

**New Jersey's Clean Energy Program
Energy Efficiency Committee Meeting
July 8, 2014**

Program Coordinator and Regulatory Updates

Betsy Ackerman, Sherri Jones, Mike Ambrosio

Updates on Filings, Board Orders, Regulatory Items, and FY15 Budget

Betsy Ackerman opens by stating that the Comprehensive Resource Analysis (CRA) was approved. A funding level of \$345M was granted by the Board. With carryover added, the Board-approved funding level for FY15 is \$491M.

It is recommended that a work group is formed to review program portfolio. The work group will identify programs compatible with the Environmental Defense Fund's Investor Confidence Project in order to start building a pool of investor-ready projects for when the NJ Clean Energy Programs begin making the transition to financing.

Betsy announces new assistant director, Marissa Slaton. Betsy and Marissa plan to work together to find objectives for the above-mentioned work group and reach out to potential members by August. The plan is to have the work group in action by late September/early October.

The findings of the 3 work groups formed in FY14 (data work group, utility work group, and evaluation work group) are in the process of being compiled. Reports should be available in early-mid September.

Discussion of NJCEP Program Administrator RFP / Transition Status

Unfortunately, 18-month contracts for the market managers and program coordinator were not secured (instead 12-month contracts were issued). Recommended modifications to these contracts are anticipated at the September Board meeting.

An RFI will be issued to seek feedback on past-issued RFP (i.e. What did not work? What was not included?) and hopefully provide insight when drafting a new RFP. A public hearing is tentatively scheduled for August 14.

Mike Ambrosio clarifies that FY14 programs were extended, and are being broken into two groups—ones that do not require contract modifications, and ones that do require contract modifications. The Board is in talks with both TRC and Honeywell in order to receive drafts for the former group. Longer-term discussions are being planned for the latter group.

Residential Programs - Honeywell

Proposed 2015 Program Changes

HVAC (WarmAdvantage/CoolAdvantage) Proposed Changes:

- No changes to AC specification.
- Furnaces: Eligibility criteria to be increased with 2 levels.
Tier 1 - >95% AFUE (\$250 incentive)
Tier 2 – Energy Star V 4.0 [>95% AFUE; <2% Furnace Fan Efficiency (“e”); < 2% Cabinet Air Leakage (“Qleak”) - \$500 incentive
Additional Sandy incentive to continue to be available.
- Extra incentive expanded to include space furnace and gas water heating - \$900 incentive. The expansion would allow for combination units.
- Inspection efficiency to be increased through utility coordination.

DISCUSSION

Question by Attendee: Do the tiers affect Home Performance with Energy Star (HPwES)?

Answer: No, HPwES functions under their own guidelines.

Question by Mike Ambrosio: With the exception of tier 2, are all of the other incentives current? Tier 2 is being proposed as an increase?

Answer by Kevin Burke: Yes, tier 2 is an increased incentive for increased efficiency (from \$250 to \$500).

There is some discussion on the notification process—changes that include an increased incentive, rather than a decrease, can wait longer to be introduced for public comment.

Question by Mike Ambrosio: Last year we had discussions that DOE was increasing the standards, is that still being discussed?

Answer by Anne Marie/Bruce Grossman: (paraphrased) It’s being remanded back to be analyzed again—the process [of discussion] is starting all over.

Question by Bruce: Just to clarify the \$900 combination rebate—is it for tier 1 projects, tier 2, or both?

Explanation by Kevin Burke: (paraphrased) The \$900 can be for either tier 1 or tier 2, as long as it is a combination rebate (furnace/boiler plus water heater, or a combination unit). The idea is to motivate homeowners to replace both units.

Concern by Anne Marie: Is \$900 enough of an incentive? If a homeowner is qualifying for a tier 2 incentive, replacing both units, then they could receive more money (\$500 +

\$500 = \$1000) than they would with the combination incentive of \$900. The \$900 incentive is therefore geared more towards homeowners qualifying for a tier 1 incentive only.

Statement by Mike Ambrosio: (after some discussion) Each incentive encourages homeowners to replace both units, but I would like to see more analysis of cost (purchase vs. rebate).

RNC Proposed Changes:

- Tier 3 to transition to “open rater” market.
- Tier 3 criteria to be aligned to DOE ZERH with additional NJ requirements.
- Maintain tier 1 incentive levels/program requirements.
- Remove pathway for 2006 IECC homes (no longer needed).

Energy Efficient Products Proposed Changes:

- Increase eligibility criteria to reflect new ES specifications.
 - Energy Star V5.0 Refrigerators to be eligible for a \$50 incentive. In September, when the federal standard changes, eligibility of equipment will shift from 25% to 20% better than the federal standard.
 - Energy Star V7.0 Clothes Washers to be eligible for a \$50 incentive. Eligibility will align with new specification shift scheduled for March 2015.
- Increased emphasis on LEDs and advanced powerstrips.

Question by Mike Ambrosio: What is currently being done to increase emphasis on advanced powerstrips?

Answer by Kevin Burke: We have someone on the creative side working on marketing.

Question by Betsy: Who does outreach to retailers?

Answer by Kevin: (paraphrased)The manufacturers typically do outreach to retailers, and Honeywell works with a few as well by connecting with the person at the company (Home Depot, Lowes, etc.) in charge of energy decisions. We let them know that there is a potential RFP process in which they can enroll.

There is discussion between Betsy and Kevin regarding Honeywell’s RFP, which concludes with Kevin stating that responses to the current RFP are expected by mid-July.

- For set top boxes, there will be an eligibility criteria increase (to Energy Star 4.1), and a focus on marketing to increase participation.
- A new energy star clothes dryer incentive will be proposed, with mail-in and midstream promotion with retailers.
 - Energy Star dryer V1.0 (gas & electric) will be eligible for Tier 1 \$100 incentive.

-EPA Emerging Technology award winners will be eligible for Tier 2 \$300 incentive.

Question by Attendee: What types of technology would potentially be included under tier 2 for dryers?

Rebecca: (on the phone) Tier 1 encompasses current energy levels, but with add-ons (i.e. more sensitive moisture sensors). Tier 2 products would encompass emerging energy efficient products that utilize heat pumps for more savings. The announcements for these products are expected this year.

HPwES Proposed Changes:

- Maintain tier 1 & 2 incentive levels/program requirements.
- Evaluate & possibly expand NJCUL Financing Program.
- Increase cost efficiency to allow more projects (i.e. evaluate which contactors' projects can go out for less inspections).

Program Numbers to Date:

Monthly Overview

Warm & Cool Advantage:

- Cool Completions are at 61% of program goal.
- Warm Completions are at 90% of program goal.
- HVAC Completions are at 85% of program goal.

RNC:

- Completions are at 63% of program goal.
- Enrollments are at 68% of program goal.

Energy Star Products:

- Washer Completions at 145% of program goal.
- Refrigerator Completions at 53% of program goal.
- Lighting Completions at 118% of program goal.
- Fridge Recycling at 57% of program goal.

HPwES:

- Tier 2 Completions at 213% of program goal.
- Tier 3 Completions at 134% of program goal.

Betsy asks if, in September, the layout of presentations can include goals for energy savings. She also requests that seasonal peaks and valleys be shown. Kevin replies that some proposed graph changes will be presented as part of the next agenda.

Hurricane Sandy Response Update

- WarmAdvantage rebates issued: 4613.
- CoolAdvantage rebates issued: 73 mini-splits; 812 central AC.
- Total incentive value associated with Sandy applications:
-\$3,460,950.00

FirstFuel Presentation: Mike Jackson, Indran Ratnathicam, Austin Whitman

Introduction: FirstFuel works with data analytics to help energy efficiency programs find opportunities and achieve greater savings.

Presentation by Indran Ratnathicam (Indy): The goal of this presentation is to put forth an overview of what analytics is doing within the energy efficiency market. FirstFuel currently has approximately 20 customers across the U.S., in Canada, and the U.K. Most customers are utilities and program administrators. FirstFuel software can help these customers deliver energy efficiency incentives more efficiently, cost-effectively, and on a greater scale.

More about FirstFuel:

- FirstFuel is an energy information services company that harnesses customer meter data to accelerate and scale commercial energy efficiency via “zero touch” analytics.
- The technology combines data analytics and building science to integrate into energy efficiency programs. Math by itself does not always create a whole picture of energy efficiency—FirstFuel brings other factors together in order to produce accurate results.

How analytics works:

- All customer address and meter data is formed on a graph. This meter data graph can be compared to a medical scan—an “MRI” of a building.
- FirstFuel analyzes data, and inputs possible variants such as weather conditions etc.
- The data provides insight into how power is distributed within a building.
- Each meter data graph tells a story, and does so without the use of any measuring devices within the building or on-site audits. The analysis has shown to be more effective than other methods (i.e. building simulations) in assessing what is actually happening in a building.

Question by Betsy: What exactly is being shown on the meter data graph?

Answer by Indy: This represents 24 hours/365 days worth of data. Red shows high energy use, and green shows low energy use. The graph is not an analysis itself, but a way to visualize the data and easily spot patterns.

Utility Efficiency Program Impact:

- Having full knowledge of what is happening in a building can result in improved conversion/participation rates.
- Access to meter data can be used to find buildings/building owners with energy saving opportunities.
- Program administrators/utilities can approach customers with data specific to their building in order to sell the program. Offering targeted, specific data decreases the timeline between a customer being aware of energy programs, and agreeing to participate.
- Analyzing meter data can help one discern the differences between operational data savings and retrofit savings. Long-term data examination outlines operational savings in a way that day visit, in-person auditing cannot.

Question by Attendee: What would be considered operational differences that cause savings?

Answer by Indy: (paraphrased) Scheduling times, for example—if a building starts up at 3 a.m., but no one comes in until 8 a.m....is it possible the building can wait until 5 a.m. to start? More examples include lighting unnecessarily left on at night (that can be turned off), as well as heating and cooling sequencing. Lots of buildings have the “gas and brakes” on simultaneously—in other words, they are running both heating and cooling systems at the same time.

The subject briefly returns to building start-up times. Owners with an in-depth knowledge of their own building systems might be able to explain why a 3 a.m. start-up time is reasonable (as opposed to a start-up time taking place 2 hours later). Mr. Ratnathicam introduces a portal on the FirstFuel website that allows webinar chat sessions with building owners for the purpose of real-time information exchange.

More Ways Analytics Makes an Impact:

- Access value in small to mid-size buildings—savings value in low square footage buildings is smaller, but there are more opportunities present. Data can help to separate the “wheat from the chaff” when choosing how to market to smaller buildings.

Question by Betsy: How are you getting initial data for buildings?

Answer by Indy: Typically, we gather the data from utility companies.

Question by Mike: Do the utilities give you all of the customer data, and FirstFuel narrows it down?

Answer by Indy: Yes—for example, one utility customer gave us data on all of their mid-size building customers, while another gave us all data on schools, etc.

Follow-up Question by Mike: How much time does it take to narrow down... days, weeks?

Answer by Indy: A few weeks ago we received data on 10-15 thousand customers, and we were able to produce analytical results within a few weeks.

All-in-one Analytics Platform Concluding Overview:

- Whole-building approach works well with data analytics. All saved kwh and therms are on the same data set.
- Program administrators can think about how to implement full programs, rather than only measure-by-measure retrofitting.
- Data helps to expand the scale of savings—i.e. if there is a blanket savings goal of 20%, it is possible that 20% can be achieved with one customer, or twenty different customers. The data works to refine the actual savings goal.

Concluding Discussion:

Concern by Anne Marie: (paraphrased) Messaging might be an issue—utilities could message, but any mail from the utility company is likely to end up in the hands of an accounting person rather than the energy decision-maker.

Answer by Indy: Right—we are currently gathering data, and data sources, to figure out who would be the best person to send information.

Question by Bruce: Are you gathering of all of the building information from mathematical analytics? There's no device inside the buildings?

Answer by Indy: (following some discussion) Right, there is no device inside the buildings at all. We also merge the meter data with other data, such as building size and weather. To obtain that information, we use a combination of Google mapping, permit filings, and publically available information.

Question by Bruce: Are there any interviews with personnel in the buildings?

Answer by Indy: Yes—and no. We can get to the information without speaking to anyone; however, once we do so, we like to speak with someone inside the building to let them know what was found/find out if what we found is consistent with actual building conditions.

Mr. Ratnathicam clarifies that “we” does not only mean FirstFuel—it can represent the program administrator or utility, both of which would be able to access the web portal to speak with building personnel.

Commercial & Industrial Program

TRC Team

Proposed 2015 Program Changes

New FY15 applications are available on the NJ Clean Energy website. All proposed changes will be coming in next months.

Prescriptive Program Proposed Changes:

- Prescriptive Lighting/Lighting Controls for Hurricane Sandy incentive will be discontinued.
- T12 lighting and Premium Motor incentives no longer eligible (for Sandy relief).
- Incentives will be capped at total project cost.
- Incentives for LED screw-in/plug-in (integral lamps) only available for incandescent and halogen replacement. CFL/HID to LED will not be eligible for incentives.
- R/PAR20, MR/PAR16, Globe, Candelabra, and other miscellaneous types will have a reduced incentive of \$5 per lamp (from \$10 per lamp).
- LED Track or Monopoint Directional fixtures reduces from \$50 per fixture to \$30 per fixture.
- Existing incentives for T8 to reduced wattage T8 delamping retrofits offered for new fixture replacements.

New Incentives:

- Wireless lighting controls are available and identical to wired units.
- LED Architectural Flood and Spot Luminaires (\$50 per fixture)
- Variable Frequency Drive retrofit for existing constant volume HVAC systems (\$80/HP Controlled, up to \$6,000 maximum incentive per drive).
- Food Service Equipment qualification requirement (Require Energy Star listing where applicable).

CHP/Fuel Cells Proposed Changes:

- Consideration of mixed-fuel (biogas & natural gas) participation, per prior discussion.
- Participants will be required to submit performance data for 5 years *after* installation (no additional incentive).

LEUP Proposed Changes:

- Qualified entities can participate in other NJ Clean Energy Programs.
- Participation in other programs will not reduce funding eligibility from LEUP.
- Entities will be permitted to submit a Draft Energy Efficiency Plan for funding reservation prior to submission of Final EE Plan.
- Entities may submit up to 3 draft and/or Final EE Plans within the program year for separate scopes of work.

Question by Anne Marie: In terms of entities being able to participate in LEUP as well as other programs—it won't for the same project?

Answer by Carl Teter: No.

Progress to Goal (May-June 2014)

Retrofit:

- Completed projects as of May are at 83% of goal.
- 1,070 new applications were received in June (a record number for one month).

New Construction:

- Completed projects as of May are at 48% of goal.
- 12 new applications were received in June.

Direct Install:

- Completed projects as of May are at 74% of goal.
- 228 new applications were received in June.
- 86 new approvals/commitments in June.
- 119 projects were approved for payment in June.

CHP/Fuel Cells:

- Approved applications as of May are at 86% of goal.
- 18 new applications were received in June (17 supermarkets; 1 hotel).
- 1 new large project was received in June.

P4P Existing Buildings:

- Approved ERPs as of May are at 80% of goal.
- 2 new applications were received in June.
- 13 installations were approved in June.

Comment by Betsy: I would like to see the budget at the outset included in these statistics—in other words, please show the starting budget figure as well as the graph with the current budget breakdown.

P4P New Construction:

- Approved ERPs as of May are at 82% of goal.
- 3 new applications were received in June.
- 2 new Cx reports were submitted in June.

LGEA:

- 41 new projects were received in June (9 applicants).

LEUP:

- Approved FEEPs as of May are at 100% of goal.
- 8 approved enrollments as of June.
- 6 new enrollments received in June.

Sandy Relief as of June 30th 2014:

- 1,699 applications received.
- 812 applications committed; total incentive value of \$8,923,472.15.
- 597 applications approved for payment with total incentive value of \$4,988,843.49.
- \$16,283,789.14 estimated incentive value for all received applications.

Program Metrics FY14 for SEP Non-IOU:

- Available Funding: \$316,349.41
- 0 Direct Install applications committed
- 15 applications paid: \$194,453.62
- 6 applications invoiced.
- Remaining funds for Direct Install: \$0.00
- Approved FY15 Direct Install Funding: \$350,150.40

Environmental Savings & Benefits:

- Based on cumulative completed project lifetime kWh and therm savings, NJCEP has helped saved 2,946,369 metric tons of CO₂.

Utility Updates

NJNG Outreach events are occurring this summer and fall.

Other Business, Next Meeting

Next Meeting: September 9th. There is no EE meeting scheduled for August.

Name	Company	In Person	By Phone
Ackerman, Elizabeth	BPU	X	
Adams, Ben	MaGrann Assoc.	X	
Aller, Larry	Next Step Living		X
Ambrosio, Mike	AEG	X	
Bowen, Mark	Franklin Synergy		X
Carpenter, Joseph	NJ DEP	X	
Conkey, Todd	WECC		X
DeLuca, Brian	TRC	X	
DeSeve, Julie	CSG	X	
Donohue, John	Fuel Merchants Assoc	X	
Ellman, Susan	NJNG	X	
Fekete, Victoria	US Dept. of Agriculture		X
Gratz, Ricky	Opower	X	
Grossman, Bruce	SJG	X	
Hoff, Kim	CSG	X	
Hornick-Becker, Audrey	Environmental Defense Fund	X	
Jackson, Mike	FirstFuel	X	
Jones, Sherri	BPU	X	
McShea, Anne	BPU		X
Miller, Ashley	TRC		X
Muench, Amanda	TRC	X	
O'Donnell, Tony	Sustainable Jersey	X	
Paine, Karen	TRC		X
Perracchio, Anne-Marie	NJNG	X	
Reichard, Tom	Conservation Services Group		X
Rogers, Daniel	ICF International	X	
Ryan, Jerry	NJNG	X	
Schuster, Thomas	Sierra Club		X
Stanish, Jeff	Opower	X	
Tantillo, Cheryl	Elizabethtown		X
Teng, Elizabeth	BPU	X	
Tobian, Carol	National Resource Management, Inc.		X
Vieiva, Mario	New Millennium Lighting	X	
Watts, Theresa	SJG	X	
Wetzel, Linda	AEG	X	
Wong, Doug	BC Express Inc		X
Zoppa, Bob	CSG		X
Zukas, Diane	TRC		X