

## Summary of Proposed Changes to the FY16 Residential EE Programs

**\*\*Areas footnoted and italicized indicate items that were clarified or changed from the originally posted documents.**

The following summarizes the proposed changes to the FY16 Residential EE programs:

### Residential HVAC Program

The Market Manager Team has proposed modifications to existing equipment and eligibility levels to improve alignment with available technology and recently revised regional and national efficiency specifications. These recommendations include:

- Adjusting *WARMAvantage* and *COOLAdvantage* highest tier incentive requirements to match performance levels for CEE Tier 3 and ENERGY STAR Most Efficient versus ENERGY STAR labeling.
- Modify the incentive amount and eligibility levels to better match the most efficient generally available ductless equipment. Expand Manual J Load sizing requirements to include ductless equipment.
- Restore *COOLAdvantage* entry tier, align with performance levels for CEE Tier 2.
- Explore *WARMAvantage* support for high efficiency boiler circulation pumps through mid-upstream offering in line with addressing the key market barriers for this measure.
- Explore transitioning *WARMAvantage* support for water heating equipment to mid and upstream channels for greater equipment availability, participation, and savings yield.
- Discontinue the Boiler Reset Controls due to a lack of participation in the program.

The Market Manager Team has identified areas where changes to performance criteria and incentive amounts can improve overall program performance with negligible tradeoffs. They are as follows:

### *COOLAdvantage*

Area of Change	Summary	FY2015	Proposed FY2016
<b>Central Air Conditioners &amp; Air-Source Heat Pumps</b>	Align \$500 incentive specification with CEE's highest tier levels.	<i>17 SEER, 13 EER, 8.5 HSPF</i>	<b>18 SEER, 13 EER, 10 HSPF \$500 incentive w/Manual J</b>
	Restore "Entry Tier" aligned with	<i>N/A</i>	<b>16 SEER, 13 EER, 9 HSPF</b>

	CEE Tier 2 performance levels.		<b>\$300 incentive w/Manual J</b>
<b>Ductless Mini-Splits</b>	Expand program presence in market category, align with savings opportunity	<i>17 SEER, 13 EER, 8.5 HSPF \$500 incentive</i>	<b>20 SEER, 12.5 EER, 10 HSPF \$300 incentive w/Manual J</b>

**WARMAvantage**

<b>Area of Change</b>	<b>Summary</b>	<b>FY2015</b>	<b>Proposed FY2016</b>
<b>Furnaces</b>	Reflect changing standards and market for gas and oil fired units	<i>Gas Tier 2: 95 AFUE (and ENERGY STAR)</i>	<b>Gas Tier 2: 97 AFUE (level of ENERGY STAR Most Efficient)</b>
<b>Boilers</b>	Align and differentiate between gas and oil fired units.	<i>Gas: 85% AFUE (old ENERGY STAR) Oil: 85 AFUE (old ENERGY STAR)</i>	<b>Gas: 90% AFUE (equiv. new level of ENERGY STAR) Oil: 87% AFUE, (equiv. new level of ENERGY STAR)</b>
<b>After-market Boiler Rest Controls</b>	Discontinue	<i>Less than 20 expected rebates.</i>	<b>Eliminate due to small size, lack of growth, closing window for cost-effective opportunities.</b>
<b>Circulator Pumps</b>	New efficient variable speed motors save 80%. Need lift.	<i>N/A</i>	<b>Explore incentive offering at retailer/wholesale/mfr level to increase availability, and access to customers at key times.</b>

**Residential New Construction Program**

The NJ Clean Energy Program’s Residential New Construction (RNC) Program is designed to increase the energy efficiency and performance of residential new construction in New Jersey. The RNC 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 renewable energy generation. The changes proposed for FY16 are designed to incentivize builders to become familiar with IECC2015 code and encourage the adoption of the Energy Rating Index (ERI) compliance path within the code as well as promote energy efficiency through a performance based incentive structure. Proposed changes include:

- Performance based incentive matrix incorporating IECC 2015 energy efficiency requirements
- Provide flexibility around Tier 3 renewable requirements
- Transition to a performance based incentive structure for Multi-family
- Increase communication from the program to the participants
- Increase marketing and outreach
- *\*\*Provide flexibility for multifamily units with extended construction timelines by removing annual re-enrollment requirement<sup>1</sup>*

While the Market Manager has reviewed a great deal of data from this and other programs, recommendations are made with the understanding that builders, rating companies and other stakeholders must have greater input into a final recommendation. Given that, the proposed restructuring for single family, multi-single, and multifamily units creates multiple paths for builder participation, rewards increased savings and performance, and provides incentives for homes to be DOE ZERH Certified with or without renewables. This structure will help builders move up the pathway toward greater energy efficiency and become familiar with new codes, in particular IECC 2015 which allows for a compliance path similar to HERS called the Energy Rating Index (ERI). While providing flexibility for builders to determine least cost performance path, IECC 2015 will require a significant improvement in efficiency compared to IECC 2009 and the NJCEP can help to prepare the NJ building industry for that level of performance.

The following table shows the paths and incentive structures currently under development for adoption in FY16.

**\*\*Proposed RNC Incentive Matrix for Single Family<sup>2</sup>**

	Tier 1	Tier 2	Tier 3	Tier 3 Plus
<i>HERS (before renewables)</i>	<i>ENERGYEfficient Home</i>	<i>ENERGY STAR Home</i>	<i>Zero Energy Ready Home</i>	<i>Zero Energy Home 100% Renewables</i>
65	\$750	\$1,750		
60	\$1,000	\$2,000		
55	\$2,000	\$3,000		
50	\$3,500	\$4,500	\$6,500	\$9,500
45	\$6,250	\$7,250	\$9,250	\$12,250
40	\$9,250	\$10,250	\$12,250	\$15,250
35	\$12,750	\$13,750	\$15,750	\$18,750
30	\$16,250	\$17,250	\$19,250	\$22,250
25	\$17,250	\$18,250	\$20,250	\$23,250
20	\$18,250	\$19,250	\$21,250	\$24,250

<sup>1</sup> This is an additional bullet

<sup>2</sup> The table is clarified for Single Family and incentive matrix corrected to match compliance filing

The new incentive structure is heavily weighted toward lower HERS scores and is intended to increase energy saving. *\*\*Multi single units receive 75% of the incentive and multifamily units 50% of the incentive. See compliance filing for incentive matrix for all units.*<sup>3</sup>

*Proposed Incentive Restructuring for Multifamily High Rise*

The Multifamily High Rise program currently offers a flat incentive of \$1000 per unit. In response to comments provided by builders and raters and given new information on incremental costs, the Market Manager is developing a performance-based incentive structure to align this component of the program with the others. When looking individually at MFHR savings relative to baseline, the unit average is about 25% better than code.

**Proposed Multifamily High Rise Incentive Structure**

<b>Savings before RE</b>	<b>Incentive per unit</b>
15%	\$1,250
20%	\$1,500
25%	\$1,750
30%	\$2,000
35%	\$2,250

*Increase in Technical Support Offered by the Program*

As noted above, the residential new construction industry is approaching a critical transition as NJ looks to adopt IECC 2015. To support that transition, the program proposes to increase technical and field outreach, increase training opportunities, and support a BPU/DCA collaboration with code officials around the State so that the expertise within the NJCEP can be brought to bear and support a successful transition to the new code.

**Home Performance with Energy Star Program**

The Market Manager team has developed a set of proposals designed to increase the savings associated with each dollar spent in the HPwES program while increasing the savings on a per project basis. FY2016 proposals include:

- Reduce incentive and financing costs
  - Lower incentives and interest rate buy-downs to a sustainable level
- Boost Savings for single-family projects
  - Increase savings through insulation and duct sealing requirements
- Increase program participation to drive savings
  - Ramp up multifamily projects
  - Increase program driven marketing
  - Develop pilot program for insulation and remodeling projects

<sup>3</sup> *Incorrect language was removed and the italicized language was added for clarification*  
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*Expand Insulation and Duct Sealing to Increase Per Project Savings*

The Market Manager has identified several opportunities to increase HPwES program savings. The program currently requires air sealing of attics and attached garages for all projects, but does not require attic insulation. Attic insulation is currently included in more than 70% of projects, but there continue to be missed opportunities. The Program will require installation of insulation in at least one open, accessible area of the thermal boundary of the home for every HPwES project.

The Market Manager also believes that the program can obtain more savings by strengthening its focus on duct sealing using the pressure pan test, which is less cumbersome than the previously required Duct Blaster test. We estimate that increased installation of attic insulation and duct sealing would result in a 4-5% increase in energy savings per project.

*Increase Multifamily Participation*

Contractors have indicated that there are opportunities to significantly ramp up the number of multifamily buildings completing HPwES upgrades. Multifamily HPwES projects must be completed at the whole-building level, and due to building size and complexity, it is more difficult to achieve 10% Total Energy Savings requirement in a multifamily building than in a single-family building. We recommend maintaining the current incentive structure for multifamily units, while adjusting the Total Energy Savings tiers to enable more projects to qualify.

***\*\*Proposed Single-Family Incentive Tiers<sup>4</sup>***

	<b><i>Current Total Energy Savings</i></b>	<b><i>Proposed Total Energy Savings</i></b>
<i>Tier 2</i>	10%	5%
<i>Tier 3 Level 1</i>	20%	20%
<i>Tier 3 Level 2</i>	25%	25%

**Proposed Multifamily Savings Tiers and Customer Rebates**

	<b>Current Total Energy Savings</b>	<b>Proposed Total Energy Savings</b>
Tier 2	10%	5%

<sup>4</sup> This table was added for clarity between Single Family and Multi-Family differences  
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Tier 3 Level 1	20%	15%
Tier 3 Level 2	25%	20%

*Increase Program Participation through Enhanced Customer Marketing*

Building on approaches currently being tested by the Market Manager, we recommend that the HPwES marketing strategy focus on engaging customers through new channels, including:

- Market segmentation to understand which segments of the NJ residential market are the best prospects for HPwES upgrades;
- Targeted marketing to new homeowners, HVAC/appliance customers, multifamily property owners, and other market segments identified through the market segmentation work; and
- Community-based marketing in partnership with municipalities and community-based organizations, to spread awareness of HPwES via word-of-mouth.

*Reduce Customer Incentives*

We recommend maintaining the current incentive structure, in which incentives are based on the percentage of total site energy savings. The Market Manager proposes a maximum customer incentive of \$4,000 for a project with total energy savings greater than 25%.

It is important to maintain HPwES incentives at a level higher than WARMAdvantage and COOLAdvantage, in order to enable contractors to upsell customers into HPwES. Assuming that HVAC rebates are maintained at current levels, a customer installing a combination gas furnace and water heater, plus a central air conditioner, would qualify for a rebate of \$1,500 from the NJCEP and a \$500 rebate from the New Jersey Natural Gas or South Jersey Gas, for a total of \$2,000. The maximum HPwES incentive of \$4,000 is double at that level, and combined with the low-interest loan, will continue to provide a powerful inducement for many customers to jump to HPwES and undertake more comprehensive projects.

**Proposed Single-Family Savings Tiers and Customer Rebates**

	<b>Total Energy Savings</b>	<b>Current Rebate</b>	<b>Proposed Rebate</b>
Tier 2	**5% <sup>5</sup>	50% of cost up to \$2,000	50% of cost up to \$2,000
Tier 3 Level 1	20%	50% of cost up to \$4,000	50% of cost up to \$3,000
Tier 3 Level 2	25%	50% of cost up to \$5,000	50% of cost up to \$4,000

<sup>5</sup> Corrected Total Energy Savings requirement reflected in the Compliance Filing  
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*Reduce Program Costs Associated with Financing*

The zero interest, 10-year loan offered by the HPwES is extremely popular among customers and contractors alike, with more than 80% of customers taking program financing. Currently the cost to the program to buy down interest rates from a starting rate of 10-13% to 0% for a 10 year, \$10,000 loan is approximately \$4,500 per loan. Contractors have also suggested that more flexibility in loan amounts and terms would be helpful. For example, currently loans are capped at \$10,000, but some customers would like to finance a larger amount. Additionally, not all customers require 10-year loan terms. Under the current program, the full buy-down amount is paid up front, so the program has still paid \$4,500 even if the customer chooses to pay off the loan early.

We believe that there is potential to reduce the cost to the program associated with the interest rate buy-down by approximately 20%, even while enabling larger loans up to \$12,000, by:

- Raising the interest rate paid by the customer, for example to 1.99% or 2.99%;
- Offering shorter loan terms;
- A combination of the above strategies.

The following table illustrates how changes to interest rates and loan terms affect the cost to the program per loan.

**Cost to the Program of Interest Rate Buy-Down for \$10,000 Loan**

	Buy-Down from 11% to 0%	Buy-Down from 11% to 1.99%	Buy-Down from 11% to 2.99%
3 Year Term	\$1,591	\$1,315	\$1,173
5 Year Term	\$2,523	\$2,095	\$1,874
10 Year Term	\$4,520	\$3,786	\$3,402

The following table provides two financing scenarios for FY2016 that would reduce the program costs associated with financing.

**Current and Proposed Financing Options**

	Total Energy Savings	Current Financing	Proposed Financing
Tier 2	**5% <sup>6</sup>	0% up to \$5,000, 5 year loan	0% up to \$5,000, 5 year loan, where a utility financing offer is unavailable
Tier 3 Level 1	20%	0% up to \$10,000, 10 year loan	Either 0% financing up to \$10,000 or 4.99% financing up to \$15,000, where a utility financing offer is unavailable

<sup>6</sup> Corrected Total Energy Savings requirement reflected in the Compliance Filing  
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Tier 3 Level 2	25%	0% up to \$10,000, 10 year loan	Either 0% financing up to \$10,000 or 4.99% financing up to \$15,000, where a utility financing offer is unavailable
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*Reduce Contractor Incentives*

The HPwES program currently offers a contractor incentive tied to their performance. Contractors receive a \$700 incentive if their completed project passes field inspection the first time the project is inspected. They are not eligible to receive this incentive if the project fails the field inspection. To maintain the quality of work done by contractors, the program should continue to offer this incentive, but we recommend reducing it to \$500 for single family homes and \$50 per unit for multifamily buildings.

**Energy Efficient Products Program**

The Market Manager Team’s recommendations are aimed at two main areas of opportunity to boost savings associated with each dollar spent: 1) specific recommendations on equipment categories and eligibility levels, and 2) new approaches to greater market penetration, driving demand, and impact.

In the first category, qualifying products, the Market Manager Team has proposed modifications to existing equipment and eligibility levels to improve alignment with available technology and recently revised regional and national efficiency specifications. These recommendations include:

- Increase shift to LEDs in lighting and eliminate the incentive for single package CFLs;
- Reduce CFL & LED incentives by a minimum of 10% and increase multi-pack sales;
- Update clothes washer and refrigerator rebates to include a two-tiered specification at ENERGY STAR and CEE Tier 2, based on a review of available models in the NJ market;
- Add a Tier 2 Advanced Power Strip rebate to offer deeper savings opportunities for addressing plug loads;

In the second category, increasing market penetration, the Market Manager Team has proposed new approaches to driving demand and generating impacts. These recommendations include:

- Run a new annual solicitation for service provider promotions of whole-home set top box replacements;
- Review options for consolidating rebates for a combined ENERGY STAR clothes dryer and washer pair and shift to a paired rebate for new ENERGY STAR refrigerator with recycling of old refrigerator; and
- Evaluate a New Jersey pilot of the ENERGY STAR Retail Products Platform to maintain a viable long-term, cost-effective products program and leverage a

national platform for greater engagement with retailers to accelerate the stocking and sales of certain ENERGY STAR product categories.

*Proposed Adjustments to Incentives*

Lighting

- Modest reductions (~ 10%) in markdown incentives will continue based on the continued market shift to higher performing LEDs and continued price reductions for standard CFLs;
- The same growing market share of LED and CFL replacement lamps support the removal of most fixture incentives with the exception of down lights; and
- Removal of incentives for standard single pack CFLs to reflect the low cost of multi-packs as a more cost-effective option for customers and the program.
- *\*\*The removal of most fixture incentives with the exception of down lights based on the growing market share of LED and CFL replacement lamps<sup>7</sup>.*

Appliances, Advanced Power Strips, Refrigerator Recycling & Cable Set Top Boxes

- Monitor clothes dryer participation and consider a future shift to a single paired incentive for ENERGY STAR and 2014 ETA clothes dryers purchased with an ENERGY STAR clothes washer;
- Increase advanced power strip rebates for Tier 1 to \$15 and introduce a new Tier 2 rebate at \$40 maximum;
- Engage retailers partnering on point-of-sale rebates to support a new refrigerator recycling “piggy-back” rebate to combine with the existing ENERGY STAR refrigerator rebate; and
- Add a two-tier rebate structure for clothes washers and refrigerators at \$50 and \$75 for products meeting the new ENERGY STAR and CEE Tier 2 performance criteria.

Current and proposed incentive levels and proposed modifications are shown in the table below.

**Proposed Efficient Products Incentives**

	<b>Current Rebate</b>	<b>FY2016 Proposed Rebate</b>
Lighting	<ul style="list-style-type: none"> <li>• Avg. \$0.73 CFLs</li> <li>• Avg. \$5.40 LEDs</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of average incentives by 10% in markdown promotions</li> <li>• Removal of standard single pack CFL incentive</li> <li>• Removal of fixture incentives except LED down lights</li> </ul>

<sup>7</sup> Additional bullet for clarification on fixtures included in the program  
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Clothes Washer	<ul style="list-style-type: none"> <li>• \$50 for CEE Tier 2 (pre-specification update in 2015)</li> </ul>	<ul style="list-style-type: none"> <li>• \$50 for new ENERGY STAR V7.0</li> <li>• \$75 for CEE Tier 2</li> <li>• Potential shift to paired rebate with ENERGY STAR and 2014 ETA clothes dryers</li> </ul>
Refrigerator	<ul style="list-style-type: none"> <li>• \$50 for CEE Tier 2 (pre-specification update in 2014)</li> </ul>	<ul style="list-style-type: none"> <li>• \$50 for new ENERGY STAR V5.0</li> <li>• \$75 for CEE Tier 2</li> <li>• Potential pilot of piggy-back rebate for refrigerator recycling with POS retailers</li> </ul>
Advanced Power Strips	<ul style="list-style-type: none"> <li>• \$7-10 for Tier 1</li> </ul>	<ul style="list-style-type: none"> <li>• \$15 for Tier 1</li> <li>• \$40 for Tier 2</li> </ul>
Cable Set Top Boxes	<ul style="list-style-type: none"> <li>• \$11.20 for ENERGY STAR V4.1 deployed STBS</li> </ul>	<ul style="list-style-type: none"> <li>• Add additional rebate of up to \$100 for whole-home replacement of existing STBs with thin client technology</li> </ul>
Refrigerator Recycling	<ul style="list-style-type: none"> <li>• \$50 customer rebate</li> <li>• &gt;\$100 JACO processing payment</li> </ul>	<ul style="list-style-type: none"> <li>• Potential pilot of piggy-back rebate for refrigerator recycling with POS retailers</li> </ul>

## **\*\*Renewable Energy<sup>8</sup>**

### **Recommended Program Modifications**

This section recommends modifications to the Renewable Energy programs for FY2016. Recommendations in this section are designed to result in incremental improvements to the current program model and meet the program objectives.

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

The most significant change in the SREC Registration Program going into FY2016 will be the transition from a paper-based registration system to an electronic portal that will enable registrants to do online data entry and document uploads. This will create a more streamlined and automated registration submittal and acceptance process, and will allow the Market Manager to more effectively manage the robust registration volumes it has been experiencing. It will also help control administrative costs and improve the experience of program participants.

The Honeywell Market Manager will continue to update program procedures and requirements as necessary to ensure that the SRP registration process complies with the Solar Act and all applicable Rules governing the program. Additionally, the Market Manager will work closely with Navigant Consulting, the administrator of the EDC SREC Based Financing Program, to coordinate the implementation of that program.

#### ***REIP Sustainable Biopower***

The stakeholder process will be utilized to identify methods of ensuring that sustainable biopower projects can continue to be developed in a timely manner with appropriate incentives. Elements of the program design and incentive structure will be discussed with the Biopower Technical Working Group. The Honeywell Market Manager will expand its efforts on targeted outreach to biopower industry organizations to ensure a more robust working group. Based on that stakeholder input, Board Staff and the Market Manager will prepare a recommendation that will be presented to the Board for review and approval at a regularly scheduled Board meeting. The incentive budget available for new commitments for this program will be \$3.0 million in FY2016.

#### ***REIP Renewable Electric Storage***

The stakeholder process will be utilized to recommend improvements to the program design and incentive structure of the renewable electric storage incentive, informed by the results of the FY2015 solicitation. Following public comment and stakeholder discussion through the Renewable Electric Storage Working Group, Board Staff and the Market Manager will develop a proposed program design and incentive structure that Staff will present to the Board for review and approval at a regularly scheduled Board

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<sup>8</sup> Entire new section added into the summary. Previously a separate document  
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meeting. The incentive budget for new commitments for this program will increase from \$3.0 Million available in FY2015 to \$6.0 million available in FY2016.