	Balance

<sup>\*</sup> Failure to complete the project, or to meet Tier 3 (NJ Climate Choice Homes) minimum specifications and/or performance goals, will result in repayment to the Program of incentives paid, less any applicable incentives for meeting all lower tier (Tier 1 or 2) qualifying level requirements. In this circumstance, the Market Manager will generate a letter to the appropriate party requesting any monies due.

Table 4: FY2014 Financial Incentives for ENERGY STAR Multifamily High-Rise

Multifamily High-Rise	Incentive
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.

### Planned Program Implementation Activities for FY2014

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

With 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 the previous standards that are carried over from 2011 and 2012 until the homes are completed. 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. Therefore both the New Jersey residential new construction codes based on IECC 2006 and IECC 2009 will be used as baselines in FY2014. 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 2014 program offerings of NJ *ENERGY*Efficient Home (Tier 1) and ENERGY STAR Homes version 3.0 (Tier 2). In FY2014, there may be some administrative carry over for home previously certified to ENERGY STAR Homes version 2.0 or 2.5.

#### HERS Ratings and Multifamily High-Rise Modeling

For ENERGY STAR Homes Tier 1 and Tier 2, implementation services (project review and verification) will be 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. For Multifamily High-Rise 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 Climate Choice Homes, 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. Over the course of the FY 2014 program, the Market Manager will transition these services to an open rater market.

### **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 oversight processes on raters and builders. Quality Assurance activities will continue to be performed by the Program, in proportion to the track records of raters and builders through program inspections.

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 FY2014 is attached in Appendix B.

The FY2014 budget includes direct incentive costs for units both planned to be completed in FY2014 and for homes committed but that may not be completed in FY2014. Commitments are issued for a period of twelve months and are included as committed incentive funds until they expire.

# Goals and Energy Savings

#### Goals

Program goals for FY2014 are as follows:

- Approximately 7,500 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), Climate Choice Homes (Tier 3) or ENERGY STAR Multifamily High Rise standards.
- Approximately 6,200 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), Climate Choice Homes

(Tier 3), or ENERGY STAR Multifamily High Rise standards.

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

### **Energy Savings**

Energy savings will be calculated consistent with the latest Board approved protocols. Please see Appendix C.

# New Jersey's Clean Energy Program™

### FY2014 Residential Gas & Electric HVAC Program

"New Jersey WARMAdvantage & COOLAdvantage"

### **Description**

The New Jersey Residential Gas & Electric 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;
- o Consumers' inability to differentiate, and therefore value, the difference between good and poor quality HVAC installation;
- o Consumers' lack of information on the benefits (both energy and non-energy) of efficient equipment and quality installations, particularly during renovation and remodeling:
- o 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 this program year, the Market Manager will evaluate, define and submit for BPU consideration an upstream and/or midstream HVAC Equipment Loan Program. This pilot program will be designed to transition consumers away from incentives and to remove barriers to HVAC equipment purchases through a combination loan and/or interest buydown option.

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**

COOLAdvantage 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.

WARMAdvantage promotes energy efficient natural gas-fired furnaces, boilers and water heaters for use in residential buildings.

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 FY2014, the solar domestic water heating (SDHW) initiative will continue to be offered to both residential electric and gas water heating customers.

Incentives are available for the installation of qualified HVAC equipment in existing residential buildings (retrofit).

# Offerings and Incentives

#### **COOL**Advantage

In FY2014, the Program will offer incentives for super-efficient Central Air Conditioners. New program requirements, procedures and/or incentives will take effect after a notification period that begins with written notification 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 Central Air Conditioners 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 will continue to be available in FY2014 for Geothermal Systems, Heat Pumps, and mini-split purchases as noted in Table 5.

Table 5: COOLAdvantage Central A/C and Heat Pump Customer Incentives<sup>5,</sup>

Eligible Equipment Requirements	Full Incentive Amount	Confirmation Documentation
For Central A/C: Statewide SEER ≥ 17 EER ≥ 13	\$500	<ul> <li>Efficiency Rating</li> <li>Compressor/ coil combination ratings<sup>6</sup></li> <li>Proper sizing and selection</li> </ul>
For Central A/C: For qualifying Sandy participants	\$500	<ul> <li>Efficiency Rating</li> <li>Compressor/ coil combination ratings</li> </ul>
SEER ≥16 EER ≥ 13		<ul><li>Proper sizing and selection</li><li>For qualifying Sandy participants.</li></ul>

<sup>6</sup> To be replaced as a matched set.

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

For Mini-Split Units <sup>7</sup> SEER ≥ 17 EER ≥ 13  For Air-source Heat  Pumps:  SEER ≥ 17 EER ≥ 13  & HSPF ≥ 8.5  For Ground-source (Geothermal) Heat	\$500	<ul> <li>Efficiency Rating Compressor/ coil combination ratings<sup>8</sup></li> <li>Proper sizing and selection<sup>9</sup></li> </ul>
Pumps: ENERGY STAR Qualification		

#### Sandy Storm Response

The \$500 incentive for high efficiency Central AC Units at the 16 SEER/13 EER efficiency level that was offered 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 <u>per unit</u> over the incentive in place at the time of purchase.

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<sup>&</sup>lt;sup>7</sup> Mini-Split and Heat Pump incentives continue into 2014.

For ASHPs to be replaced as a matched set.

<sup>&</sup>lt;sup>9</sup> Ductless mini-split (DMS) systems do not require sizing and selection documentation.

#### **WARMAdvantage**

Continuing in FY2014 WARMAdvantage will offer incentives for efficient furnaces, boilers & 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 6: WARMAdvantage Direct to Customer Incentives for FY2014<sup>10</sup>

Table 6. WARWAUVantage Direct to Customer Incentives for F12014			
Equipment	Minimum Efficiency	Incentive Levels	
Gas Furnace	"≥ 92% AFUE AND ENERGY STAR CERTIFIED	\$250	
Furnace & DHW Combination	"≥ 92% AFUE AND ENERGY STAR CERTIFIEDGas Furnace; and a qualifying water heater is also installed.	\$900 <sup>1112</sup>	
Boiler	≥ 85% hydronic AND ENERGY STAR CERTIFIED or ≥ 82% steam	\$300	
Boiler & DHW Combination	≥ 85% hydronic AND ENERGY STAR CERTIFIED or ≥ 82% steam and a qualifying water heater is also installed.	\$900 <sup>1314</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	
Boiler Reset Controls Pilot	Automatic, inferred-heat load control operationally meeting federal criteria* <sup>15</sup> compatible with qualifying boiler <sup>16</sup>	\$175.	
Heat Pump Water Heater	ENERGY STAR qualified	\$500	
Solar Domestic Hot Water	ENERGY STAR qualified SRCC OG-	\$1,200	

<sup>&</sup>lt;sup>10</sup> Incentives in effect for purchases made after the FY2014 notification period.

<sup>11</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>&</sup>lt;sup>12</sup> Two qualifying standalone units must be installed to receive the Combination Rebate.

<sup>13</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.

14 Two qualifying standalone units must be installed to receive the Combination Rebate.

<sup>&</sup>lt;sup>15</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>&</sup>lt;sup>16</sup> Boiler must have an AFUE <85%

300 listed; and $SF \ge 0.5$ )	

For FY2014, incentives will continue to be available for residential solar domestic water heating systems with either electric or gas water heater backup. The rebate incentive level of \$1,200 per system has been established to offset approximately 20% of the incremental costs associated with this measure installation.

#### 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 <u>per unit</u> 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 NJ Clean Energy Program for similar equipment while funds are available.

*COOL*Advantage and *WARM*Advantage 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 FY2014 for Boiler Reset Retrofit Controls.

# Planned Program Implementation Activities for FY2014

The following program implementation activities will be undertaken in FY2014:

- Continue processing incentives for heating, water heating and cooling equipment.
- Continue processing solar water heating incentives as a WARMAdvantage 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.

# **Quality Control Provisions**

#### Electric HVAC Quality Assurance

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all incentive program participants. All applications are reviewed as they are processed for verification of the documentation of 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.

#### Gas HVAC Quality Assurance

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 proper documentation. Qualifying equipment efficiency levels are verified with the AHRI directory of gas heating 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 2014 program is attached in Appendix B.

# **Goals and Energy Savings**

Program goals for FY2014 are as follows:

• Process applications for approximately 2,700 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.
- Conduct approximately 100 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.

#### **Energy Savings**

Energy savings will be calculated consistent with the latest Board approved protocols. Please see Appendix C.

# New Jersey's Clean Energy Program<sup>™</sup> FY2014 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, 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 community-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;
- Offering early retirement options for old, inefficient equipment that is still in operation;
- 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.

New Jersey's Clean Energy Program (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 FY2014 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. These initiatives will increase 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 FY2014 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, 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 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. We also plan to augment existing Green New Jersey Resource Team (GNJRT) initiatives that distribute CFLs, LEDs, fixtures, and smart power strips and educate New Jersians through community outreach and events. The FY2014 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 FY2014 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

Compact Fluorescent Lamp (CFL) penetration studies completed in 2010 by the DOE indicate a significant remaining potential for energy savings in NJ homes from switching incandescent lamps to CFLs. In FY2014, Program will increase focus on incentives on ENERGY STAR qualified Solid State Lighting (SSL) products, while continuing to reduce retail prices and incentives for the most common, most easily available, regularly

lowest price CFLs. Incentives will be applied to eligible products (up to a mutually negotiated volume) sold by participating 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 2012-13 initiatives and regional promotions, the FY2014 mark down incentives will be in the range of \$0.25-\$0.70 per standard CFL, \$1.25-\$3.00 per specialty CFL, and \$4.50-\$30.00 per LED or energy efficient light fixture, including qualifying SSL fixtures. Additionally, the program will identify opportunities to develop new potential distribution channels for lighting in order to accelerate the market adoption of CFLs, SSL and other high efficiency lighting products.

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

The FY2014 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 consumer incentives for ENERGY STAR qualified clothes washers at 2.2 MEF or higher, and ENERGY STAR qualified refrigerators that are 25% better than the federal minimum standard. In addition, the program will offer mail in, direct to consumer incentives for clothes washers and refrigerators 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 to upstream offerings.

Equipment	Minimum Efficiency	Incentive Levels
Clothes Washers	ENERGY STAR qualified:	\$50.
	2.2 MEF or higher	
Refrigerators	ENERGY STAR qualified	\$50.
	25% better than the federal minimum standard.	
	=>7.75 cu ft	

#### Appliance Early Retirement

In FY2014 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 goal of the Creative Initiatives are to allow for innovative approaches to reach the estimated 20-40% of customers that haven't responded to the traditional retail price incentive campaigns and to engage them in NJCEP. In FY2014, the Program will continue this initiative to provide CFLs, LEDs, fixtures, and smart power strips through community outreach events as well as corporate events aimed at employee distributions. The program will also explore the expansion of participating New Jersey service providers within the set top box initiative to deploy set top boxes as well as advanced power strips. Incentives are negotiated with partners and will vary depending upon the type of product and the market segment targeted.

# Planned Program Implementation Activities for FY2014

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 FY2014.

#### General Activities

Maintain existing retailer base and recruit new retailers as needed. In FY2014, 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. 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 FY2014 Change The World – Start With ENERGY STAR program will include a continued focus on strengthening diverse lighting promotions throughout the year, including retail price markdowns with select retailers.

The opportunity to use markdown incentives will be awarded on the basis of a proposal's value to the Program, the quality of the products included in the proposal, and other factors. In FY2014 continued emphasis will be placed on transitioning retailers to offer onsite CFL recycling options to participants as part of Program participation and awarding incentive levels based on retailers' specific marketing efforts to raise awareness of the Program's other efficiency initiatives beyond lighting. Additionally, new market strategies will be developed to allow for a cost-effective approach to accelerating the market adoption of CFLs and other high efficiency lighting products.

#### Online Store

Most energy efficiency programs in the northeast offer participants the opportunity to purchase energy efficient lighting on-line through internet portals such as <a href="https://www.myenergystar.com">www.myenergystar.com</a>. In 2008, the Program selected Energy Federation, Inc. to create

an online store as part of a creative initiative and the volume of products sold through the online store expanded significantly in 2010. In FY2014 the Program will continue to increase product and customer outreach through the online store and expand 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 FY2014, this initiative will continue to support select ENERGY STAR qualified clothes washers at the 2.2 MEF level or higher and ENERGY STAR qualified refrigerators at 25% more efficient than the minimum federal standard.

#### Appliance "Early Retirement" Program

In FY2014 the Program will continue a 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 through the employment and training of private haulers;
- 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**

<u>Set Top Boxes:</u> 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 of consumer electronics. The Program will further investigate 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 EPA on behalf of ENERGY STAR in the introduction of a super-efficient clothes dryer to the North American market, under the banner of the Super-Efficient Dryer Initiative (SEDI). As a result of SEDI, high efficiency clothes dryers were selected for the 2013 ENERGY STAR Emerging Technology Award, which supports manufacturers that bring this technology to the North American market. In FY2014 the Program will support High Efficiency Clothes Dryers through market development activities including industry

outreach and continue to explore additional opportunities such as exploring a pilot program for high efficiency clothes dryers in New Jersey.

#### CFL Recycling

Following the voluntary initiation of an on-site CFL recycling program by a major NJ retailer in 2008, the Program's FY2014 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 NJ DEP to strongly encourage other NJ retailers to offer CFL recycling.

#### National and Regional Initiatives

The recently established Top Ten initiative and the ENERGY STAR Most Efficient program are intended to provide participants with on line access to information about the "best of the best" energy efficient consumer products. The program will continue to monitor and evaluate the end product of these initiatives to determine a recommended level of NJCEP support and involvement.

#### 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.

# **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 FY2014 is attached in Appendix B.

# **Goals and Energy Savings**

#### Goals

Program goals are as follows:

- Achieve sales and distribution in excess of 5 million CFLs and SSL lighting products in NJ in FY2014.
- Provide approximately 61,000 incentives for clothes washers and refrigerators;
- Remove approximately 15,000 old, inefficient refrigerators and freezers from NJ homes;
- Provide approximately 20,000 rebates for high efficiency set top boxes;
- Provide CFL distribution and customer outreach through creative partners.

#### **Energy Savings**

Energy savings will be calculated consistent with the latest Board approved protocols. Please see Appendix C.

# New Jersey's Clean Energy Program™ FY2014 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 significant energy efficiency improvements to their homes. The Program also has provided contractors with the training and accreditation necessary to consistently achieve comprehensive energy savings in existing homes. The contractor recruitment and training element of the Program was designed to ensure an adequate supply of qualified contractors to meet the demand for program services created by the customer marketing and public education elements.

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 Building Performance Institute (BPI) accreditation 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 FY2014, the Program will serve over 3,600 homes/multi-family units in the HPwES Program through a combination of:

- Offering incentives to both participants and contractors;
- 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 support to contractors for part of BPI training costs and sales training.
- Providing partial reimbursement for annual BPI accreditation 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 a set percentage of 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 existing one, two, three and four-family homes; either attached or detached, and served by an investor-owned utility. Through the use of State Energy Program (SEP) funding, if available in FY2014, the Program will also be available to NJ residential oil, propane and non-investor owned (municipal) electric participants, 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.

Also, the EPA expanded the definition of buildings eligible to participate in HPwES programs nationally to include small multi-family buildings. In NJ, the target market for the multi-family component of the HPwES program is multi-family buildings which are three stories or less. NJ has many large developments consisting of low-rise multi-family buildings and Program contractors have demonstrated the skills and capacity to serve this market.

# **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. Assessors 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 accredited by BPI, may participate in the program. These company accreditation 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.

# **Program Incentives**

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

- Incentives 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 HPwES by installing thermal envelope measures (such as air sealing and insulation) and then 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.

- > 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 Accreditation 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 that was offered in 2012 and 6 months of 2013, which will continue throughout the FY2014. These incentives are intended to promote increased program participation. The specifics of the incentives are further described in the notes which follow.

Table 8: NJ HPwES FY2014 Incentives and Requirements

INCENTIVE TIER	REQUIREMENTS	ntives and Requiremen Customer Incentive	CONTRACTOR INCENTIVE
Tier 1	Energy audit only	No incentives	No incentives
Tier 2	Estimated total energy savings from all work must total at least 10% but less than 20%.  Must install air sealing.  May install insulation and may also install duct sealing and duct insulation measures.	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;  For eligible Multi-Family	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.  For multifamily projects, the contractors will be paid a \$50
	Participants may also include water heater measures from the Eligible Measures List.	properties, cash rebate of 50% of the costs of the measures used to calculate TES up to \$500 per unit.	production incentive per unit.
Tier 3	Level 1.  Estimated total energy savings from all work must total at least 20% but less than 25%.  Must install at least two measures including air goaling from the Eligible.	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;	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.
	sealing from the Eligible Measures List.	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.	For multifamily projects, the contractors will be paid a \$50 production incentive per unit.
	Level 2.  Estimated total energy savings from all work must total at least 25%.  Must install at least two measures including air sealing from the Eligible Measures List.	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	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.  For multifamily projects, the contractors will be paid a \$50

	\$1,500 per unit.	production incentive per unit.

#### Table 8: NJ HPwES Incentives and Requirements *Notes*:

- 1. The Market Manager has been advised that 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. The Market Manager has been advised that 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.
- 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.
- 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 accreditation annual fees and support BPI training and sales trainings, as indicated below.

- 1. The Program will offer New Jersey BPI annual accreditation reimbursements for all participating accredited contractors who have completed at least 10 projects during FY2014. The New Jersey BPI accreditation reimbursement will be 25% of the annual New Jersey BPI accreditation fee, up to a maximum of \$3,000, and will be processed upon presentation of the contractor's paid New Jersey BPI accreditation invoice.
- 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.

## **Multi-Family Buildings**

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

- no more than three stories high,
- has single ownership,
- total building energy usage is 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),
- is 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 Program will offer the following incentive structure for multifamily projects:

• Improvement packages showing a minimum of 10% but less than 20% estimated total building energy savings will receive a per unit incentive of \$500 not to exceed 50% of the costs of the measures used to calculate TES.

- Improvement packages showing a minimum of 20% but less than 25% estimated total building energy savings will receive a per unit incentive of \$1,000 not to exceed 50% of the costs of the measures used to calculate TES.
- Improvement packages showing 25% or greater estimated total building energy savings will receive a per unit incentive of \$1,500 not to exceed 50% of the costs of the measures used to calculate TES.

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.

HPwES Program work scopes <u>must</u> 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>17</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.

#### 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 is working with the New Jersey Credit Union League (NJCUL) to offer a NJ Credit Union 0% loan option. This loan option for HPwES work could be offered to any program participant where a utility loan or on-bill repayment program is not in place. Nominal incentives will be provided by the NJ CUL from a portion of their administrative fee. These incentives would be issued

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<sup>&</sup>lt;sup>17</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

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. Further, the program could offer co-op marketing support to the NJCUL to promote the program with consumers.

- It is incumbent upon the Program to effectively evaluate new technologies as they become available. The Program has a new technology screening process, and as new technologies pass this initial screen, the HPwES program 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 FY2014 is attached in Appendix B.

## **Goals and Energy Savings**

#### Goals

The goals for FY2014 for the HPwES Program were as follows: Single Family

- Tier 2: Approximately 120 participants will receive building envelope improvement packages that achieve at least 10% TES.
- Tier 3, level 1 and 2: Approximately 3,500 participants 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.

## **Energy Savings**

Energy savings will be calculated consistent with the latest Board approved protocols.

Please see Appendix C.

## **New Jersey's Clean Energy Program<sup>TM</sup>**

## **FY2014 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 FY2014.

#### 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. Direct 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.

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

In Fiscal Year 2014, the REIP program will offer incentive funds for biopower projects and energy storage projects. Currently, the customer-sited wind program is on hold. Solar projects are no longer eligible for REIP rebates.

#### **Energy Storage Projects**

The Office of Clean Energy will be introducing a new incentive program for energy storage technology. During the 2<sup>nd</sup> half of 2013, Board Staff and the Market Manager will hold discussions with interested stakeholders to develop program guidelines, incentive structure and target market. The findings of these stakeholder meetings will provide valuable input which will be utilized to develop a competitive solicitation process. The intent is to develop a solicitation schedule with the first round of solicitations targeted for presentation to the Board in Q1 of 2014.

The proposed solicitation design, incentive levels and schedule that are developed through the stakeholder process will be presented to the Board for its review and approval at one of the regularly scheduled Board Agenda meetings.

The responses to the solicitation will be reviewed by an evaluation committee which will consist of the Office of Clean Energy, the Market Manager, the Program Coordinator and other NJ State agencies as applicable. The awards will be based upon the criteria established within the solicitation. Any incentive award that exceeds the then current threshold established by the Board will require approval by the Board at one of the regularly scheduled Board Agenda meetings prior to the issuance of the incentive commitment. Awards below the threshold level will not require this additional approval.

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

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

Despite continuing sluggishness in the overall economy, the solar market in New Jersey remained robust for both residential and non-residential markets. In calendar year 2012, more than 390 MW of new solar capacity was installed in New Jersey, surpassing the 305 MW of capacity installed in all of 2011. Approximately 70 MW of additional capacity was installed in the first quarter of 2013.

In March 2013, New Jersey's installed solar capacity exceeded the one gigawatt milestone through more than 20,000 projects, with nearly 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 end of March the solar project pipeline remains strong with more than 700 MW of project capacity that has been accepted by the NJCEP Market Manager.

During calendar year 2012, the Market Manager received 9,136 SRP registrations – an increase of more than 12% over the 8,146 registrations received during 2011. In the first quarter of 2013, the Market Manager received 1,609 SRP registrations, compared with 1,593 received in the first quarter of 2012.

## **Program Description**

In FY2014, 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.

## **FY2014 Program Changes**

In response to stakeholder feedback, market conditions, and policy developments, the Market Manager proposes a number of enhancements and changes in the FY2014 Program Plan. These include:

- 1) The Navigant market potential study identifies energy storage as an emerging technology that could contribute to achieving the State's energy goals by shifting renewable generation to more optimal times of day and providing some of the additional frequency regulation that may be required with higher levels of intermittent renewable energy. During the 2<sup>nd</sup> half of 2013, Board Staff and the Market Manager will conduct research and hold discussions with interested stakeholders to develop a solicitation to provide incentives for the commercial application of this technology.
- 2) For FY2014, the biopower incentive structure will change from a fixed incentive schedule to a competitive solicitation which will be administered by the Market Manager. During the 2<sup>nd</sup> half of 2013, Board Staff and the Market Manager will hold discussions with interested stakeholders to develop the solicitation process. The intent is to develop a solicitation schedule with the first round of solicitations targeted for presentation to the Board in Q1 of 2014. The solicitation would rely upon past project eligibility requirements and program application forms but would include a dollar per watt cap and a total project payment cap to be determined with input from interested parties through the stakeholder process.
- 3) The REIP financial incentive for sustainable biopower feasibility studies and wind feasibility studies will be eliminated for FY2014.
- 4) Continue to use the Solar Technical Working Group as a forum to address questions relating to rules, inspections and technical issues. For purposes of cost and convenience, meetings could be conducted as webinars or on a regional rather than statewide basis.
- 5) In order to improve assessments of project viability and reduce the number of SREC registrations submitted for projects that may never be built, the Market Manager will require that, consistent with amendments to the Renewable Portfolio Standard at N.J.A.C. 14:8-2.4, approved by the Board on May 1, 2012 that became effective upon publication in the New Jersey Register on June 4, 2012, all SRP registrations must include a copy of one recent EDC bill for the host facility (for Net Metered projects only), the cost of equipment and installation, a site map, construction schedule and key elements of the signed, executed contract. It is not necessary to include the entire contract.

- 6) The Market Manager may conduct REC verification site visits 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 few rebated solar projects that are still in the system will continue to be inspected at the 20% level and non-rebated projects at the 10% level. The BPU's rule amendments establish new paperwork requirements in both the SREC Registration and Final As-Built packages that carry over into FY2014. Please refer to the Planned Program Implementation Activities section of this document for additional details.
- 7) To remain consistent with the recent amendments to the Renewable Portfolio Standard at N.J.A.C. 14:8-2.4, the extension policy for SRP projects is refined to require only the documentation that supports the likely completion of the project. Please refer to the section titled "Extension Policy for SRP Solar Projects".
- 8) 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.

The following requirements are added to the SREC Registration process based on the recent rule amendments:

- 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 resulting from the revised registration resubmittal.
- 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.

On July 23, 2012, Governor Chris Christie signed legislation (P.L. 2012, Chapter 24) revising certain program requirements relating to the development of grid-supply projects on assessed farmland, capped landfills and brownfield sites; net metering aggregation for local governments and school districts; interconnection; and RPS and SACP levels. The Market Manager is awaiting guidance from the Board on the implementation of these revisions, so that processes can be updated accordingly.

## **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 has now completely transitioned to a non-rebated, performance-based incentive structure. 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 FY2014, 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 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 Program - Solar Projects

The REIP program has been closed to new solar applications since 2010. However, the Market Manager will continue to process the few remaining applications. Please refer to the sections below on Planned Program Implementation Activities and Quality Control/Quality Assurance Provisions for discussions on the ongoing processing and inspections for all REIP wind, biopower and solar projects.

## REIP Rebate Program – Wind and Biopower 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. Upon review of the NREL report regarding two previous turbine failures and consideration of other information, the BPU will decide if and when the program will reopen to new applicants.

Meanwhile, the program remains closed to new applications.

## **Biopower Program Description**

The biopower market in New Jersey must continue to grow if we are to achieve the goal of 900 MW by 2021 that is referenced in the Energy Master Plan (EMP). To that end, the REIP will continue to offer financial incentives for sustainable biopower projects, but will do so through a competitive solicitation rather than a structured rebate. The Market Manager will seek stakeholder input from the Biopower Technical Working Group and the Renewable Energy Committee during the 2<sup>nd</sup> half of 2013 to facilitate the development of the solicitation.

## **FY2014 Biopower Program Changes**

• The REIP incentive will be changed from a structured rebate to a competitive solicitation.

- During the 2<sup>nd</sup> half of 2013, Board Staff and the Market Manager will hold discussions with interested stakeholders to develop the solicitation process. The intent is to develop a solicitation schedule with the first round of solicitations targeted for presentation to the Board in Q1 of 2014.
- The solicitation would rely upon past project eligibility requirements and program application forms but would include a dollar per watt cap and a total project payment cap to be determined with input from interested parties through the stakeholder process.
- In an effort to encourage the development of CHP over conventional power-only generation, the incentive differential between power-only and CHP will be considered during the stakeholder process.
- The proposed solicitation design, incentive levels and schedule that are developed through the stakeholder process will be presented to the Board for its review and approval at one of the regularly scheduled Board Agenda meetings.
- An evaluation committee consisting of Board staff, the Market Manager, the Program Coordinator and other State agencies will evaluate the solicitation responses and will select the projects that will receive an incentive commitment. The selection criteria and available budget for each round of solicitations will be described within the solicitation documents.
- Any incentive award that exceeds the then current threshold established by the Board will require approval by the Board at one of the regularly scheduled Board Agenda meetings prior to the issuance of the biopower incentive commitment. Awards below the threshold level will not require this additional approval.
- Applicants that are awarded an REIP biopower incentive commitment as a result of the competitive solicitation process will continue to have 18 months from the date of the approval letter to complete their project.
- The REIP incentive for sustainable biopower feasibility studies and wind feasibility studies will be eliminated.
- In placing greater emphasis on market development in biopower, the Market Manager will conduct outreach activities to high potential customers, project developers and equipment manufacturers through targeted meetings.
- Biopower Technical Working Group meetings will be scheduled on an as-needed basis.

## **Biopower Target Markets and Eligibility**

Although a 2007 Rutgers study titled "Assessment for Biomass Potential in New Jersey" stated that biomass could provide up to 9% of New Jersey's electric needs, it is clear that this potential will not be fully realized without a comprehensive effort to overcome the economic and regulatory barriers to biopower development. Greater resources are proposed to be directed toward outreach efforts, with the Market Manager taking an active role in bringing together customers in high-potential industries with equipment manufacturers, project developers, engineers, the Department of Environmental Protection (DEP) and academia. High-potential industries include those which generate large amounts of waste and have high on-site electric (and thermal, for CHP applications) demand, such as:

Target Market	Potential Technologies					
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	Gasification of food and medical waste					
facilities						
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					

Because biomass is generally a bulky, low-value commodity that is difficult and costly to transport, the on-site use of the biomass for power generation is economically preferable to transporting it to a centralized facility. However, centralized facilities will play a role in large-scale biopower projects that require the importation of feedstocks from multiple sources.

To be eligible for the REIP incentive, biopower systems must be sized equal to or less than estimated annual onsite electric use. The incentive is capped at 1 MW AC of rated capacity. In addition, REIP incentives are contingent upon the applicant meeting all other program requirements, including but not limited to compliance with the host EDC's interconnection 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 biopower incentive structure will be replaced with a competitive solicitation previously described in the "Biopower Program Changes" section. As per existing REIP guidelines, all projects – whether power generation only or CHP – must be net metered and must not generate power in excess of the host facility's annual consumption. Projects capable of supplying power that exceeds the limits imposed by the Board's Net Metering and Interconnection regulations will be steered toward the Office of Clean Energy's Grid Supply Solicitation. 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 incentives will be awarded through a competitive solicitation, one of the goals of the stakeholder process will be to establish a series of payment caps which will allow the limited amount of funds to be committed to a broader number of projects.

Although there will be no limit on the size of the system itself, the REIP incentive will be capped at the project payment cap to be determined during the stakeholder process or 30% of the installed cost, whichever is less. Installed costs include all documented capital costs to supply and operate the system including feedstock collection, fuel conversion technology, storage, refining, power generation, and monitoring systems. In situations where power generation units 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.

Projects which seek to generate combined heat and power (CHP) may be eligible for an additional incentive if that determination is made during the development of the solicitation. As with the power-only incentives, there will be no limit on the size of the system itself, as long as it is net metered and does not exceed the annual electric consumption of the host site.

The working group will be tasked with establishing a payment cap which will be based upon the lesser of an absolute cap per project or a percentage of the installed cost. 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 CHP equipment is being added will not be eligible for inclusion in calculating the total project incentive. As with power generation only, incentive payments will not be made on the value of any existing facilities but will be applied only to the cost of new CHP equipment. The incentive payment schedule will also be established as part of the working group process and will be described within the solicitation documents.

Any biopower project applying for CHP incentives must meet all eligibility requirements as defined by the NJCEP for a CHP program, which includes an annual system efficiency of at least 60%, based on total energy input and total utilized energy output.

## **Planned Program Implementation Activities for FY2014**

The Renewable Energy Programs will have the following areas of focus in FY2014:

- 1) Sustain the growth of New Jersey's solar markets, while communicating accurate and objective information on 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) Complete all rebate programs by managing the carryover projects from solar and non-solar REIP.

The Market Manager may conduct site visits to verify that the installation of the revenue grade system output meters meet the requirements under ANSI C12.1-2008 if requested by OCE. Rebated projects that are still in the system will continue to be inspected at the 20% level while on-site verification for non-rebated projects will continue at the 10% level.

In FY2014 the Market Manager will implement and launch the changes summarized below:

#### For New SREC Registrations Received

The rules governing new SREC Registrations may be referenced at N.J.A.C. 14:8-2.4. A complete description of the requirements for new SREC Registrations may be found in the SRP Guidebook, which is available on the NJCEP website.

#### Final As-Built Paperwork for all SRP Projects

The rules governing the submittal of Final As-Built paperwork may be referenced at N.J.A.C. 14:8-2.4. A complete description of the requirements for Final As-Built paperwork may be found in the SRP Guidebook, which is available on the NJCEP website.

#### 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

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 ESFI (if applicable)

Projects shall not retain eligibility for the ESFI incentive beyond 18 months from the original SRP Acceptance letter date. This timeline includes the initial 12 month SRP Acceptance period plus 6 months from the original expiration date if an extension is granted by the Market Manager.

#### Extension Policy for Approved Non-Solar REIP Projects

For all non-public projects regardless of size, 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 the period of time published in the REIP program Guidebook which is updated periodically.

#### Other Program Services

In addition to incentives, the Market Managers 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 issues troubleshooting.
- 2) Facilitate industry working groups, including the Renewable Energy Committee meetings, the solar technical working group, and the biopower working group. 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) Expand outreach efforts to promote biopower markets, including speaking engagement and presentations. The Market Manager will also work with the biopower working group to better understand the statewide market potential of biopower.
- 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, REC and SREC trading prices and volumes, and the project pipeline based on SREC registrations and 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.

Inspections will be limited to rebated projects only, and will include the following steps:

• Collect solar panel make and model information

- Collect inverter make and model information
- Verify inverter operation & record output reading
- Verify the existence of a revenue grade meter for the system output & obtain a reading
- Verify panel tilt and orientation
- Perform rooftop inspection

Inspections tasks performed by the Market Manager will no longer include calculation of estimated annual production, evaluation of manufacturers' specifications, performance of on-site shading evaluation, or performing string sizing evaluation. However, the Market Manager at its option may perform any of these tasks if there appears to be a discrepancy with what was submitted on the Final As-built paper work.

For non-rebated projects, on-site verifications will involve a more limited scope of work including:

- 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 (review of "Final As-Built" information, including PV watts, shading analysis, photos, etc.) while all other applications 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 remediation procedures against contractors who willingly and consistently violate program rules or misrepresent information.

## **Budget**

## FY2014 Honeywell Renewable Energy Incentive Program (REIP) Budget (7/1/13 to 6/30/14)

A detailed budget for the FY2014 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 the following installed capacity goals for 2021 for renewable technologies:

- 2,120 MW Solar
- 200 MW Onshore Wind
- 900 MW Biopower

In FY2014, 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 2012-13**

Energy Year	Solar Electric	Class I Renewable Energy	Class II Renewable Energy		
June 1, 2011-May 31, 2012	442 GWH	6.320%	2.5%		
June 1, 2012-May 31, 2013	596 GWH	7.143%	2.5%		
June 1, 2013-May 31, 2014	2.050%*	7.977%	2.5%		

<sup>\*</sup>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: FY2014 Residential and Renewable Marketing Plan**

#### **Executive Summary**

The Honeywell Market Manager Team has outlined plans for continued support and consumer/contractor participation in *New Jersey's Clean Energy Program* as part of the FY2014 program year. While some modifications will be made to program marketing, including an enhanced contractor co-op program, and mass media advertising, overall goals have been maintained to help promote awareness and program participation. The FY2014 program will include:

- Conducting cost-effective lead generation that directs consumers to the NJCEP website which will help guide customers into the appropriate program(s).
- Enhancing contractor participation by streamlining the co-op advertising program, including greater outreach and training to contractors and builders, reducing paperwork requirements, and quarterly training sessions. Additionally, marketing efforts will 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.

To support *New Jersey's Clean Energy Program* (NJCEP), the program staff is planning a FY2014 marketing and communications effort that will:

- 1. Maximize energy savings in the residential sector for new and existing homes.
- 2. Integrate and cross-promote residential energy efficiency and renewable energy services, 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.
- 3. Increase awareness and participation by New Jersey residents in current and future energy efficiency and renewable energy offerings.
- 4. 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.
- 5. Work with utilities, 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.
- 6. Expand on successful "testimonials" campaign in advertising and public relations when appropriate to showcase New Jersey residents and businesses that are benefiting and prospering from *New Jersey's Clean Energy Program*.

- 7. Help 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.

#### **Key Creative and Communications Elements**

- 1. Continue to identify and enlist New Jersey residents that are successfully participating in the programs.
- 2. Where appropriate, engage BPU Commissioners and staff to promote *New Jersey's Clean Energy Program* through events and community opportunities designed to increase program participation.
- 3. Revitalize retail stores with *New Jersey's Clean Energy Program* information, positioning the state as a consumer resource for greater savings through energy efficiency programs.
- 4. Leverage utility communications with New Jersey residents through newsletters, bill messaging, web linkage, and other community outreach when available.
- 5. Continue ongoing maintenance and enhancements to the NJCEP website including updating program content and adding success stories and resources that encourage action by New Jersey residents and businesses.
- 6. Leverage call center activities to increase awareness and promote participation.

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

Below are the expectations of New Jersey's 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.

#### Marketing/Advertising Campaigns

- Maintain expanded co-op advertising across energy efficiency programs (HVAC, RNC, and HPwES) that include TV, radio, web media tactics and pre-designed print and direct mail templates for contractor use.
- Continue utilization of radio and the Energy Minute Radio campaign as appropriate.
- Strategic plan development to promote programs served by Honeywell Market Manager Team.
- Obtain technical review with Honeywell Market Manager Team prior to review and approval by BPU.
- Inclusion of NJCEP and BPU brands in all materials.
- Inclusion of utility-managed Comfort Partners program offering as part of a larger message on energy efficiency for low-income residents, incorporating the utilities' approval of proper messaging.

• Placeholders for mass media tactics, which may include continued transit and web advertising.

As part of the planning process, specific tactics and deliverables have been forecasted for the FY2014 variable marketing budget. Implementation of these materials will be produced in accordance with the BPU to help drive program participation. Details of these plans are broken out by program:

#### **Energy Efficiency**

#### New Jersey ENERGY STAR (RNC)

- o Updates to consumer brochure and builder fact sheet
- o Summary program detail in updated NJCEP overview piece and residential brochure
- o Updating existing fact sheet; if needed
- o Create one existing case study/ white paper; as needed
- o Updates to existing signage (lawn signs & museum boards; as needed)
- o Update/ maintenance of forms as needed
- o Small variable reserve allocated for program presentation/event materials
- o Small variable reserve allocated for educational workshops
- Minor variable spend allocated for public relations, trade display & equipment maintenance, and awards & photography
- Small reserve allocated in variable budget for contingency/ special requests
- o Create new RNC web banner

#### **ENERGY STAR Products**

- Web banner
- o Updates to brochures/applications
- o Summary program detail in updated NJCEP overview piece and residential brochure
- o Point of purchase displays
- Minor variable spend allocated for public relations, and trade display & equipment maintenance
- o Updates to clothes washer and refrigerator brochures
- Small reserve allocated in variable budget for contingency/ special requests

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#### **HVAC**

- Web banners (two)
- o Updates to brochures; *Cool*Advantage, *Warm*Advantage (Heating and Cooling System Guide and water heating brochure)

- o Updates to Warm/ Cool Advantage applications (as needed)
- o Minor variable spend allocated for public relations, trade display & equipment maintenance, and awards & photography
- Small reserve allocated in variable budget for contingency/ special requests

#### Home Performance with ENERGY STAR (HPWES)

- Web banner
- Updates to consumer English and Spanish brochures Creation of new contractor brochure
- o Summary program detail in updated NJCEP overview piece and residential brochure
- o Updating two existing fact sheets; if needed
- o Creation of one new case study/ white paper as needed
- o Minor variable spend allocated for public relations, trade display & equipment maintenance, and awards & photography
- Small reserve allocated in variable budget for contingency/ special requests

#### **Renewables Program**

- Ongoing marketing program support for key milestones, including press release development and announcements
- o Maintenance of updates to critical brochures for literature library;print quantities, including new renewables brochure
- o Summary program detail in updated NJCEP Overview piece and residential brochure
- o Continued maintenance of program detail on Renewables web pages on the NJCEP website

#### **Event Management & Support**

The Market Manager team will continue to define and prioritize events in cooperation with the BPU. The continued use of stock presentations including Energy Efficiency and Renewables PowerPoint presentation, as well as corresponding talking points will be updated as needed for Commissioners and aids to tailor to their specific speaking needs. For the FY2014 plan, the process for selection will continue to evolve with the BPU based on mutually agreed upon criteria for cost efficiency and the best use of BPU personnel and Market Manager resources.

- Events and media support will be focused on generating program participation
- Focus resources on key agreed upon events

- Select conferences and speaking engagements based on program participation levels
- Partner with BPU staff and program team to ensure event and speaking engagement attendance is in sync with program goals
- Utilization of stock presentations; to be updated as needed
- Press releases for program specific announcements and updates
- Limited press engagements; eliminating ceremonial events, ribbon cuttings, etc. that do not effectively promote the program
- All costs related to approved trade shows/events and sponsorships specifically identified in the following table for the –FY2014 Marketing Plan are included in the fixed marketing budget. (See events summary.)
- Outreach for additional event staffing and support will be addressed as needed, potentially utilizing variable funds.

#### **Media Events**

Event Selection and Implementation

- Select opportunities to plan events in conjunction with program managers and BPU to highlight significant program accomplishments.
- Once opportunities are selected and approved by BPU, contact relevant organizations to initiate planning of events.
- Coordinate with BPU to select appropriate Commissioner or BPU representative.
- Develop project background information for Commissioners for speaking engagements, along with briefing memos which include event logistics, such as event agenda, driving directions, project statistics, etc.
- Partner with BPU for media outreach (drafting materials for distribution to BPU lists) to ensure press coverage of programs, utilizing the Commissioners as an additional hook (BPU will confirm when media outreach for specific events will be conducted by the BPU communications team).
- Attend program press events with Commissioners to ensure and provide assistance.

Given the continued requests for events anticipated throughout the FY2014 plan, the Honeywell Market Manager team will work with the BPU to prioritize events initiated and managed by the team. Suggestions for these events should be presented to the BPU Marketing Administrator and the Marketing/Communications team for evaluation as far in advance as possible.

There are other events or speaking engagements where the BPU is requested to participate, initiated either through a website request or other method. These event requests are evaluated with the Marketing Administrator and Program Coordinator. The Honeywell Market Manager team will also assist and support the BPU for these events with planning, preparation, or execution based on discussion and agreement with BPU at the outset of each event.

#### **Industry Conferences & Trade Ally Events**

A defined list of trade shows is outlined in this marketing plan. For those trade shows/events, support may include preparation of program information, as well as participation and presence at the event. Before the start of any event, the Honeywell Market Manager team will clarify its deliverables for each event with the agreement and cooperation of the BPU. The Honeywell Market Manager team will assist the BPU with criteria for selecting newsworthy media and public events that warrant the attendance and participation of Commissioners.

- Support trade ally recruitment events, training meetings, and conferences for Home Performance contractors, HVAC contractors, RNC builders, and solar installers as needed.
- Preparation of applications for industry awards.

#### **Public/ Community Events**

Event Reviews (process for when events are proposed to Market Managers/BPU)

- Review audience composition and size, sponsor mission, historical data, logistics, and other criteria to determine whether or not the event will offer a worthwhile opportunity for promoting *New Jersey's Clean Energy Program*.
- Based on the above, determine the level of support that will maximize benefit to
  the program of the event. Work with team to ensure appropriate coverage and
  speakers if deemed appropriate; if not direct requestor to the NJCEP website for
  downloadable program materials.
- Continue to work with the BPU to be selective regarding participation at public events to help use time and personnel resources efficiently to support greater awareness and participation in the programs.

#### **Ongoing Public & Media Relations**

- Identify opportunities to promote programs through news media as appropriate.
- Write press releases, conducting technical review before BPU receives draft copy.
- The BPU will distribute and conduct outreach of press releases.
- Confirm with BPU that media outreach efforts are not duplicated, especially with regard to the Refrigerator/Freezer Recycling Program.
- A final copy of any program-related press release distributed will be provided by the BPU.

#### **Written Materials**

- Develop talking points and briefing memos for specific project events as needed. These will include statistics on specific projects, as well as overall program progress to date.
- Conduct complete technical review before providing to BPU for review.
- Work with Program Coordinator to store all updated program brochures and fact sheets in the program literature section of NJCleanEnergy.com for easy posting and access.

#### **Educational and Promotional Materials**

- Create brochures, public service announcements, and fact sheets that contain a larger message on how residents can take steps to be more energy efficient and/or invest in renewable energy.
- Conduct all technical review before providing to BPU.
- Promote usage of NJCEP website and online literature library for printed material requests.

Educational materials are an integral part of the marketing plan. The FY2014 plan includes updating the overview and residential brochures, which promote all of the programs. The plan also includes updates and reprints of materials promoting the specific programs.

The Honeywell Market Manager will utilize the Project Information Form (PIF) with appropriate BPU staff at the start of new projects that may require in depth revisions or more complex messaging. This outline will help define the subject, audience, key messages, tone, goals, call-to-action, media specifications, and timeline to help understand and meet BPU expectations at the outset of each project.

#### **Co-op Advertising Program**

The Honeywell Market Manager team accounts for an expanded co-op program throughout the FY2014 plan. The goal of the expanded co-op program is to promote increased contractor and builder participation across the HPwES, HVAC, and RNC programs. Modifications to the FY2014 co-op program include:

- Streamlining the process for co-op advertising program that will reduce paperwork requirements for participants
- Quarterly training sessions for contractors and builders to demonstrate the process and outline steps participation
- Continued use of media including TV, radio, and web (maintaining existing print and direct mail channels).
- Promote use of print and direct mail pre-designed templates.
- Promote current co-op program participation levels as follows:

- o HPwES cap of \$75,000, HVAC cap at \$10,000 and RNC cap at \$50,000
- o HPwES reimbursement incentive of 50%, HVAC reimbursement incentive of 40% and RNC reimbursement of 40%.
- Administration and management of co-op advertising for New Jersey ENERGY STAR Homes (RNC), Home Performance with ENERGY STAR, and HVAC programs.
- Processing of co-op advertising incentive applications, based upon eligibility, and
  to assure full compliance with all co-op advertising requirements. The payments
  to the vendors for approved co-op applications will be processed from the
  program's incentive budgets.
- Assistance to participating contractors and builders with advertising and sales tools.

#### **Digital Communications**

The NJCEP website will be utilized as the core medium for promoting program information and updates. The site's program literature library will continue to be used as a central repository for updated and printable materials.

- Utilize new web banners to promote consumer interest for program specific promotions and changes.
- Updating program information and trade ally database.
- Creating web enhancements for greater consumer ease and navigation.
- Participating in web strategy development and enhancements as part of ongoing web meetings with BPU and program coordinator as needed.
- Use of external sources for web enhancements, including web consultants, web designers, web programmers, web production, as well as paid market research and search optimization consultants may be submitted as variable expenses, based on prior written approval by BPU Marketing Administrator.
- Copy development and organization of respective sections of the website. This includes input and support for direction and content of the site.
- Provide newsletter content as needed.
- Maintenance of program Frequently Asked Questions.
- The marketing team may look to advertise via digital media channels through sites such as nj.com, Pandora, etc.
- Utilize Energy Star's website to help promote all residential Energy programs.
- Develop messaging for social media channels including NJCEP FaceBook and Twitter accounts.

#### Development of Retail Point of Purchase and Sales/Educational Materials

- Production of retailer educational materials and in-store point of purchase materials for *ENERGY STAR Products* includes incentive information, rebate applications, store signage, qualifying products list and educational brochures.
- Support FY2014 program enhancements and modifications with materials as needed.

#### **Market Manager Meetings**

- Hosting and preparation of weekly Marketing status calls.
- Meetings as needed with Market Manager program staff to support program marketing needs.
- Call center communications and support.
- Internal traffic meetings to review work plan and deliverables.
- Attendance in person or by phone of monthly Energy Efficiency and Renewable Energy Committee Meetings and Marketing and Communications Meetings.
- Coordination with utilities on joint promotions; i.e., New Jersey Natural Gas and *Home Performance with ENERGY STAR*.
- Attendance at additional meetings as needed.

#### **Reporting**

- Monthly billing, budget, and activity reporting
- Work with program managers to provide response to requests for program statistics or inquiries
- Annual recap books of all marketing materials produced
- Work with call center and web team to assess results of promotional campaigns

#### **Marketing Plan Development and Management**

The Honeywell Market Manager team will work with the BPU to develop an annual tactical marketing plan and calendar. This will provide an opportunity for the BPU to help plan a year-long schedule with appropriate themes and messaging to help leverage all communications activities.

- Strategic planning and development of annual program marketing plans and filings
- Preparation of annual program marketing and contract modification budgets
- Ongoing strategic planning and recommendations based on individual participation rates of each program.

A separate media plan detailing tactics for the Refrigerator-Freezer Recycling Program (ENERGY STAR Products) will be developed and shared with the Marketing Administrator and Program Coordinator prior to implementation. All marketing tactics for this program are funded directly through the program budget based on marketing allowable per unit collected and program goals.

#### **Utility Coordination**

The Honeywell Market Manager team will make every effort to coordinate with new program pilots or launches by New Jersey's electric and gas utilities. Similarly, the team will also work with relevant organizations to maximize any incoming funding such as SEP (State Energy Program).

#### **Account Management**

- Program Marketing Management and Oversight
- Communication with BPU/PC/utilities/other agencies via meetings or conference calls
- Financial administration
- Reporting
- General office administration
- Office space expenses, including phones, computers, fax, copying, etc.
- Office supplies, including program stationery, forms, envelopes, etc.
- Program apparel
- Preparation and submission of award nominations, including materials, copying, and mailing costs.
- Postage for regular business operations
- Travel

#### **Call Center**

- Call center briefings will be conducted on marketing initiatives, including FAQs, current campaign information, and training as required.
- The call center provides an important link between potential program participants and the Market Manager team. Providing information about program requirements, the call center acts as a clearinghouse for program literature and an important point of entry to *New Jersey's Clean Energy Program*.
- Customers calling Monday through Friday from 9:00 AM to 7:00 PM will be handled by customer service representatives.

#### **Creative Services**

 Creative development of all marketing materials and program identity pieces, including but not limited to program stationery, labels, easel backs, POP displays, forms, case studies, testimonials, customer or trade ally materials, fact sheets, direct mail, brochures, promotional materials, event signage, lawn signs, trade show booths, banners, and banner stands.  Administration of co-op marketing program, including management of guidelines, approval of submissions, and monitoring of contractor adherence to co-op guidelines.

#### Variable Costs

The variable marketing budget is intended to cover out-of-pocket costs that vary directly with the program goals and marketing production needs. There will be no markup on variable marketing expenses. All expenses will be approved by the BPU Marketing Administrator prior to project commencement. Examples of appropriate variable marketing expenses include:

- Overnight delivery costs or other delivery costs. These extra costs will be utilized prudently and when necessary.
- Actual printing or production costs for marketing materials, including trade show displays, banners, signage, bill inserts, applications, brochures, forms, and any printed materials supporting the programs.
- Other production expenses, such as video production, photography, both from stock/subscription sites and specific sites/subjects, when such services are provided by external consultant or production company.
- Direct mail campaigns, if utilized; including list purchase, postage, mail-house costs, and printing.
- Public relations expenses.
- Event expenses, such as onsite photographer, special equipment rental/purchase, such as microphones, tents, podiums, tables, chairs, easels, and sound systems, may be submitted under variable
- Website projects.
- Additional budgetary placeholders have been built into the FY2014 variable budget plan including (but not limited to) online and transit advertising, as deemed appropriate.
- Requests for event staffing and community outreach outside of planned fixed commitments below where program staff or resources are unable to support may require hourly subcontractor support from variable marketing budget.

#### **Events Summary**

The following organizations sponsor trade shows and/or monthly meetings that the Market Manager expects to support throughout the FY2014 plan, with all costs covered within the fixed marketing budget. Events of equivalent cost and scope may be supported in exchange or in place of any of these events.

Event	Sponsor	Program(s)
2013 Governor's	Governor, NJHMFA,	RNC
Conference on	NJDCA	
Housing and		
Development		
2013 New Jersey	NJLM	RE
League of		
Municipalities		
2013 Association of	ANJEC	All
New Jersey		
Environmental		
Commission		
2014 Atlantic Builders	Atlantic Builders	RNC
Convention	Convention	
2014 AEA Utility	AEA (Association of	All
Management	Environmental	
Conference	Authorities)	
2014 NJ Association	NJAC	RE
of Counties		
2014 New Jersey	New Jersey	All
Conference of Mayors	Conference of Mayors	

# **Appendix B: FY2014 Residential Energy Efficiency and Renewable Programs Budgets**

Table 1: FY 2014 Renewable Energy Programs Budget

Program	Total	Administration, IT and Program Development	Sales & Marketing	Training	Rebates, Grants, and Other Direct Incentives	J	Performance Incentives	Evaluation and Related Research
CORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
REIP	\$19,487,818.30	\$1,376,206.92	\$0.00	\$0.00	\$16,371,160.18	\$1,740,451.20	\$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	\$19,487,818.30	\$1,376,206.92	\$0.00	\$0.00	\$16,371,160.18	\$1,740,451.20	\$0.00	\$0.00

Table 2: FY 2014 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	\$13,730,768.98	\$1,306,764.00	\$0.00	\$590,003.00	\$10,045,757.20	\$1,788,244.78	\$0.00	\$0.00
Residential New Construction	\$18,910,092.90	\$1,249,392.00	\$0.00	\$0.00	\$16,732,000.00	\$666,282.90	\$0.00	\$262,418.00
Energy Efficient Products	\$18,256,232.84	\$1,212,132.84	\$0.00	\$0.00	\$15,892,300.00	\$1,151,800.00	\$0.00	\$0.00
Home Performance with Energy Star	\$36,862,091.99	\$1,044,421.08	\$0.00	\$0.00	\$34,216,314.88	\$1,601,356.03	\$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	\$89,069,170.71	\$4,812,709.92	\$1,309,984.00	\$590,003.00	\$76,886,372.08	\$5,207,683.71	\$0.00	\$262,418.00

## **Appendix C: Energy Savings Table**

	ency Savings By Program and Category			100% Ann	of Budgeted G	oal I I	Life	imo
				MWh	DTh		MWh	DTh
	All Programs		Measures	257,298	657,611		1,619,192	12,755,753
	Energy Efficient Products		5,372,188	242,192	29,419		1,325,437	323,611
	Residential New Construction		6,560	5,811	332,246		116,212	6,644,920
	Heating, Ventilation and Air Conditioning Home Performance with ENERGY STAR		25,779 4,850	7,598 1,698	213,496 82,450		143,593 33,950	4,138,222 1,649,000
	Home I chomanee with ENERGY GYAR		4,000	1,000	Annual	Measure		Lifetime MMBtu
	Total FY2014 NJCEP Energy Efficiency:			Annual kWh	Therms	Lives	Saved	Saved
To	ital FY2014 NJCEP Energy Efficiency at use						1,619,192	12,755,753
「&D Loss adjustn							1.11	1.00
let to Gross Ratio							1.00	1.00
Total Adjustment	sal FY2014 NJCEP Energy Efficiency at Gen.						1.11	1.00
101	al F12014 NJCEF Energy Elliciency at Gen.						1,797,304	12,755,753
		Participants	Energy	Ann	ual		Lifet	ime
Eff	iciency Savings By Program and Category		Efficiency	7.11.11		Measure		
			Units	MWh	DTh	Lifetimes	MWh	DTh
	2014 EE Lighting CFL markdowns (Std & Spclty)	2,193,000	5,100,000	209,100	0	5	1,045,500	(
	2014 EE Lighting Fixture & SSL markdowns Creative (Lighting)	50,000 98,313	50,000 121,000	2,200 4,961	0	5 8	11,000 39,688	(
	Rerigerators CEE Tier 2	16,000	16,000	2,096	0	12	25,152	Č
	Clotheswasher Tier 2 (MEF 2.2)	16,000	16,000	2,048	14,400	11	22,528	158,400
Energy Efficient	Refrigerator/Freezer Early Retirement Program (JACO)	16,500	16,500	15,675	0	8	125,400	(
Products	Other Upstream Incentives - Clothes Washers	16,688	16,688	2,136	15,019	11	23,497	165,211
	Other Unetreen Incention CEE To 2 Defice	13,600	16,000	2,096	0	12	05.450	C
	Other Upstream Incentives - CEE Tier 2 Refrigerators Energy Efficient Set-Top Box (ENERGY STAR Tier 1&2)	20,000	20,000	1,880	0	12 4	25,152 7,520	0
	TOTAL New Programs and Pilots	66,788	5,372,188	242,192	29,419	-	1,325,437	323,611
	Contingency Savings		.,.,	0	0		0	C
	Total	66,788	5,372,188	242,192	29,419		1,325,437	323,611
				MWh	DTh		MWh	DTh
	Tier 1 (ENERGY Advantage) Tier 2 ENERGY STAR v3.0	3,000 2,000	3,000 2,000	1,806	103,800	20 20	36,120 24,080	2,076,000
	Tier 3 CCH	2,000	2,000	1,204 15	69,200 591	20	305	1,384,000 11.820
B	2013 Commitments (carried forward)	2,010	2,010	3,025	173,591	20	60,505	3,471,820
Residential New Construction	Tier 1 (ENERGY Advantage)	2,700	2,700	1,625	93,420	20	32,508	1,868,400
Construction	Tier 2 ENERGY STAR v3.0	1,800	1,800	1,084	62,280	20	21,672	1,245,600
	Tier 3 CCH	50	50	76	2,955	20	1,527	59,100
	2014 Enrollments/Commitments	4,550	4,550	2,785 0	158,655 0		55,707 0	3,173,100
	Contingency Savings Total	6,560	6,560	5,811	332.246		116,212	6,644,920
		.,		MWh	DTh		MWh	DTh
	A/C SEER 17 (with proper sizing)	1,800	1,800	587	0	15	8,802	C
	A/C SEER 16 (with proper sizing)	650	650	169	0	15	2,535	C
	Mini-Split SEER 16 ASHP 16 (with proper sizing)	820 274	820 274	183 183	0	15 15	2,750 2,751	(
	GSHP ENERGY STAR							· ·
		10	10	24	0	30		(
	HP Water Heater	10 100	10 100	24 266	0	30 10	731 2,662	
	HP Water Heater Solar Domestic Hot Water for Electric Applications	100 5	100 5	266 12	0		731 2,662 123	C
	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications	100 5 3,659	100 5 3,659	266 12 1,425	0 0 0	10 10	731 2,662 123 20,353	(
Unative	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM	100 5 3,659 3,500	100 5 3,659 3,500	266 12 1,425 1,386	0 0 0 35,700	10 10 20	731 2,662 123 20,353 27,720	714,000
Heating,	HP Water Heater Solar Domestic Hot Water for Electric Applications Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*)	100 5 3,659 3,500 12,000	3,659 3,500 12,000	266 12 1,425 1,386 4,776	0 0 35,700 138,000	10 10 20 20	731 2,662 123 20,353 27,720 95,520	714,000 2,760,000
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace/Boiler & .82EF or 90%TE Combo or 0.67 PV	100 5 3,659 3,500 12,000 1,650	100 5 3,659 3,500 12,000 1,650	266 12 1,425 1,386 4,776 0	0 0 35,700 138,000 21,120	10 10 20 20 20 20	731 2,662 123 20,353 27,720 95,520 0	714,000 2,760,000 422,400
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*)	100 5 3,659 3,500 12,000	3,659 3,500 12,000	266 12 1,425 1,386 4,776	0 0 35,700 138,000 21,120 3,960 1,553	10 10 20 20	731 2,662 123 20,353 27,720 95,520	714,000 2,760,000 422,400 79,200
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace/Boiler & .82EF or 90%TE Combo or 0.67 PV Boiler: 85% AFUE (Hydronic) Boiler: 82% AFUE (Steam) Power Vented .67 EF (to support orphan WH issue)	100 5 3,659 3,500 12,000 1,650 1,650 575 575	100 5 3,659 3,500 12,000 1,650 1,650 575 575	266 12 1,425 1,386 4,776 0 0 0	0 0 35,700 138,000 21,120 3,960 1,553 1,495	10 10 20 20 20 20 20 20 10	731 2,662 123 20,353 27,720 95,520 0 0 0	714,000 2,760,000 422,400 79,200 31,050 14,950
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace/Boiler & 825E or 90%TE Combo or 0.67 PV Boiler: 85% AFUE (Hydronic)) Boiler: 82% AFUE (Steam) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150	266 12 1,425 1,386 4,776 0 0 0 0	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610	10 10 20 20 20 20 20 20 10	731 2,662 123 20,353 27,720 95,520 0 0 0	714,000 2,760,000 422,400 79,200 31,050 14,950 116,100
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Stamp) Gas Furnace: 960ler & .82EF or 90%TE Combo or 0.67 PV Boiler: 85% AFUE (Hydronic)\ Boiler: 82% AFUE (Stamp) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% Te wisealed combustion Solar Domestic Hot Water for Gas Applications	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150	266 12 1,425 1,386 4,776 0 0 0 0	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610	10 10 20 20 20 20 20 20 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0	714,000 2,760,000 422,400 79,200 31,050 14,950 116,100
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (AFUE and 2% ECM (New E*) Boiler: 85% AFUE (Hydronic) Boiler: 85% AFUE (Steam) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE wisealed combustion Solar Domestic Hot Water for Gas Applications  Gas Applications	100 5 3,659 3,500 12,000 1,650 575 575 2,150 10 22,110	100 5 3,659 3,500 12,000 1,650 575 575 2,150 10 22,110	266 12 1,425 1,386 4,776 0 0 0 0 0	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170	20 20 20 20 20 20 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0	714,000 2,760,000 422,400 79,200 31,050 14,950 116,100 4,137,700
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Stamp) Gas Furnace: 960ler & .82EF or 90%TE Combo or 0.67 PV Boiler: 85% AFUE (Hydronic)\ Boiler: 82% AFUE (Stamp) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% Te wisealed combustion Solar Domestic Hot Water for Gas Applications	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150	266 12 1,425 1,386 4,776 0 0 0 0	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610	10 10 20 20 20 20 20 20 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0	714,000 2,760,000 422,400 79,200 31,050 14,950 116,100 4,137,700 4,137,700
Heating, Ventilation and Air Conditioning	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Hydronic) Boiler: 85% AFUE (Hydronic) Boiler: 85% AFUE (Steam) Power Vented: 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% Te wisealed combustion Solar Domestic Hot Water for Gas Applications  Pilot new measures (boiler controls)  HVAC Financing Pilot  Other	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150 10 22,110	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150 100 22,110	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 58 0	10 10 20 20 20 20 20 20 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240	714,000 2,760,000 422,400 31,050 14,950 116,100 1,700 4,137,700
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace/Boiler & .82EF or 90%TE Combo or 0.67 PV Boiler: 85% AFUE (Hydronic)\ Boiler: 85% AFUE (Stamp) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion Solar Domestic Hot Water for Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Other  Contingency Savings	100 3,669 3,500 12,000 1,650 1,650 575 575 2,150 10 22,110 10	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 10 22,110 0	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0,0 0 0,162 0 0	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 0 58 0	10 10 20 20 20 20 20 20 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0	0 0 0 0 714,000 2,760,000 422,400 79,200 31,050 14,950 116,100 1,700 4,137,700 522 0 522 0
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Hydronic) Boiler: 85% AFUE (Hydronic) Boiler: 85% AFUE (Steam) Power Vented: 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% Te wisealed combustion Solar Domestic Hot Water for Gas Applications  Pilot new measures (boiler controls)  HVAC Financing Pilot  Other	100 5 3,659 3,500 12,000 1,650 575 575 2,150 10 22,110	100 3,659 3,500 12,000 1,650 575 575 2,150 10 22,110	266 12 1,425 1,386 4,776 0 0 0 0 0 6,162 0 0 0	0 0 0 35,700 138,000 21,120 3,960 1,553 11,610 170 213,438 58 0 0 213,496	10 10 20 20 20 20 20 20 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 0	714,000 2,760,000 422,400 79,200 31,056 14,950 116,100 4,137,700 4,137,700 522 522 6
Ventilation and	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE and 2% ECM (New E*) Boiler: 85% AFUE (Hydronic) Boiler: 85% AFUE (Steam) Power Vented: 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE wisealed combustion Solar Domestic Hot Water for Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Other  Contingency Savings Total	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150 10 0 22,110	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 10 22,110 10 25,779	266 12 1,425 1,386 4,776 0 0 0 0 0 6,162 0 0 0 0 7,598	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 213,438 0 58 0 213,496 DTh	10 10 20 20 20 20 20 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh	714,000 2,760,000 422,400 79,200 31,050 116,100 1,700 4,137,700 4,137,700 522 0 4,138,222 DTh
Ventilation and Air Conditioning  Home Performance	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace/Boiler & .82EF or 90%TE Combo or 0.67 PV Boiler: 85% AFUE (Hydronic)\ Boiler: 85% AFUE (Stamp) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion Solar Domestic Hot Water for Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Other  Contingency Savings	100 3,669 3,500 12,000 1,650 1,650 575 575 2,150 10 22,110 10	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 10 22,110 0	266 12 1,425 1,386 4,776 0 0 0 0 0 6,162 0 0 0	0 0 0 35,700 138,000 21,120 3,960 1,553 11,610 170 213,438 58 0 0 213,496	10 10 20 20 20 20 20 20 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 0	714,000 (2,760,000 (422,400 79,200 31,056 14,956 116,100 (1,700 4,137,700 522 (4,138,222 DTh 1,588,000
Ventilation and Air Conditioning  Home Performance with ENERGY	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE and 2% ECM (New E*) Boiler: 85% AFUE (Hydronic) Boiler: 85% AFUE (Steam) Power Vented: 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE wisealed combustion Solar Domestic Hot Water for Gas Applications  Fliot new measures (boiler controls) HVAC Financing Pilot  Other  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings  Contingency Savings	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 22,110 0 10 25,779 4,700 150	266 12 1,425 1,386 4,776 0 0 0 0 0 6,162 0 10 7,598 MWh 1,645 53	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 213,438 0 58 0 213,496 DTh 79,900 2,550	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh 32,900 1,050	714,000 2,760,000 422,400 79,200 31,095 14,956 116,100 1,700 4,137,700 522 52 4,138,222 DTh 1,598,000 51,000
Ventilation and Air Conditioning	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE w ECM (New E*) Gas Furnace: 95% AFUE (SEM) Gas Furnace: 95% AFUE (SEM) Boiler: 85% AFUE (Hydronic) Boiler: 85% AFUE (Steam) Power Vented: 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE wisealed combustion Solar Domestic Hot Water for Gas Applications  Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Other Contingency Savings  Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150 10 0 0 10 22,110 4,700	100 53,659 3,500 12,000 1,650 1,650 575 575 2,150 0 0 0 10 22,110 10 0 4,700	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 6,162 0 0 10 7,598 MWh 1,645 53 0	0 0 35,700 21,120 3,960 1,553 1,495 11,610 213,438 68 0 213,496 DTh 79,900 2,550	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 123,240 0 143,593 MWh 32,900 1,050 0 33,950	714,000 2,760,000 422,400 79,200 31,056 14,950 116,100 4,137,700 4,137,700 522 6 4,138,222 DTh 1,598,000 51,000
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Steam) Fower Vented .67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% Te wisealed combustion Solar Domestic Hot Water for Gas Applications  Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Other Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 22,110 0 10 25,779 4,700 150	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 6,162 0 0 7,598 MWh 1,645 53 0 1,698 Annual Lbs	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 58 0 213,496 DTh 79,900 2,550 0 82,450	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh 32,900 1,050 0 0 33,3550 Lifetime Lb	714,000 2,760,000 422,400 79,200 31,050 116,100 4,137,700 4,137,700 522 DTh 1,598,000 51,000 1,649,000 58 Reduction
Ventilation and Air Conditioning Home Performance with ENERGY STAR	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE w ECM Gas Furnace: 95% AFUE (SEM) Boiler: 82% AFUE (Stam) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion Solar Domestic Hot Water for Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total  Savings (Ibs reduction)	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 22,110 0 10 25,779 4,700 150	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 0 0 0 0 7,598 MWh 1,645 53 0 1,698 Annual Lbs	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 0 213,436 DTh 79,900 2,550 0 82,450 Reduction Gas	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh 32,900 1,050 0 33,950 Lifetime Lb	714,000 2,760,000 422,400 79,200 31,095 14,956 16,100 1,700 4,137,700 522 (0,4,138,222 DTh 1,598,000 51,000 (1,649,000 5 Reduction Gas
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater  Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Steam) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE wisealed combustion Solar Domestic Hot Water for Gas Applications  Pilot new measures (boiler controls) HVAC Financing Pilot  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total  1s Savings (lbs reduction)  CO2 (Carbon Dioxide)	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 22,110 0 10 25,779 4,700 150	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 0 6,162 0 0 10 7,598 MWh 1,645 53 0 1,698 Annual Lbs	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 58 0 58 0 213,496 DTh 79,900 2,550 0 82,450 Reduction Gas 76,940,452	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 123,240 0 143,593 MWh 32,900 1,050 0 33,950 Lifetime Lie	714,000 2,760,000 422,400 79,200 31,056 14,950 116,100 4,137,700 4,137,700 522 6 522 DTh 1,598,000 51,000 1,649,000 8 Reduction Gas 1,492,423,124
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE w ECM Gas Furnace: 95% AFUE (SEM) Boiler: 82% AFUE (Stam) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion Solar Domestic Hot Water for Gas Applications Pilot new measures (boiler controls) HVAC Financing Pilot  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total  Savings (Ibs reduction)	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 22,110 0 10 25,779 4,700 150	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 0 0 0 0 7,598 MWh 1,645 53 0 1,698 Annual Lbs	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 0 213,436 DTh 79,900 2,550 0 82,450 Reduction Gas	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh 32,900 1,050 0 33,950 Lifetime Lb	714,000 2,760,000 422,400 79,200 31,056 14,956 116,100 4,137,700 4,137,700 522 6 4,138,222 DTh 1,598,000 51,000 1,649,000 8 Reduction Gas 1,492,423,124
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater  Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM  Gas Furnace: 95% AFUE and 2% ECM (New E*)  Gas Furnace: 95% AFUE and 2% ECM (New E*)  Boiler: 85% AFUE (Hydronic)  Boiler: 85% AFUE (Steam)  Power Vented: 67 EF (to support orphan WH issue)  Water Heater: 0.82 EF or 90% Te wisealed combustion  Solar Domestic Hot Water for Gas Applications  Gas Applications  Pilot new measures (boiler controls)  HVAC Financing Pilot  Other  Contingency Savings  Total  Tier 3: Insulation, HVAC, DHW, other eligible measures  Tier 3: Multi-family  Contingency Savings  Total  s Savings (lbs reduction)  CO2 (Carbon Dioxide)  NOX (Nitric Oxide)	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 575 575 2,150 22,110 0 10 25,779 4,700 150	266 12 1,425 1,386 4,776 0 0 0 0 0 0 6,162 0 0 10 17,598 MWh 1,645 53 0 1,698 Annual Lbs Electric 391,092,695 720,434	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 58 0 58 0 213,496 DTh 79,900 2,550 0 82,450 Reduction Gas 76,940,452	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 10 0 123,240 0 0 143,593 MWh 32,900 1,050 0 33,950 0 Lifetime Lb Electric 2,461,172,382	714,000 2,760,000 422,400 79,200 31,056 14,956 116,100 4,137,700 4,137,700 522 6 4,138,222 DTh 1,598,000 51,000 1,649,000 8 Reduction Gas 1,492,423,124
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater  Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE Gand 2% ECM (New E*) Gas Furnace: 95% AFUE (Starm) Boiler: 82% AFUE (Starm) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion Solar Domestic Hot Water for Gas Applications  Pilot new measures (boiler controls) HVAC Financing Pilot  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total  Savings (lbs reduction)  CO2 (Carbon Dioxide) NOX (Nitric Oxide) SO2 (Sulphur Dioxide)	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 1,650 10 22,110 10 25,779 4,700 150 4,850	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 6,162 0 7,598 MWh 1,645 53 0 1,698 Annual Lbs Electric 391,092,695 720,434	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 58 0 58 0 213,496 DTh 79,900 2,550 0 82,450 Reduction Gas 76,940,452	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh 32,900 1,050 0 33,950 Lifetime Lb Electric 2,461,172,382 4,533,739 10,524,750	714,000 2,760,000 422,400 79,200 31,056 14,956 116,100 4,137,700 4,137,700 522 6 4,138,222 DTh 1,598,000 51,000 1,649,000 8 Reduction Gas 1,492,423,124
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater  Solar Domestic Hot Water for Electric Applications  Electric Applications  Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE Gand 2% ECM (New E*) Gas Furnace: 95% AFUE (Starm) Boiler: 82% AFUE (Starm) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE w/sealed combustion Solar Domestic Hot Water for Gas Applications  Pilot new measures (boiler controls) HVAC Financing Pilot  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total  Savings (lbs reduction)  CO2 (Carbon Dioxide) NOX (Nitric Oxide) SO2 (Sulphur Dioxide)	100 5 3,659 3,500 12,000 1,650 1,650 575 575 2,150 0 0 22,110 10 0 25,779 4,700 150	100 53,659 3,500 12,000 1,650 1,650 575 575 2,150 0 22,110 0 10 25,779 4,700 150 4,850	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 6,162 0 0 10 7,598 MWh 1,645 53 0 1,698 Annual Lbs Electric 391,092,695 720,434 1,672,436 9	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 68 0 0 213,496 DTh 79,900 2,550 0 82,450 Reduction Gas 76,940,452 60,500	10 10 20 20 20 20 20 10 10 10 9 10 20 20 20 20 20 20 20 20 20 20 20 20 20	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 143,593 MWh 32,900 1,050 0 33,950 Lifetime Lb Electric 2,461,172,382 4,533,739 10,524,750 58	714,000 2,760,000 422,400 79,200 31,056 14,956 116,100 4,137,700 4,137,700 522 DTh 1,598,000 51,000 1,649,000 8 Reduction Gas 1,492,423,124 1,173,525
Ventilation and Air Conditioning  Home Performance with ENERGY STAR	HP Water Heater Solar Domestic Hot Water for Electric Applications  Electric Applications Gas Furnace: 92% AFUE w ECM Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE and 2% ECM (New E*) Gas Furnace: 95% AFUE (Starm) Power Vented. 67 EF (to support orphan WH issue) Water Heater: 0.82 EF or 90% TE wisealed combustion Solar Domestic Hot Water for Gas Applications  Filot new measures (boiler controls) HVAC Financing Pilot  Contingency Savings Total  Tier 3: Insulation, HVAC, DHW, other eligible measures Tier 3: Multi-family  Contingency Savings Total  18 Savings (Ibs reduction)  CO2 (Carbon Dioxide) NOX (Nitric Oxide) SO2 (Sulphur Dioxide) Hg (Mercury	100 5 3,659 3,500 12,000 1,650 1,650 1,650 575 575 2,150 10 0 10 10 25,779 4,700 150	100 3,659 3,500 12,000 1,650 1,650 1,650 10 22,110 10 25,779 4,700 150 4,850	266 12 1,425 1,386 4,776 0 0 0 0 0 0 0 6,162 0 7,598 MWh 1,645 53 0 1,698 Annual Lbs Electric 391,092,695 720,434	0 0 35,700 138,000 21,120 3,960 1,553 1,495 11,610 170 213,438 58 0 58 0 213,496 DTh 79,900 2,550 0 82,450 Reduction Gas 76,940,452	10 10 20 20 20 20 20 10 10 10 10	731 2,662 123 20,353 27,720 95,520 0 0 0 0 0 123,240 0 0 143,593 MWh 32,900 1,050 0 33,950 Lifetime Lb Electric 2,461,172,382 4,533,739 10,524,750	714,000 2,760,000 422,400 79,200 31,050 116,100 4,137,700 4,137,700 522 DTh 1,598,000 51,000 1,649,000 58 Reduction