



Agenda Date: 1/31/18
Agenda Item: 8B

STATE OF NEW JERSEY
Board of Public Utilities
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CLEAN ENERGY

IN THE MATTER OF THE CLEAN ENERGY PROGRAMS)
AND BUDGET FOR FISCAL YEAR 2018 -- NEW PILOT)
COMPONENTS OF HOME PERFORMANCE WITH)
ENERGY STAR® & UPDATED STANDARDS TO)
CONFORM TO NEW UNIFORM ENERGY FACTOR)
STANDARDS)
ORDER
DOCKET NO. QO17050465

Parties of Record:

Michael Ambrosio, TRC Energy Solutions
Mark Mader, Jersey Central Power & Light
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Mary Patricia Keefe, Elizabethtown Gas
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BY THE BOARD:

This Order memorializes action taken by the Board of Public Utilities ("Board") at its January 31, 2018 public meeting where the Board considered: (i) the adoption of two (2) new pilot components of New Jersey's Clean Energy Program's ("NJCEP's"); Home Performance with ENERGY STAR® (HPwES) Program; and (ii) the adoption of updated standards for NJCEP's Commercial and Industrial (C&I) programs to conform to new Uniform Energy Factor ("UEF") standards.

BACKGROUND AND PROCEDURAL HISTORY

On February 9, 1999, the Electric Discount and Energy Competition Act ("EDECA" or the "Act") was signed into law, creating the societal benefits charge ("SBC") to fund programs for the advancement of energy efficiency ("EE") and renewable energy (RE) in New Jersey. The Act also provided for the Board to initiate proceedings and undertake a comprehensive resource analysis ("CRA") of EE and RE programs in New Jersey every four (4) years, which CRA would

then be used to determine the funding and content of the EE and RE programs that are part of what is now known as NJCEP. Accordingly, in 2001, the Board issued an order setting funding levels, the programs to be funded, and the budgets for each program, all for the years 2001 through 2003. Since then, the Board has issued numerous Orders setting the funding levels, related programs, and program budgets for the years 2004 – FY18.¹ The FY18 programs and program budgets were set in a Board Order in the present matter, dated June 30, 2017 (June Order).²

On January 5, 2018, Board Staff posted on NJCEP's website a Request for Comments regarding a proposal to adopt the subject pilot components and updated standards (Proposals). Comments on same were accepted through January 17, 2018. The Proposals were also distributed on the EE Committee and RE Committee listservs.

PROPOSALS

The guidelines for approved NJCEP programs are set in part through Program Descriptions and Budgets (Compliance Filings), that are subject to review and approval by the Board. In the June Order, the Board approved for implementation during FY18 the Compliance Filings for various NJCEP programs, including one submitted by NJCEP's Program Administrator.³ (FY18 Compliance Filing).⁴

Proposed New Pilot Components of HPwES Program

The FY18 Compliance Filing anticipated implementing two (2) pilots to test concepts relevant to potential new program designs. Specifically, the FY18 Compliance Filing included the following language:

- If sufficient budgetary capacity remains later in the FY, the program may pilot a basic entry level for insulation contractors to perform air sealing and insulation measures with prescriptive incentives (mirrors current WARM/COOLAdvantage programs but with a focus on envelope measures) to engage insulation and remodeling contractors and increase customer participation.
- If sufficient budgetary capacity remains later in the FY, the program may pilot a Direct Install (DI) component to the program (LEDs, water conservation measures) to capture additional savings, including for fuel saved because of water use reductions.

Board Staff has advised that sufficient FY18 budgetary capacity remains to implement the proposed pilots.

¹ Prior to 2012, the budgets and programs were based on calendar years. In 2012, the Board determined to begin basing the budgets and programs on fiscal years in order to align with the overall State budget cycle.

² In the Matter of the Clean Energy Programs and Budget for Fiscal Year 2018, BPU Docket No. QO17050465 (June 30, 2017).

³ On January 13, 2017, TRC Environmental Corporation acquired the NJCEP Program Administrator Contract from Applied Energy Group, Inc. (AEG) and assumed AEG's rights and duties thereunder.

⁴ The FY18 Compliance Filing approved in the June Order was updated on October 18, 2017 to reflect certain budget revisions. Both the June and October versions are referred to in this Order as the "FY18 Compliance Filing."

The proposed pilots are intended to generate and collect information that will guide the Board, its Staff, and TRC in designing programs for FY19. The pilots would be assessed based on, among other things, a review of pilot program participation levels and energy savings, as well as on the results of focus groups and homeowner surveys conducted by TRC and/or its Program Managers. Some of the questions the pilots are designed to address are:

- Would the prescriptive air sealing and insulation measures attract additional contractors to participate in and promote the Program?
- Would the prescriptive air sealing and insulation measures lead to greater levels of customer participation?
- Would the prescriptive air sealing and insulation measures serve as a "gateway" for some customers to participate in a more comprehensive HPwES project in the future?
- Would the prescriptive air sealing and insulation measures and/or the DI component increase savings per program dollar spent and/or overall program cost-effectiveness?
- By how much would the implementation of the DI component increase the program's electricity savings?

The proposed pilots would provide information that could potentially lead to program changes that could increase savings at a lower overall cost per unit of savings, a prime objective of NJCEP.

The major elements of, and the incentives proposed for, each proposed pilot would be as follows:

Air Sealing and Insulation

- Only those homes that do not use atmospheric draft combustion appliances and that have an ENERGY STAR bathroom or inline exhaust fan will be eligible.
- The air-sealing and insulation must meet the technical requirements detailed in the HPwES Eligible Measures document.
- Contractors need not be BPI-certified to be eligible to participate.⁵
- The incentive would be the lesser of (1) 50% of total project cost or (2) \$500, for each of (a) air sealing and (b) installing insulation.

Residential DI

- The measures to be installed would consist of at least nine (9) items selected by the contractor and/or consumer from a published list of eligible measures.
- Only the HPwES program's accredited and certified contractors may serve as contractors for this component.
- The incentive would be \$50 paid to the installation contractor; the energy efficiency measures would be provided and installed at no cost to the consumer

⁵ In response to a comment, it would be clarified that non-BPI-certified would be required to attend certain training, as described below.

Proposed Update of C&I Standards to Conform to New UEF Standards

The C&I Programs' water heater application requirements have long been denominated in terms of Energy Factor (EF) and/or Thermal Efficiency (TE or Et). However, in December 2016, the United States Department of Energy (USDOE) adopted a final rule requiring the use of a new Uniform Energy Factor (UEF) denomination for certain water heaters. 81 FR 96204 (December 29, 2016)(the UEF Rule). Through December 29, 2017, manufacturers, rating agencies, and other stakeholders could simply use a mathematical formula to convert EF/TE to UEF, which formula is designed so that the standards denominated in UEF are equivalent in stringency to those denominated in ET/TE. However, after December 29, 2017, stakeholders are required to begin to use a new testing procedure to determine actual UEF. Considering this, the NJCEP Residential Programs at the commencement of FY18 began using criteria that allowed water heaters covered by the UEF Rule to meet either the old EF/TE-denominated or the new UEF-denominated standards.

Some applications to the SmartStart and other NJCEP C&I Programs can and do include eligibility for the "Consumer" and the "Residential-duty commercial" water heaters covered by the UEF Rule. At present, the NJCEP C&I standards that provide a direct numerical standard are expressed only in the old EF/TE-denominated standards, but some other C&I standards are expressed by reference to other codes and standards, which, at present, are expressed in the old EF/TE-denominated standards or the new UEF-denominated standards, or both.

As previously mentioned, the mathematically-derived UEFs were established by USDOE such that energy use based on UEF will be comparable to energy use based on EF. Therefore, switching to UEF values is not expected to impact eligibility standards or incentive levels, at least not until the new UEF testing procedures are utilized and new standards based on them are promulgated. (For the avoidance of doubt, the present action does not directly change any eligibility standards or incentives.) At present, it is difficult to predict the effect of the new testing procedures, but that effect is likely to begin to be measurable by mid-2018. Although USDOE seems to contemplate that stakeholders will be using only the new test-based UEFs after December 29, 2017, Board Staff believes it likely that during early 2018 some applicants installing what is currently eligible equipment will be unable to obtain and/or produce certificates that include the new UEF standards.

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Accordingly, Board Staff is seeking Board approval of the following:

1. Update the FY18 Compliance Filing and implementing program documents to adjust water heater sizing and minimum efficiency requirements for gas water heaters to include the essentially mathematically derived UEF standards for gas water heaters, as well as the current EF/TE standards, all as set forth in the Table below.

U.S. DOE Definitions			Proposed NJCEP C&I Requirements
Gas-fired, Storage	≤ 75,000 Btu/h (consumer)	≤ 55 gal	0.67 EF / 0.64 UEF (T1) 0.87 EF / 0.81 UEF (T2)
		> 55 gal	
	>75,000 Btu/h and ≤ 105,000 Btu/h (residential duty commercial)		82% Et / 0.64 UEF (T1) 90% Et / 0.85 UEF (T2)
	>105,000 Btu/h (commercial)		82% Et (T1) 92% Et (T2) No change
Gas-fired, instant (tankless)	< 200,000 Btu/h (consumer)		90% Et or 0.82 EF / 0.81 UEF
	≥ 200,000 Btu/h (commercial)		90% Et No change

* Includes adjustment from 92% Et to 90% Et to more closely align with the ENERGY STAR and the WARMADVANTAGE programs. Note also that the commercial list on AHRI only has two (2) gas water heaters that are 90 Et, the rest are 92 and higher.

2. Align all C&I efficiency standards for other water heater types (e.g., electric storage/instantaneous), with the current USDOE Tables for Consumer water heaters and Residential-duty commercial water heaters and with ASHRAE 90.1-2013 for non-Consumer and non-Residential-duty water heaters (i.e., not necessarily with the standards identified in the table above).

SUMMARY OF COMMENTS FROM PUBLIC STAKEHOLDERS & STAFF RESPONSES

In response to the subject Request for Comments, written comments were submitted by the New Jersey Utilities Association (NJUA). The following summarizes the comments and provides Board Staff's responses to them:

Comment: NJUA commented that the HPwES pilot was discussed only cursorily at two EE Committee (Committee) meetings, the process would have been better if a more detailed proposal had been submitted to and discussed with the Committee, only four (4) Committee meetings were held in 2017, and none are yet scheduled for 2018.

Response: Board Staff appreciates NJUA's participation in the Committee meetings and acknowledges the pilots were not the subject of detailed discussions at those meetings. The pilots are intended to generate and collect information that would be used to design longer-term, more comprehensive program components. As such, they will run for only three (3) to four (4) months and will be limited to a small number of projects (250 Air Sealing and Insulation projects and 400 DI projects) and a very small amount of funds (\$250,000 for Air Sealing & Insulation and \$20,000 for DI). As the information is collected and Board Staff moves forward to determine whether to proceed with, and, if so, how to design, longer-term program components, it intends to have detailed and robust discussions with the EE Committee about same. Board Staff expects to schedule EE Committee meetings for 2018 and looks forward to NJUA's participation in them.

Comment: NJUA commented that the information publicly available suggests there may not be sufficient budgetary capability to implement the pilots. It pointed to publicly posted financial reports showing that, for example, Residential New Construction program had only 7% of its "budget remaining" as of November 30, 2017. Although NJUA recognized that NJCEP nonetheless might be able to provide funds for the pilots in that it routinely shifts funds among programs and cost categories as FYs proceed and actual spending information becomes available, NJUA believes the recent cold snap could absorb any "apparent budget cushion." It finally comments that any budgetary excess should be used for training and outreach, rather than the pilots.

Response: Preliminarily, Board Staff submits that the amount of "budget remaining" is not a very useful or accurate indicator of actual versus budgeted spending rates in any given FY in that "budgets" typically are constituted in significant part of commitments made in previous years but not yet fully paid. Further, in close consultation with the Program Administrator who closely monitors actual spending and commitment rates and provides Board Staff with regular forecasts regarding same, Board Staff believes the budget revisions made thus far in FY18 and those it is currently contemplating will enable NJCEP both to continue normal operations of all NJCEP programs through the end of FY18 and to conduct the pilots, which pilots, as indicated in the previous response will have minimal budgetary impact. Finally, although Board Staff, again in close consultation with the Program Administrator, believes it will not be necessary to choose between the pilots and enhancing outreach, it does agree there is value in enhancing outreach and is contemplating, among other things, a proposal to enhance its cooperative advertising programs.

Comment: As to the DI pilot, NJUA commented that the full listing of eligible measures was not included in the subject Request for Comments and that contractors probably would tend to implement the cheapest rather than the most energy efficient measures.

Response: The full list of eligible measures would consist of qualified LED lightbulbs, low-flow faucet aerators, and low-flow showerheads; of the nine (9) items to be installed, no more than two (2) could be aerators and no more than one (1) could be a showerhead. Given the relatively low cost and efficiency differentials between the various measures, Board Staff is far from sure that contractors will skew towards the lowest cost measure and/or that any such skewing will significantly adversely affect energy savings. That said, if the data collected through the pilot shows such a skewing or effect, Board Staff will revise or add design features to prevent or mitigate same.

Comment: As to the Air Sealing and Insulation pilot, NJUA commented that:

1. Any contractor participating in the pilot should be required to have some appropriate certification to better ensure the quality of the work.
2. It might be more effective to offer financing rather than a cash payment.
3. The pilot should be accompanied by communications that clearly lay out its technical requirements.
4. QA/QC processes should be identified.
5. Crawlspace insulation and other insulation requirements should be clearer.
6. The ability or inability of Multifamily housing to participate should be stated.
7. One of its members, Elizabethtown Gas, recently launched a similar program that could provide valuable insights.

Response:

1. Board Staff agrees with NJUA that the work is sufficiently straightforward that limiting participation to BPI-certified contractors, and thereby negatively impacting the overall rate of participation in the pilot, would not be appropriate. It also agrees that some degree of training and expertise would be appropriate, and it therefore will require those without such certification to attend at least one (1) NJCEP-sponsored class that covers air sealing and insulation. If and when Board Staff moves forward to design longer-term program components, Board Staff would welcome and seriously consider more specific suggestions as to certification and/or other training requirements that could better ensure quality work while avoiding any undue adverse impact on participation rates.
2. Given the relatively small incentives, a rebate payment seems more appropriate, especially given that such incentives as typically used in other programs where the incentives are of relatively small amounts (e.g., Residential HVAC and Energy Efficient Products). That said, if and when Board Staff moves forward to design longer-term program incentives, Board Staff would welcome and seriously consider more specific suggestions regarding the possibility of providing financing incentives as part of the final program.
3. Board Staff agrees and intends to prepare and distribute such communications.
4. The QA/QC processes will be at least as rigorous as those the Compliance Filing identifies for other HPwES projects.
5. These types of technical details will be covered in technical guidelines that will be communicated to participating contractors as the pilot is rolled out. BPI-certified contractors are already knowledgeable about them, and the above-described training required of other contractors will cover such details.
6. Multifamily housing is not eligible because Board Staff preferred to keep the pilot as simple as possible and therefore chose to avoid the complications inherent in Multifamily housing. Additionally, Board Staff is hopeful the pilot might attract some new Single Family contractors who might then become interested in qualifying and participating in the overall HPwES program.
7. As stated in response to a similar comment in June 2017, Board Staff welcomes the suggestion to coordinate with Elizabethtown Gas to gather and share useful information regarding its new pilot, as both programs offer low flow showerheads and faucet aerators.

BOARD STAFF RECOMMENDATIONS

Having reviewed and considered the comments, Board Staff recommends the Board approve the Proposals with the following clarifications: (a) each pilot shall be limited to the following: Air Sealing and Insulation: 250 projects, \$250,000; DI: 400 projects, \$20,000; (b) those contractors

who are not BPU-certified will be required to attend at least one (1) NJCEP-sponsored class that covers air sealing and insulation; and (c) Multifamily housing is not eligible to participate in the Air Sealing and Insulation pilot (Clarified Proposals).

The Program Administrator has submitted a revised FY18 Compliance Filing, dated January 26, 2018 (Revised FY18 Compliance Filing) incorporating the Clarified Proposals. Board Staff recommends the Board approve the Revised FY18 Compliance Filing.

DISCUSSION & FINDINGS

Consistent with the contract with the Program Administrator, Board Staff has coordinated with the Program Administrator regarding the Proposals. The Proposals were circulated to the EE and RE Committee listservs and posted on the NJCEP web site and written comments were accepted from stakeholders and the public. Accordingly, the Board **HEREBY FINDS** the process utilized in developing the Proposals was appropriate and provided stakeholders and interested members of the public adequate notice and the opportunity to comment on them.

The Board has reviewed the Proposals as clarified by Board Staff and Board Staff's recommendations regarding same, and **HEREBY FINDS** that the Proposals will, among other things, provide information that will: (a) guide the design of new programs planned for Fiscal Year 2019 that, among other things, could increase savings at a lower overall cost per unit of savings; and (b) bring NJCEP's C&I Programs into conformity with the USDOE's new UEF standards. For those and other reasons discussed above, the Proposals are consistent with the State's goals of reducing energy usage and associated emissions. Therefore, the Board **HEREBY APPROVES** the Clarified Proposals.

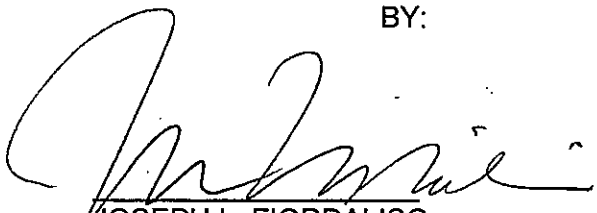
The Board has also reviewed Board Staff's recommendation that the Board approve the Revised FY18 Compliance Filing and **HEREBY FINDS** that recommendation to be reasonable and appropriate. Therefore, the Board **HEREBY APPROVES** Board Staff's recommendation to approve the Revised FY18 Compliance Filing.

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The effective date of this Order is February 10, 2018.

DATED: 1/31/18

BOARD OF PUBLIC UTILITIES
BY:



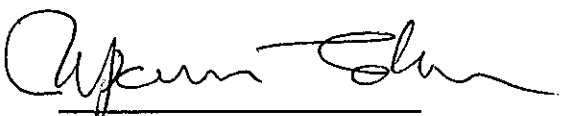
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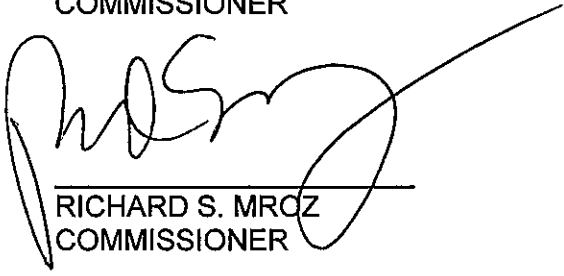
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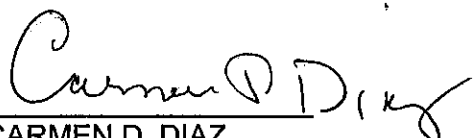
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ATTEST: 

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ASSISTANT BOARD SECRETARY

I HEREBY CERTIFY that the within
document is a true copy of the original
in the files of the Board of Public Utilities.

**DOCKET NO. QO17050465 -- IN THE MATTER OF THE CLEAN ENERGY PROGRAMS AND
BUDGET FOR FISCAL YEAR 2018 -- NEW PILOT COMPONENTS OF HOME
PERFORMANCE WITH ENERGY STAR® & UPDATED STANDARDS TO CONFORM TO
NEW UNIFORM ENERGY FACTOR STANDARDS**

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