



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 2017)	ORDER
)	
)	DOCKET NO. QO16040353
IN THE MATTER OF REVISIONS TO NEW JERSEY'S FISCAL YEAR 2017 PROTOCOLS TO MEASURE RESOURCE SAVINGS)	
)	
)	DOCKET NO. QO16060525

Parties of Record:

Michael Ambrosio, Applied Energy Group
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Timothy White, Atlantic City Electric
Sandra Easton-Perez, Orange & Rockland Utilities
Bruce Grossman, South Jersey Gas Company
Alexander Stern, Public Service Electric & Gas Company
Anne Marie Peracchio, New Jersey Natural Gas
Mary Patricia Keefe, Elizabethtown Gas Company
Stefanie A. Brand, Division of Rate Counsel

BY THE BOARD:

This Order memorializes action taken by the Board of Public Utilities (Board or BPU) at its June 29, 2016 public meeting, where the Board considered and determined (a) fiscal year 2017 (FY17) programs and budgets for New Jersey's Clean Energy Program (NJCEP)¹, and (b) revisions to NJCEP'S Protocols to Measure Resource Savings.

BACKGROUND & 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 years. The CRA would then be used to

¹ The budgets approved in this Order are subject to State appropriations law.

determine the appropriate level of funding over the next four years for the EE and Class I RE programs, which are part of what is now known as NJCEP. Accordingly, in 1999, the Board initiated its first CRA proceeding and, in 2001, it issued an order setting funding levels, the programs to be funded, and the budgets for each those programs, 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 – Fiscal Year 2016 (FY16).²

By Order dated December 16, 2015, Docket No. E009120975, the Board approved a document entitled Protocols to Measure Resource Savings (Protocols) dated November 24, 2015 (FY16 Protocols), which is the most recent version approved by the Board. The Protocols are used by the program managers to estimate energy savings and renewable energy generation. The Protocols include algorithms for measuring energy and other resource savings or renewable or clean energy generation that result from the implementation of eligible measures under NJCEP. The Protocols require updating from time to time as baselines against which energy savings are measured change due to upgrades in energy codes or appliance efficiency standards, the addition or deletion of programs, the results of program evaluations, or other changes in the assumptions used to measure resource savings. In this Order, the Board will consider proposed revisions to the Protocols, as set forth in detail below.

This Order determines (a) FY17 programs and budgets, and (b) revisions to the FY16 Protocols, all as previously mentioned and as set forth in detail below.

Process Regarding Development of the Proposed FY17 Programs and Budget Filings

In 2005-2006, the Board issued RFPs to contract for the services necessary to manage NJCEP, and in 2006 Honeywell, Inc. was engaged to manage the RE and residential EE programs, and TRC Energy Solutions (TRC) was engaged to manage the C&I EE programs. In 2007, Applied Energy Group Inc. (AEG) was engaged as the NJCEP Program Coordinator. These contracts, following multiple extensions, terminated on March 31, 2016.

In June 2012, the Board issued RFP 13-X-22546 seeking proposals for a single Program Administrator to provide the services then being provided by the above-mentioned contractors (2012 RFP). Although the 2012 RFP ultimately did not result in the award of a final contract, the Board, in April 2015, issued RFP 16-X-23938 (2015 RFP), again seeking proposals for a single Program Administrator (PA). On December 1, 2015 Treasury awarded the PA contract (Contract) to AEG. AEG has subcontracted portions of the work under the Contract to TRC, CLEAResult Consulting Inc., ICF Resources, LLC (collectively, sometimes the Program Managers or PMs), and Energy Futures Group, Inc. (AEG together with all of its subcontractors, the PA Team).

The Contract requires AEG to participate in the annual Comprehensive Resource Analysis (CRA) process, participate in the annual budget process, prepare draft annual Compliance Filings for NJCEP, design and implement improvements to NJCEP's programs, obtain and consider stakeholder feedback (from, without limit, the RE and EE Committees), coordinate annual NJCEP evaluations, and implement the agreed-upon recommendations flowing from those evaluations. Contract, 2015 RFP, Secs. 3.2.1, 3.2.2.1-2.2.3, 3.5. AEG has been fulfilling these requirements as applicable and as they come due.

² In the early years, the budgets and programs were based on calendar years, but, 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.

Program Evaluation

Rutgers University's Center for Energy, Economic and Environmental Policy (CEEPP) was engaged by the Board to manage evaluations of NJCEP. CEEPP evaluation activities have included preparation of a program cost benefit analysis, preparation of a multi-year evaluation plan, and management of other evaluation activities performed by third-party contractors. In February 2015, Energy Resource Solutions (ERS), managed through CEEPP, submitted its report regarding its evaluation and benchmarking of the NJCEP. ERS also performed a process evaluation report for the Board which is currently under review by OCE Staff. While a review of the recommendations included in the ERS reports remains ongoing, several of the recommendations in the benchmarking and process evaluation studies are reflected in the program changes summarized below. Evaluations of NJCEP programs are posted on the NJCEP web site.

Stakeholder Process

On May 31, 2016, OCE Staff distributed to the EE and RE listservs a notice of the availability of the proposed FY17 Program Descriptions and Budgets (aka "Compliance Filings" and "Plan Filings") for programs managed by OCE, dated May 31, 2016, by AEG, dated May 31, 2016, and by the Utilities, dated May 2016 (collectively, the FY17 Compliance Filings), as well as other budgetary materials set forth in tables below in this Order (these budgetary materials, the FY17 Budget Materials together with the FY17 Compliance Filings, the FY17 Compliance Filings and Budgets). OCE Staff also posted the documents on the NJCEP and BPU web sites. The distributions and postings invited comments on the foregoing documents, with a due date of June 17, 2016. Further, a public hearing regarding the foregoing documents was held on June 10, 2016, and the foregoing documents were also discussed at the meetings of both the EE Committee and the RE Committee on June 14, 2016.

Process Regarding Development of the Proposed FY17 Protocol Revisions

On May 31, 2016, OCE Staff posted on the NJCEP and BPU web sites the proposed Protocols to Measure Resource Savings, identifying each proposed revision to the FY16 Protocols, as well as a one-page summary of those proposed revisions (FY17 Protocol Revisions). Written comments on same were accepted through June 17, 2016, oral comments on same were accepted at the June 10, 2016 public hearing discussed above, and the document was discussed at the meetings of both the EE Committee and the RE Committee on June 14, 2016.

Approval of CRA Straw Proposal

On June 29, 2016, prior to acting on the present Order, the Board reviewed and approved a Comprehensive Energy Efficiency & Renewable Energy Resource Analysis Straw Proposal," dated May 31, 2016 (CRA Straw Proposal), including new SBC Funding of \$344,665,000, which when combined with other resources for funds, resulted in Total FY17 Funding of \$360,758,752 (the CRA Order). The proposed budgets set out below utilize and are consistent with the funding levels approved in the CRA Order.

PROPOSED FY17 PROGRAMS AND BUDGETS

Based on the goals and strategies set forth in the Energy Master Plan and the policy objectives of the NJCEP, as well as historic spend rates, OCE Staff, in close coordination with the PA Team, developed proposed programs and budgets as described below.

Proposed FY17 Budgets for NJCEP

As summarized in the table immediately below, to calculate the Proposed FY17 NJCEP budget (FY17 NJCEP Budget), OCE Staff:

- Carried over from the CRA Order the amounts of new SBC Funding and added Other Resources to derive the Total FY17 Funding.
- Estimated the amount of the commitments made prior to FY17 expected to be paid in or remain committed through FY17 (Commitment Backlog).
- Added the Commitment Backlog to Total FY17 Funding to arrive at a NJCEP Total FY17 Budget of \$374,850,000.

[TABLE FOLLOWS]

NJ Clean Energy Program
Proposed FY2017 Budget
(\$000)

Budget Category	New SBC Funding	Other Resources (a)	Total FY17 Funding (b)	Commitment Backlog (c)	Total FY17 Budget
<i>Energy Efficiency:</i>					
Residential	\$ 71,388	\$ 825	\$ 72,213	\$ 16,896	\$ 89,109
Low Income	29,657	343	30,000	-	30,000
Commercial & Industrial	74,117	857	74,973	87,274	162,247
State Facilities	7,414	86	7,500	-	7,500
Total Energy Efficiency	\$ 182,576	\$ 2,110	\$ 184,686	\$ 104,170	\$ 288,856
Distributed Energy Resources (d)	22,739	263	23,002	35,626	58,628
Renewable Energy	1,977	23	2,000	450	2,450
EDA Programs	-	160	160	10,135	10,295
NJCEP Administration	12,477	144	12,621	2,000	14,621
NJCEP Total	\$ 219,770	\$ 2,700	\$ 222,470	\$ 152,381	\$ 374,850
State Energy Initiatives	124,895	13,394	138,289	-	138,289
Total FY17 Funding	\$ 344,665	\$ 16,094	\$ 360,759	\$ 152,381	\$ 513,139

- (a) includes loan repayments, interest, and carryforward of unspent/uncommitted balances from FY16
(b) includes funding for new commitments, payment of incentives not previously committed, and program expenses
(c) equals carryover of forecast committed balance from FY16 (for payment in FY17 or continued encumbrance for future payment)
(d) Distributed Energy Resources ("DER") includes funding for CHP/Fuel Cell (including biomass), RE energy storage, and microgrid; Funding by category reflects reallocation of biomass and energy storage from Renewable Energy to Distributed Energy Resources.

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Proposed FY17 Budgets for EE Programs

Based on the goals and strategies set forth in the Energy Master Plan and the policy objectives of the NJCEP, as well as historic spend rates, OCE Staff, in close coordination with the PA Team, developed the proposed FY17 budgets for EE programs shown in the following table, which is in turn followed by a brief description of each of the EE programs.

		Current-year	Commitment	Total
Category / Program		Funding Need	Backlog	FY17 Budget
Energy Efficiency	Residential HVAC	\$ 13,947,000.00	\$ -	\$ 13,947,000.00
	Residential New Construction	6,358,082.00	13,069,955.50	19,428,037.50
	Energy Efficient Products	24,532,000.00	-	24,532,000.00
	Home Performance	27,376,219.00	3,825,734.41	31,201,953.41
	Subtotal Residential	\$ 72,213,301.00	\$ 16,895,689.91	\$ 89,108,990.91
	Comfort Partners	\$ 30,000,000.00	\$ -	\$ 30,000,000.00
	C&I New Construction	1,946,250.00	1,955,994.07	3,902,244.07
	C&I Retrofit	20,457,000.00	30,721,338.38	51,178,338.38
	Pay-for-Performance NC	4,944,000.00	10,409,068.38	15,353,068.38
	Pay-for-Performance	8,367,000.00	29,318,532.70	37,685,532.70
	Local Govt Energy Audit	2,793,000.00	336,802.00	3,129,802.00
	Direct Install	23,372,813.59	5,284,265.81	28,657,079.40
	Large Energy Users Program	10,893,000.00	9,248,106.40	20,141,106.40
	Customer-tailored C&I Pilot	2,200,000.00	-	2,200,000.00
	Subtotal C&I	\$ 74,973,063.59	\$ 87,274,107.74	\$ 162,247,171.33
	State Facility Initiatives	7,500,000.00	-	7,500,000.00
	Total EE Programs	\$ 184,686,364.59	\$ 104,169,797.65	\$ 288,856,162.24

- *Residential HVAC*: Provides rebates to customers who purchase high efficiency heating, ventilating, and cooling (HVAC) equipment such as furnaces and central air conditioners.
- *Residential New Construction*: Provides financial incentives to builders who construct new homes meeting the New Jersey Energy Star Homes standards, which exceed the requirements of existing energy codes.
- *Energy Efficient Products*: Provides financial incentives and support to retailers who sell energy efficient products, such as appliances or LED light bulbs.
- *Home Performance*: Relies on contractors who are Building Performance Institute (BPI) certified and incentivizes the installation of whole-house energy conservation measures, such as new HVAC, air sealing, insulation, etc. in existing homes.
- *Comfort Partners*: Provides for the installation of energy conservation measures at no cost to income-qualified customers.
- *C&I New Construction*: Provides rebates and other incentives to commercial and industrial (C&I) customers who design and build energy efficient buildings.
- *C&I Retrofit*: Provides rebates and other incentives to C&I customers who install high efficiency equipment in existing buildings.
- *Pay-for-Performance New Construction (NC)*: Provides incentives for new buildings based on the level of energy savings delivered rather than a prescribed rebate for the installation of a specific measure.

- *Pay-for-Performance*: Provides incentives for existing buildings based on the level of energy savings delivered rather than a prescribed rebate for the installation of a specific measure.
- *Local Government Energy Audit*: Provides subsidized energy efficiency audits to municipalities, school districts, and non-profits.
- *Direct Install*: Provides incentives for the installation of energy efficiency measures in small commercial buildings and non-profits' buildings.
- *Large Energy Users*: Provides incentives to the State's largest energy users through a streamlined program approach.
- *C&I Customer-Tailored Energy Efficiency Pilot Program (C&I CTEEP)*: Would employ custom account management techniques to engage targeted customers in the mid-large energy cost category in projects through a mix of technical assistance, financial analysis, design incentives, and measure incentives.
- *State Facilities Initiatives*: Through an Energy Capital Committee, would identify and implement energy efficiency projects in State-owned facilities with the objective of producing energy savings.

Proposed FY17 Budgets for DER Programs

Distributed Energy Resources (DER) would be a new, broader budget category replacing the FY16 CHP-FC budget category. It would include the CHP/Fuel Cell Program and the RE Storage program, and the Bio-power component of the Renewable Energy Incentive Program (REIP) would be folded into the FY17 CHP /Fuel Cell Program. This follows the recommendation to administer CHP/Fuel Cell, RE Storage and Bio-power projects together so as to make it easier to address some of the more common barriers, like interconnection, that impact these technologies. The proposed FY17 budgets for Distributed Energy Resources (DER) programs are shown in the following table, which in turn is followed by a brief description of each of the DER programs.

		Current-year	Commitment	Total
Category / Program		Funding Need	Backlog	FY17 Budget
DER	CHP / Fuel Cell	15,702,000.00	34,100,806.80	49,802,806.80
	RE Storage	6,300,000.00	1,525,482.04	7,825,482.04
	Microgrids	1,000,000.00	-	1,000,000.00
	Total DER	\$ 23,002,000.00	\$ 35,626,288.84	\$ 58,628,288.84

- *CHP / Fuel Cell*: Provides incentives for the installation of Combined Heat and Power (CHP), fuel cell with heat recovery, and bio-powered systems.
- *RE Storage*: Provides incentives for renewable energy storage systems.
- *Town Center DER Microgrid – Feasibility Incentive Program*: Will provide incentives to fund feasibility studies for potential DER microgrids in the State.

Proposed FY17 Budgets for RE Programs

The proposed FY17 budgets for Renewable Energy (RE) programs are shown in the following table, which in turn is followed by a brief description of each of the RE programs.

		Current-year	Commitment	Total
Category / Program		Funding Need	Backlog	FY17 Budget
RE	Offshore Wind	-	450,000.00	450,000.00
	SRP	2,000,000.00	-	2,000,000.00
	Total RE Programs	\$ 2,000,000.00	\$ 450,000.00	\$ 2,450,000.00

- *Offshore Wind*: Provides funding for research, evaluations, and general consulting services.
- *SRP (SREC [Solar Renewable Energy Credit] Registration Program)*: Registers projects that are eligible to generate and trade SRECs.

Proposed FY17 Budgets for EDA Programs

The proposed FY17 budgets for New Jersey Economic Development Authority (EDA)-administered programs are shown in the following table, which in turn is followed by a brief description of each of the EDA programs. In FY17, no new applications will be accepted and no new grants or incentives will be awarded by EDA. Instead, the budget reflects the value of existing portfolio of loans and grants previously awarded through EDA programs.

		Current-year	Commitment	Total
Category / Program		Funding Need	Backlog	FY17 Budget
EDA	Clean Energy Mfg Fund	93,555.19	4,310,804.35	4,404,359.54
	Green Growth Fund	28,351.25	2,000,044.21	2,028,395.46
	Large CHP Solicitation	38,236.80	3,823,680.00	3,861,916.80
	Total EDA Programs	\$ 160,143.24	\$ 10,134,528.56	\$ 10,294,671.80

- *Clean Energy Manufacturing Fund*: Provides incentives to attract and expand energy efficiency and renewable energy manufacturing facilities in New Jersey.
- *Green Growth Fund*: Provides assistance in the form of loans to clean technology companies who have achieved 'proof of concept' and successful, independent beta results, and who seek funding to grow and support their technology businesses.
- *Large CHP Solicitation*: Provides assistance to certain large CHP projects.

Proposed FY17 Budgets for Planning & Administration

The proposed FY17 budgets for Planning & Administration are shown in the following table, which in turn is followed by a brief description of each component of the budgets.

		Current-year	Commitment	Total
Category / Program		Funding Need	Backlog	FY17 Budget
Planning & Admin	BPU Program Admin	2,400,000.00	-	2,400,000.00
	Marketing (incl. CEP website)	3,750,000.00	-	3,750,000.00
	Program Evaluation & Analysis	2,500,000.00	2,000,000.00	4,500,000.00
	Outreach & Education	3,921,244.00	-	3,921,244.00
	Other	50,000.00	-	50,000.00
	Total Planning & Admin	\$ 12,621,244.00	\$ 2,000,000.00	\$ 14,621,244.00

- *BPU Program Administration:* Includes primarily OCE Staff salaries and fringe benefits.
- *Marketing:* Includes funding for marketing NJCEP, including maintaining the NJCEP website.
- *Program Evaluation & Analysis:* Includes funding for program evaluation, the results of which are used, to, among other things, set incentive levels and design programs.
- *Outreach & Education:* Includes funding for the implementation of an *Enhanced Outreach Plan* submitted by the AEG Team in FY16 (which Plan places a greater emphasis on outbound communication and account management), a clean energy business web site, and projects with Rutgers LESS, NJIT, and Sustainable Jersey.
- *Other:* Includes funding for, among other things, membership in organizations of clean energy officials.

SUMMARY OF FY17 PROPOSED PROGRAM MODIFICATIONS

The following summarizes the key program modifications proposed in the FY17 Compliance Filings. More detail regarding the modifications is set forth in the FY17 Compliance Filings themselves.

GENERAL

Extensions of Time

Many programs include deadlines for submittal of information. For example, some programs require the submittal of a final application within six months or one year from the date of the letter approving the initial application. NJCEP provides for extensions of deadlines provided certain conditions are met. Program Managers in general are authorized to approve first and, in some cases, second, extensions. Additional standards/guidelines for approving extensions are set out in the FY 17 Compliance Filings and in the Guidelines established for each program. The PA, with the approval of OCE Staff, may approve up to two extensions beyond the extensions the Program Managers are authorized to approve.

RESIDENTIAL EE PROGRAMS

Residential HVAC Program

The proposed modifications to existing eligible equipment rebates and technical standards are intended to improve alignment with other Residential Programs and include the following:

- Require Manual J load calculations for heating systems and require equipment to be selected in accordance with ACCA Manual S for systems installed under the *WARMA* Advantage Program. This is to harmonize installation standards among the *COOL* Advantage, NJNG SaveGreen, Residential New Construction, and Home Performance with ENERGY STAR® Programs.
- Collect the Permit Number or a copy of the Permit Application for all HVAC Program projects. This is to align the HVAC program requirement with the Home Performance with ENERGY STAR program. This was a request of the New Jersey ACCA group in their submitted comments in regards to FY16 changes to the Home Performance with ENERGY STAR as well as HVAC programs.
- Collect a copy of the AHRI certificate rating sheet for *WARMA* Advantage projects. This is to align the submittal of supporting documentation with the *COOL* Advantage, Residential New Construction, and Home Performance with ENERGY STAR programs.
- Remove the Steam Boiler rebate. The minimum efficiency available in the market for oil boiler with steam heating is 82% and for natural gas is 81%, which yields minimal savings compared to other eligible measures available through the program. Of the 161 natural gas fueled units listed on AHRI website, 85% of the listed units meet the 82% minimum requirement.
- Reduce the Domestic Hot Water rebates to better align with the incremental cost of purchasing these more energy efficiency units.
- Reduce Combination (Heating System plus Domestic Hot Water) and Combi-boiler rebates to reflect the proposed reduced rebates for Domestic Hot Water.
- Increase the Mini-Split rebate to appropriately incentivize this equipment's incremental cost and the savings benefits that it provides. There is a great market potential in New Jersey for the mini-split systems.

The proposed incentive adjustments are set out in the FY17 AEG Compliance Filing.

Residential New Construction Program

The proposed modifications to this Program include those related to the rollout of modifications related to the recent adoption of the new code (as defined and discussed below under "ASHRAE 90.1-2013" (the New Code)).

Energy Efficient Products Program

The proposed modifications to this Program are intended to boost savings associated with program spending through (1) modifications to specific equipment categories and eligibility levels, and (2) new and improved approaches to generating greater market penetration, driving demand, and increasing impact.

The proposed modifications to existing equipment, eligibility levels, and incentives are intended to improve alignment with available technology and recently revised regional and national efficiency specifications, and they include the following:

- Rely only on LEDs in the lighting program and eliminate incentives for CFLs, so as to better align with changes including (a) the adoption of the new ENERGY STAR specification V2.0, which virtually eliminates the CFL as a viable measure for rebate programs due to the CFL's inability to meet the 15,000 hour expected lifetime requirement and (b) indications retailers in New Jersey will cease to carry CFLs. in the latter half of 2016.
- Provide an upper limit on LED incentives due to lower prices in the market, i.e., \$5 per bulb and \$8 per fixture, to better ensure that the incentives are aligned with the true incremental costs of the technology as the market shifts to higher performing LEDs with lower price points.
- Implement a Residential Products Program (RPP) that offers midstream discounts on select appliances through national retailers such as Sears, Best Buy and Home Depot.
- Work with ARCA to offer additional rebates that expand the appliance recycling program to include room air conditioners and dehumidifiers.
- Remove Set Top Boxes from the portfolio while developing a comprehensive strategy to work with cable providers, set top box manufacturers, and EPA ENERGY STAR on a new program design for such equipment.
- Include as an optional program element, "value" A-Line LEDs that do not meet the new ENERGY STAR specification V2.0's requirement for a 15,000 hour expected lifetime. Although OCE Staff intends to prioritize the support of LEDs that meet ENERGY STAR requirements, it is possible that manufacturers will develop, and consumers come to prefer, LEDs that do not meet the 15,000 requirement but are less expensive than those that do. In that case, the OCE Staff would want to incentivize the purchase of such LEDs that can deliver high lighting and product quality and has proposed an incentive of up to \$1/bulb for them.

Home Performance with Energy Star Program

The proposed modifications to existing technical standards are intended to improve alignment with other Residential Programs or reflect recent code changes, and include the following:

- Require that equipment selection be in accordance with ACCA Manual S procedures for all HPwES projects.
- Require an increase in the attic insulation level from R-38 to R-49 to reflect the adoption of IECC/2015 (as defined below).

C&I EE PROGRAMS

General--ASHRAE 90.1-2013

On September 21, 2015, New Jersey's Department of Community Affairs adopted updated construction subcodes, including the Energy Subcode, N.J.A.C. 5:23-18; 47 N.J.R. 2352(b)(September 21, 2015) based on the International Energy Conservation Code/2015 (IECC/2015), which in turn incorporates the American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 90.1-2013 (ASHRAE 90.1-2013). The requirement to comply with the updated code became effective on March 21, 2016. The new energy code requires, on

average, an increase in efficiency of 25% across all building types. Retail buildings and schools saw an even greater increase of 35% more efficient than the previous code. As a result of the adoption of the new energy code, many of the program incentives, efficiency requirements and in some instances, program design for the FY16 programs require modification. Some of the key proposed modifications are discussed further below.

C&I Retrofit and New Construction (SmartStart)

The proposed modifications to the SmartStart New Construction and Retrofit programs reflect the adoption of the new energy code, as well as continued evaluation of program requirements and incentives levels. The proposed modifications include the following:

Prescriptive Lighting

- The incentives for LED screw-in/plug-in style lamps will be reduced from \$10 to \$5 per lamp for specific types (A15, A19, A21, BR30, BR40, R40, B13, BA10, F15, MRX16). All other LED screw-in/plug-in will maintain the current \$5/lamp incentive.

Performance Lighting

- The baseline qualification requirement for new construction and major gut-rehab lighting projects will change from exceeding ASHRAE 90.1-2007 by 5% to exceeding ASHRAE 90.1-2013 by any amount; the magnitude by which the improvement must exceed ASHRAE 90.1-2013 will not be specified for FY17. Rather, this will be assessed as part of the FY18-21 Strategic Planning process. For FY17, the existing incentive structure will be maintained, i.e., the lesser of \$30 per eligible fixture or \$1/Watt over the LPD baseline per qualified area.

Electric Chillers

- The incentives for existing and new construction buildings have been separated to reflect the impact of the New Code.
- The base incentive for water-cooled centrifugal chillers <150 tons would be increased from \$12 to \$24 per ton. The performance incentive for this same unit would be reduced from \$4.00 to \$2.75 per ton.
- The proposed incentives for all electric chiller applications are set out in the FY17 AEG Compliance Filing.

Unitary HVAC

- The size categories would be modified to reflect those identified by ASHRAE 90.1-2013.
- The Split Systems and Single Package Units categories would be separated into their own respective categories.
- Package Terminal Systems would be divided into Package Terminal Air Conditioning (PTAC) and Package Terminal Heat Pump (PTHP).
- Single Package Vertical Air Conditioners (SPVAC) and Single Package Vertical Heat Pumps (SPVHP) would be new categories for FY17.
- The definition of Central DX Air Conditioning would be changed from > 30 tons to > 20 tons.
- Proposed equipment would have to meet all efficiency requirements as stated in the tables below.
- A second tier higher efficiency requirement with an associated higher incentive would be established for all equipment categories except for Package Terminal equipment.

- For Packaged Terminal Systems the size categories would be expanded considerably to allow consistency with how ASHRAE determines unit efficiency. The FY17 incentives for existing buildings and new construction would be for less than the FY16 incentives.
- For Package Terminal Systems and Single Package Vertical systems, the new construction incentives are all less than the existing building incentives.
- The proposed incentives for all Unitary HVAC applications are set out in the FY17 AEG Compliance Filing.

Ground Source Heat Pumps

- The Ground and Ground Water Source Heat Pump equipment categories and incentives would be revised to reflect the New Code. Overall incentives would be reduced as compared to FY16.
- Equipment would be required to meet both EER and COP efficiency requirements to qualify for incentives.

Variable Frequency Drives (VFD)

- The proposed incentive structure would be reformatted to aid customer use with some minor incentive revisions.
- For all VFD measure except air compressors, the maximum controlled threshold would be 50HP. VFDs controlling more than 50HP, except related to air compressors, would be reviewed through the custom measure path.
- For new air compressors with VFDs, prescriptive incentives would be provided for units up to 200HP. VFDs controlling air compressor motors exceeding 200HP would be reviewed through the custom measure path.

Gas Water Heating

- The proposed efficiency and incentive structure for tank-style gas water heating equipment are set out in the FY17 AEG Compliance Filing.
- The revised efficiency requirements for tank-style equipment are consistent with the New Code (ASHRAE 90.1-2013) and AHRI input rating categories. The capacity and efficiency values would have to be documented by the manufacturer's published ratings or a certificate from the AHRI Directory.

Custom Measures

- The current custom program requires that projects exceed ASHRAE 90.1-2007 efficiency ratings, as applicable, by at least 2%. The New Code would replace the old code as the new baseline. Existing building and new construction projects would have to demonstrate the proposed measure(s) exceed ASHRAE 90.1-2013, or, if ASHRAE 90.1-2013 does not apply, exceed industry standards (CEE, EPA ENERGY STAR, Others) by at least 2% to be considered for program incentives.

Pay for Performance New Construction (P4P NC)

Modeling Requirements

- Under the current program an applicant must develop a baseline-compliant design following ASHRAE 90.1-2007, Appendix G, and then model improvements to represent the proposed design. If the modifications proposed in the FY17 Compliance Filings are adopted, applicants would have to comply with modeling requirements described in more detail in the FY17 AEG Compliance Filing.

Minimum Performance Target

- The current program requires a Minimum Performance Target of 15% energy cost savings compared to an ASHRAE 90.1-2007 compliant baseline. If the modifications proposed in the FY17 Compliance Filings are adopted, the Minimum Performance Target would be set to 5% for commercial and industrial buildings and 15% for multifamily buildings, all as compared to an ASHRAE 90.1-2013 baseline. This target has the following equivalent values for the modeling compliance paths described above:
 - Compliance Path 1 - Proposed design would be required to meet a minimum score of 68³.
 - Compliance Path 2 – Proposed design would be required to meet a specified Performance Cost Index (PCI)⁴ value, which would vary depending on building type. For example, multifamily buildings would have to meet a minimum PCI of 0.74, which equates to a 15% improvement over ASHRAE 90.1-2013 and 26% over ASHRAE 90.1-2004 (BM baseline). Commercial office buildings would have to meet a minimum PCI of 0.71, which equates to a 5% improvement over ASHRAE 90.1-2013 and 29% over ASHRAE 90.1-2004 (BM baseline).⁵

Measure Requirements

- The current program requires at least two (2) unique measures where lighting/lighting controls cannot make up more than 50% of total energy cost savings. If the modifications proposed in the FY17 Compliance Filings are adopted, each project, regardless of compliance path selected, must have at least one measure addressing each of the following building systems: envelope, heating, cooling, and lighting (e.g. increased insulation, improved HVAC efficiency, lighting power density below code requirements, etc.). Buildings that are not heated (e.g. refrigerated warehouse) or not cooled (e.g. warehouse) will not be required to have a measure addressing the missing building

³ Scores subject to change slightly due to anticipated updates to bEQ program by ASHRAE.

⁴ Addendum BM establishes a new formula to evaluate building performance called PCI. PCI is equivalent to 1 - Performance Rating. Under the current P4P NC program, a 15% energy cost savings from ASHRAE 90.1-2007 is equal to $1 - .15 = 0.85$ PCI. A PCI of 1.0 is equal to baseline of ASHRAE 90.1-2004.

⁵ PCI subject to change slightly to align with the final PNNL / LEED technical documents.

system. Measures are defined as components that exceed ASHRAE 90.1-2013 requirements.

Incentives

- The proposed incentive structure for this Program is set out in the FY17 AEG Compliance Filing.

Pay for Performance – Existing Buildings

No modifications are currently proposed for this Program.

Local Government Energy Audit (LGEA)

Modifications include the following:

- Implementation of the program modifications approved by the Board on March 18, 2016.
- TRC performing the audits.

Direct Install

Modifications include the following:

- On May 24, 2016, the Program Manager issued RFPs implementing the Program modifications approved by the Board on April 27, 2016.

Large Energy Users

No modifications are currently proposed for this Program.

Customer-Tailored Energy Efficiency Pilot

In FY17 OCE Staff, in close coordination with the PA Team, has proposed to launch a pilot program to better serve the needs of specific commercial and industrial customers whose usage is too large for them to qualify for the Direct Install program, but too low for the Large Energy Users Program. To address this, the Commercial and Industrial Customer-Tailored Energy Efficiency Pilot Program (C&I CTEEP) would employ account management techniques to engage targeted customers in the mid-large energy cost category and use a customized approach to assisting customers with the goal of obtaining commitments to proceed with projects based on a variable mix of technical assistance, financial analysis, design incentives, and measure incentives. Incentive caps will be consistent with caps for other C&I participants. The C&I CTEEP would also gather information about the unique needs of customers in the mid-large energy cost category to maximize program impacts and benefits.

DER PROGRAMS

Combined Heat and Power/Fuel Cells

The proposed modifications, which would apply to projects submitted after the program starts accepting new applications in FY17, include those summarized below; the entire proposed

incentive structure for this Program and other details are set out in the FY17 AEG Compliance Filing.

New budget category

OCE Staff recommends a new, broader budget category, Distributed Energy Resources (DER), to replace the existing CHP-FC budget category. The new DER budget category would include the CHP/Fuel Cell program, the Renewable Energy Storage program, and, as discussed below, the Bio-power component of the Renewable Energy Incentive Program (REIP) will be folded into the FY17 CHP Program. This new DER budget category follows the recommendation to administer CHP/Fuel Cell, RE Storage and Bio-power projects through a single program making it easier to address some of the more common barriers, like interconnection, that impact these technologies. It also includes a Microgrids program that would fund feasibility studies for potential DER microgrids in the State.

Incentivize biomass and biogas-fueled projects

Current Program requirements state that qualifying CHP systems must run on natural gas, hydrogen, or mixed fuel natural gas/biogas and that systems running on 100% biomass and/or biogas may be eligible for incentives under the bio-power component of the REIP. In FY17, OCE Staff has proposed that projects that are fully powered by biomass, biogas, or mixed fuel (i.e., partially powered by biomass or biogas with the remainder powered by natural gas or hydrogen), and which meet other CHP Program criteria, be as eligible to receive Program incentives as any other CHP projects.

Suspend Incentives for Fuel Cells without Heat Recovery Pending Further Analysis

Several concerns regarding the inclusion of Fuel Cells Without Heat Recovery (aka All-Electric Fuel Cells) in the CHP program have been raised, including the following:

- Concerns raised by BPU Commissioners at recent agenda meetings regarding the costs and benefits of All-Electric Fuel Cells,
- The higher cost for the benefit of All-Electric Fuel Cells compared to the lower cost for the benefit of other distributed generation technologies, including those with lower emissions, that are not currently supported by NJCEP.
- Issues raised in a recent report by California Public Utility Commission (CPUC) staff <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M156/K013/156013203.PDF> regarding both the costs and benefits of All-Electric Fuel Cells, as well as CO2 emission levels. CPUC staff recommended eliminating incentives for electric only fuel cells as part of California's Self Generation Incentive Program (SGIP).

Based on the above, OCE Staff proposed that the Board suspend incentives for All-Electric Fuel Cells pending further analysis. OCE Staff has further proposed that an independent evaluation of the costs, emissions and benefits of various distributed generation technologies, including All-Electric Fuel Cells, be performed. Once the evaluation is complete, OCE Staff can utilize those findings to develop recommendations regarding incentive levels and performance standards, etc. for All-Electric Fuel Cells, as well as the value of fuel cells and other forms of distributed generation in building resilience, and present those findings to the Board.

Lower incentive levels for fuel cells with heat recovery to CHP incentive levels

In the FY16 Program, a fuel cell system with heat recovery was eligible for significantly higher incentives than a CHP system, e.g., a small fuel cell system with heat recovery was eligible for an incentive of \$4/watt versus \$2/watt for CHP. The policy behind this result was driven by the high cost of fuel cell systems compared to CHP systems, which was thought to justify and require the payment of a higher incentive to fuel cell system owners so as to lower the relatively higher market barriers to FC adoption. In the past two years, NJCEP has seen a significant increase in FC applications, indicating that the market is maturing to the point where rebate levels for fuel cells with heat recovery can be reduced to a level competitive with other CHP systems.

Therefore, OCE Staff has proposed that the incentives and project caps for fuel cells with heat recovery be lowered to the same levels currently available for CHP projects, changing the incentive structure to be neutral as between those two technologies.

CHP Project Cap and Adder

NJCEP has a cap of \$4 million in incentives per entity, per Fiscal Year, which is increased to \$5 million if a project includes the installation of both "comprehensive energy efficiency scopes of work" and a CHP or Fuel Cell system at the same site. The "comprehensive EE" is a new requirement implemented in FY16. This adder often causes more confusion than benefit, as "comprehensive EE" is a debated topic without a clear definition. OCE Staff therefore has proposed that the "EE adder" be eliminated and that the cap be set at \$4 million per year for all entities and technologies within this Program.

Eliminate 'bonus' incentive for performing EE before sizing a CHP system

Presently, applicants who install CHP after implementing a P4P project are eligible for a "bonus" incentive of \$0.25/W, up to \$250,000, above the CHP incentive. Because the applicant facility has already received incentives through the P4P program for implementing EE, OCE Staff has proposed that the "bonus" incentive be eliminated. This will retain the funds for additional CHP projects.

Shift the payment structure to put more emphasis on performance

Incentives are currently paid to successful applicants based upon the following three milestones: (1) 30% after equipment is purchased; (2) 60% when the equipment is installed; and (3) 10% after receiving 12 months of operating data and verifying that system operation is meeting Program requirements. OCE Staff has proposed that the payment schedule be restructured from 30/60/10 to 30/50/20, whereby (1) 30% would still be paid after equipment is purchased; (2) 50% would be paid at equipment installation; and (3) 20% would be paid after receiving 12 months of operating data within a 24-month period and verification that the system has achieved its design efficiencies for 12 consecutive months. While this change would put more risk on the customer and/or vendor installing the system, it reinforces the Program's required performance thresholds and the Program's reliance on performance data in program evaluation.

Require cost data for island mode capability

As Superstorm Sandy demonstrated, CHP can play a vital role in ensuring emergency response services are available and critical infrastructure remains operational during natural or man-made disasters. The requirements for a CHP system to deliver power reliably during a grid outage are straightforward, but there are often added costs to configure a CHP system to operate in island mode during utility grid outages. The collection of cost data will help OCE Staff assess whether or not it should recommend that island mode capability be a program requirement going forward. For these reasons, OCE Staff has recommended that all FY17 CHP project submissions provide separate cost numbers for systems with and without island mode capability, regardless of whether or not the system is built with the capability.

Cost-effectiveness screening

OCE Staff has proposed that all CHP projects be required to pass a cost-effectiveness test to be eligible for incentives by demonstrating that simple payback is 10 years or less (including any federal tax credits and Program incentives). The proposed 10 year simple payback requirement aligns with the current Program rule that CHP systems have a minimum 10-year all-inclusive system warranty or service contract, and would ensure that the Program will not incentivize projects where the simple payback is greater than the project measure life.

OCE Staff has also proposed that the CHP Program run the TRC, PCT, PACT/UCT, SCT, and RIM tests annually, or more frequently if requested, at the program-level for program planning purposes.

Clarifying CHP and Waste Heat to Power Definitions

The CHP/Fuel Cell Program has received several inquiries from developers and manufacturers regarding the eligibility of potential system configurations. In an effort to provide consistency and transparency, OCE Staff has proposed the following definitions to more clearly define "Combined Heat and Power" and "Waste Heat to Power" for the purposes of the Program:

- *Combined Heat and Power (includes Fuel Cells with Heat Recovery)*
Combined Heat and Power (CHP), also known as cogeneration, is the sequential production of electricity and useful thermal energy from a single source fuel. Useful thermal energy means energy in the form of direct heat, steam, hot water, or other thermal form that is also used for heating, cooling, humidity control, process use, or other valid thermal end-use energy requirements, for which fuel or electricity would otherwise be consumed.
- *Waste Heat to Power*
Waste heat to power (WHP) is the process of capturing waste heat discharged as a byproduct of a process and using that heat to generate power. In this configuration, a source fuel is first used to provide thermal energy to meet load requirements of a process or system (i.e. not deliberately creating excess thermal energy for the purpose of electricity generation). The byproduct of this process is heat that would otherwise be wasted to the atmosphere. The waste heat is then repurposed to produce electricity, as opposed to directly consuming additional fuel for this purpose.

Reserving Funding for Cancelled Projects

Currently the CHP/Fuel Cells Program lacks provisions defining how long the Program should reserve funding for projects or applications that have been cancelled. OCE Staff has proposed that once a project has been cancelled, the project be removed from the queue and the funds that were reserved for that project be returned to the Program budget. Per existing Program rules, the applicant would be able to appeal to the Board the decision to release the funds or the applicant submit a new application to the Program (if the Program is still accepting applications). However, the project will not be guaranteed funding or keep its original place in the project queue. OCE Staff has proposed that the Program Guidelines be modified to reflect the foregoing.

RE PROGRAMS

No modifications are currently proposed for these Programs.

EDA PROGRAMS

No modifications are currently proposed for these Programs and they are closed to new applications. Their budgets will be utilized only to manage the existing portfolio of grants and loans previously made through these Programs.

SUMMARY OF THE PROPOSED FY17 PROTOCOL REVISIONS

The proposed revisions to the Protocols reflect changes to the baselines against which energy savings are measured due to upgrades in energy codes or appliance efficiency standards, the addition or deletion of programs, the results of program evaluations, or other changes in the assumptions used to measure resource savings. Many of them are driven by the adoption of IECC/2015 and ASHRAE 90.1-2013 or by the adoption of new or revised measures by USEPA's ENERGY STAR Programs. More detail regarding the foregoing is set forth in the FY17 Protocol Revisions.

SUMMARY OF COMMENTS FROM PUBLIC STAKEHOLDERS

Oral testimony was provided at the June 10, 2016 public hearing by the Division of Rate Counsel (Rate Counsel), Bloom Energy (Bloom), New Jersey Natural Gas (NJNG), Doosan Fuel Cell America (Doosan), Core States Group (Core States), Air Tech Vacuum (Air Tech), Steven Izzi Trucking & Rigging (Izzi Trucking), New Jersey Retail Merchants Association (NJRMA), and Direct Energy. In addition, written comments were submitted by Air Tech, Shoreline Energy Associates (Shoreline), EnGeneration, LLC (EnGen), Clean Markets, Johnson Matthey Fuel Cells (Johnson Matthey), Honeywell International (Honeywell), Thomas Geothermal Engineering (Thomas Geothermal), South Jersey Gas (SJG), Assemblyman Gordon Johnson, Rutgers Professor Hana Godrich, National Fuel Cell Research Center (NFCRC), NJNG, Rate Counsel, Lime Energy (Lime), Old Bridge Township Public Schools (Old Bridge Schools), and the City of Cape May (Cape May). The following summarizes the testimony and comments and also provides OCE Staff's responses to them:

General

Comment: Rate Counsel states its support for the programs and budgets set out in the Compliance Filings, especially for Program Evaluation / Analysis.

Response: OCE Staff appreciates the support.

Comment: Rate Counsel comments that the time from the issuance of the request for comments on May 31, 2016 to the public hearing on June 10, 2016 and the close of the comment period on June 17, 2016 was insufficient for meaningful review of the CRA Straw Proposal, the FY17 Compliance Filings and Budgets, and the FY17 Protocol Revisions. It also commented that the public should be provided with more detailed supporting schedules showing how the budget proposals were calculated and that the OCE Straw Proposal and related budgeting documents should include explanations of the history, assumptions, and policy choices underlying the proposals.

Response: OCE Staff aimed to provide a reasonable opportunity for public comment on the FY17 CRA and program documents and considered the eighteen-day window to be sufficient. Staff notes that many parties had sufficient time to prepare and submit substantial comments. In addition, many of the items reflected in the subject documents had been the subject of informal discussion at EE and RE Committee meetings, and therefore have been identified as possible issues at an earlier date.

EE Incentives

Comment: Rate Counsel had the following comments about the proposed incentives for the following EE Programs:

- 1. Residential New Construction (Appendix A, p. 82).** No incentive should be offered for a HERS level higher than 55. These low incentive levels will likely not affect customers' equipment decisions in any case - and eliminating them may improve the incentive for getting the HERS score to 55 or below.
- 2. COOLAdvantage and WARMAdvantage (Appendix A, p. 86).** No incentive should be offered for Central A/C or heat pumps with SEER < 18. Furthermore, no incentive should be offered for Tier II gas furnaces, or for oil furnaces. The incentive for non-heat-pump water heaters should be reviewed, especially in light of higher federal standards for the New Jersey region. Rate Counsel also notes that the cost per therm for gas savings for these programs is extremely high at \$37.32 per therm (See Appendix G, p. 128.). Eliminating the incentives for lower-efficiency equipment could help to bring the cost per therm down.
- 3. Appliance and Consumer Electronics Incentives (Appendix A, p. 88).** The incentive for Tier I clothes dryers should be reviewed in light of current minimum standards for energy efficient dryers. In addition, as Rate Counsel has previously noted, the \$40 Tier II power strip incentive is too high -and is more so now as the retail price for these products has declined. Tier II power strips can now be purchased undiscounted for around \$30. The incentive for Tier I power strips should be eliminated or reduced.

Response: OCE Staff's responses are as follows:

1. **Residential New Construction (Appendix A, p. 82).** OCE Staff is concerned that eliminating incentives for HERS levels above 55 (i.e., the less efficient structures) at this time could have an unduly detrimental effect on the energy savings realized through this Program, especially in light of other relatively aggressive initiatives NJCEP has recently launched with regards to the Program, such as requiring compliance with the new ENERGY STAR v3.1 standard a year earlier than required by USEPA. OCE Staff will evaluate Rate Counsel's recommendations further as part of the development of the Strategic Plan, in part by considering the results of the Baseline Study planned for FY17 and discussions with stakeholders.
2. **COOLAdvantage and WARMAdvantage (Appendix A, p. 86).** OCE Staff believes that each of Rate Counsel's recommendations regarding these programs has merit and warrants further consideration, However, OCE Staff does not support implementing these recommendations at this time. Instead, OCE Staff proposes that a measure-level cost/benefit analysis be performed as part of the Strategic Planning Process and that consideration be given to these recommendations as part of that analysis, after which an informed decision can be made regarding whether or not these measures should remain in the Program. Further evaluation of these measures is particularly important given the recent drop in natural gas prices that will impact the cost effectiveness of gas saving measures.
3. **Appliance and Consumer Electronics Incentives (Appendix A, p. 88).** The current federal standard for Clothes Dryers went into effect on January 1, 2015. The ENERGY STAR specification that went into effect on the same day requires products to be 5% more efficient than the federal standard. There has not been an update to either specification since January 1, 2015. At major retailers, the majority of non-ENERGY STAR models cost \$300-\$900 while the majority of ENERGY STAR models cost over \$800. Because a majority of the ENERGY STAR models are in a higher price range, OCE Staff finds that the \$100 rebate for ENERGY STAR remains appropriate. OCE Staff's information indicates that the typical retail pricing for Tier 1 and Tier 2 Advanced Power Strips is \$25 and \$55, respectively. Accordingly, OCE Staff continues to find a value in providing the respective \$15 and \$40 incentives for these items, especially since the PA Team has arranged for a FY17 off-shelf promotion at Home Depot to stock and sell this product, which promotion would provide the program with prime placement. Although OCE Staff recommends retaining these rebates for now, it also plans to re-evaluate them as part of the Strategic Planning and/or the other evaluations planned for FY17.

Residential HVAC

Comment: NJNG and SJG support the proposal to require sizing calculations (Manuals S & J) in the Residential Gas & Electric HVAC Program. However, given the large size of the affected contractor base, they suggest the Board provide for a training and communications plan and an appropriate transition period.

Response: OCE Staff appreciates the support and is planning a staged approach regarding the requirement for sizing calculations and other changes to the Residential HVAC Program. Over the next few months, OCE Staff will work with its service providers and consult with the Program's stakeholders to finalize and implement detailed communication strategies and

training programs for the HVAC contractor base. Its preliminary thinking is that the new requirements would begin to be operational on or about January 1, 2017.

Comment: Thomas Geothermal comments that the Residential HVAC Program has a misguided approach to Geothermal Heat Pumps (GT Pumps) that prevents the Program and its participants from taking full advantage of the GT Pumps. For instance, Thomas Geothermal says:

- The Program mistakenly excludes GT Pumps from its WarmAdvantage Program even though they can save considerable heating energy and even though New Jersey is in a heating dominant climate.
- The Program mistakenly requires GT Pumps to be sized like an air conditioner according to Manual J, which results in most GT Pumps being significantly undersized for their heating loads.
- For replacement equipment installations measurable performance of the existing installation is a better indicator of correct equipment selection than Manual J and would save time and money.
- The Program and its participants would save money and achieve more accurate and predictable performance results if the Program relied on actual performance results rather than Manual J estimates.
- The Program incentive for a GT Pump only reflects its cooling capabilities and at any rate is inappropriately low considering the cost of the GT Pump and the heating and cooling energy savings it achieves.
- Continuing advances in GT Pump technology are likely to produce even greater energy savings.

Thomas Geothermal also suggests the Residential HVAC Program should adopt 2015 IRC Section M1401.3, which section makes certain exceptions for multi-stage technology regarding equipment and appliance sizing; those exceptions would facilitate the use of properly-sized GT Pumps that could also satisfy the residence's heating load.

Response: OCE Staff believes its approach to GT Pumps is technologically sound and appropriately advances the Goals/Objectives identified in the CRA Straw Proposal. Additionally, the program requirements are consistent with national standards. Nonetheless, Thomas Geothermal identifies some possible enhancements that warrant further discussion and evaluation, and OCE Staff accordingly plans to organize a meeting with stakeholders for this purpose.

Energy Efficient Products

Comment: Rate Counsel comments no incentive should be paid for lower- performing LEDs that do not meet ENERGY STAR standards because, in addition to thwarting the purpose of the Program, customers who purchase inferior LED products will be discouraged from purchasing more energy efficient LEDs in the future if the lower-quality LEDs fail to perform as expected.

NEEP stated several concerns about the proposal to include "Value LEDs" in this Program. NEEP says that early compact fluorescent lamps (CFLs) were of relatively poor quality, which led to consumer backlash, which in turn led to widespread reliance on the ENERGY STAR program and its certification process by most clean energy programs. As to LEDs, ENERGY STAR in January 2016 set a new specification for LEDs, ENERGY STAR V 2.0, and expects

products meeting that new specification to become available in the market during July 2016. According to NEEP, LEDs meeting ENERGY STAR V 2.0:

- Come with an assurance of quality, including as to energy efficiency, that the Value LEDs do not provide.
- Was developed through a public process that should mitigate the possibility of claims by any manufacturers excluded through the as yet undefined process OCE Staff would follow to include and exclude LEDs from its Program.
- Are approximately 14% more efficient than Value LEDs.
- Are less likely than Value LEDs to lead to free-ridership.

Response: OCE Staff understands and has considered NEEP comments about Value LEDs, and agrees that the promotion of high quality products is of paramount importance to the adoption of energy efficiency. As described in the AEG Compliance Filing, OCE Staff proposes to continue to favor ENERGY STAR certified LEDs, and to only promote Value LEDs if rapid market changes make it untenable for ENERGY STAR certified lighting products to compete with very low cost and poor performing LED products. OCE Staff, working through and with the PA Team, will only allow Value LEDs into NJCEP on the terms and conditions described in the AEG Compliance Filing and below, and only if it is the best course forward for assuring that consumers will purchase high quality efficient lighting products.

Recently, there has been considerable volatility in the lighting market, with swings of 400% in LED pricing over the last year. The amount of retail shelf space devoted to CFLs is decreasing as manufacturers and retailers have indicated they are exiting the CFL market. As the market shifts to LEDs, program sponsors are seeing the costs of their programs increasing from \$0.03/kWh saved to over \$0.08/kWh. In response to the higher cost of LEDs, some manufacturers and retailers are promoting very low cost and poor quality LED products, while others have released 'Value' Non-ENERGY STAR lighting at price points similar to CFLs. These Value LED products are targeted at the consumer who would purchase incandescent halogen lighting or poor quality LEDs in the absence of CFLs or affordable quality LEDs.

Because the pricing for LED products that comply with ENERGY STAR V 2.0 is not yet known it is difficult to say with certainty that it will be possible to affordably provide incentives to encourage consumers to choose ENERGY STAR LEDs. If this should prove to be the case, the OCE Staff working through and with the PA Team will need to quickly begin promotion of quality Value LEDs to ensure that consumers have a positive first contact with this technology rather than a negative first contact with some of the poor quality Value LEDs being released into the market.

Should the NJCEP determine that promotion of non-ENERGY STAR Value LEDs is necessary, only products that meet the following requirements would be eligible for incentives:

- Only A-line LED bulbs would be supported, and the focus would be on 60W and 100W equivalent LEDs.
- Lumens, Luminous Distribution (determines omnidirectionality), CCT, CRI, Color Maintenance, and Warranty would be equal to ENERGY STAR V 2.0 requirements.

- 3 performance metrics, or attributes would differ from ENERGY STAR V 2.0 as follows:

Attribute	OCE Staff Proposal	ENERGY STAR V2.0
Efficacy	70 lm/W	80, 70 with CRI \geq 90
Lifetime	L ₇₀ = 10,000 hours	15,000 hours
Power Factor	0.5	\leq 10 watts = \geq 0.6 > 10 watts = \geq 0.7

- Performance claims would have to be verified with industry-recognized standard documentation.

The testing used to evaluate the Value LEDs would be LM-79 and LM-80 test reports. These are the same tests required to test the core performance metrics for ENERGY STAR LEDs.

The results from the LM-80 report are applied to the ENERGY STAR TM-21 Calculator (also required by both ENERGY STAR and the Value LED specification) to project the lifetime that can be claimed for a product. Lowering the requirements for lifetime, efficacy and power factor, as set forth in the table above, allows the program to include LED bulbs at lower price points while at the same time retaining reasonably high quality.

Pay-for-Performance (P4P)

Comment: Honeywell praises how well the P4P Program works with New Jersey's Energy Savings Improvement Program (ESIP) in encouraging schools and other governmental entities to become energy efficient. However, it believes the FY16 requirement that participating facilities have a peak demand of at least 200 kW (the 200 kW Requirement) is and will continue to prevent many ESIP participants, especially school districts with several smaller facilities, from receiving sufficient incentives to undertake the type of comprehensive EE measures ESIP and P4P encourage. Honeywell says that the 200 kW Requirement drives some of its ESIP clients into other Programs, such as Direct Install (DI) or Smart Start, in which Honeywell says the NJCEP incentives amount to only 25 – 35% of those available through P4P. Honeywell suggests the Board should restore the feature of the P4P Program that allowed the Program Manager to issue ESIP participants a waiver from the 200 kW Requirement or to at least lower the 200 kW Requirement to 75kW, an amount Honeywell says its experience has shown is the threshold below which P4P ceases to be economically advantageous.

Old Bridge Schools shares Honeywell's position on this issue and says the 200kW Requirement would eliminate 15 out of its 20 buildings from the P4P Program to which it was planning to apply. It says this would result in it suffering hundreds of thousands of dollars of lost opportunity.

Response: OCE Staff appreciates the support for the successful relationship between the P4P Existing Buildings Program and ESIP. Historically, a typical P4P project at a facility that does not meet the 200 kW Requirement (but received a waiver of that requirement) would have an incentive value ranging from approximately \$10,000 up to \$100,000 based on incentives that cover up to 50% of the cost of the efficiency measures. By comparison, DI projects are eligible for incentives that cover up to 70% of the cost of the efficiency measures, subject to a project incentive cap of \$125,000. Further, the 30% of a DI project's cost that is not covered by an

NJCEP incentive can be included in ESIP funding. In some cases, the scope of work can be such that SmartStart incentives can be equivalent to those available under P4P. Especially if one considers the cost of the additional effort involved in the energy modeling required for P4P participation, DI or SmartStart will often be a better, more cost-effective, fit for facilities that fall below the 200 kW threshold. OCE staff also notes that the DI program provides turn-key services and includes a variety of eligible measures, and the SmartStart program provides incentives for a variety of prescriptive measures, as well as custom measures including envelope improvements. Accordingly, OCE Staff believes the 200 kW threshold is appropriate for the P4P Existing Buildings program. The Program Manager does have the ability to approve projects that are within 10% of the 200 kW peak demand threshold as stated in the Compliance Filing.

Direct Install

Comment: NJNG, SJG, and Lime support the relaunch of the Direct Install Program. However, they are concerned the proposed budget may not meet pent up demand and hope the Board would revisit the budget if the demand does in fact exceed the budget.

Response: OCE Staff appreciates the support of the relaunch. As to the adequacy of the Direct Install Program budget, it historically has spent between \$2,000,000 and \$3,000,000/month when utilizing the services of veteran contractors. Although OCE Staff and its service providers are anxious to get the Program to peak operation as quickly as possible, they also anticipate some ramp up time for new participating contractors to build their business, contractor training, and project application, approval, and commitment. Accordingly, OCE Staff believes the proposed budget will meet demand, and, if demand unexpectedly exceeds the budget, OCE Staff would consider asking the Board to revisit the budget as it has done in past fiscal years.

CHP / Fuel Cell

Comment: Bloom, Doosan, Direct Energy, Air Tech, Johnson Matthey, Izzi Trucking, Assemblyman Johnson, Professor Godrich, NFCRC, and Core States oppose the proposal to suspend the issuance of incentives for Fuel Cells without Heat Recovery (aka All-Electric Fuel Cells) pending further evaluation and analysis (Proposed Suspension). Bloom and/or NFCRC also commented:

1. OCE Staff's reliance on a November 2015 proposal by the staff of the California Public Utilities Commission (CPUC) to declare All-Electric Fuel Cells ineligible is misplaced in that CPUC ultimately rejected that proposal on May 16, 2016.
2. A 2015 Rutgers study concluded that actual CHP performance is lower than expected, especially as to capacity.
3. It would welcome a broad comparison and evaluation of All-Electric Fuel Cells versus CHPs based on economic, environmental, and energy factors, especially actual (not design) thermal energy utilization and capacity factor.
4. The displacement of centralized power plant energy with All-Electric Fuel Cell energy would result in significant CO2 reductions in New Jersey, which reductions would be approximately 30%/MWhr greater in New Jersey than in California.
5. New Jersey would be the only state that specifically excludes All-Electric Fuel Cells from its fuel cell program.
6. The Bloom Fuel Cells in NJ operate at 96.6% capacity, an efficiency of 58.6%, and an environmental level that Bloom is confident will be better than CHP, so long as

actual metrics are collected and compared. For example, Connecticut has found that a CHP emits 150 times more NOx than an All-Electric Fuel Cell.

7. Bloom is working hard to grow in New Jersey, employs over 27 employees who live in New Jersey, has New Jersey vendors (including one who employs over 50 people), and spent over \$25,000,000 in New Jersey in FY16.

Bloom, Assemblyman Johnson, and Doosan also suggest the Board should have conducted, and/or should conduct, the subject evaluation and analysis before considering the Proposed Suspension, and Bloom suggested the process related to the Proposed Suspension was inadequate.

Johnson Matthey also suggests the Board's decision-making should be technology-neutral and based upon technical requirements, not upon technology classifications. It claims the Proposed Suspension would chill future investment in EE and RE technologies.

Accordingly, Bloom and/or NFCRC submit the Board should:

1. Reject OCE Staff's Proposed Suspension and instead continue to allow All-Electric Fuel Cells to participate in NJCEP while the Board conducts an appropriate evaluation of All-Electric Fuel Cell technology and the technologies that compete with it.
2. As part of the Board's evaluation, it should assign an appropriately higher value to the reduction of Greenhouse Gas and other air pollutant emissions.
3. Request that OCE Staff provide more data as to actual performance of the competing technologies.
4. Set clear, consistent, technology-neutral standards to be applied by OCE Staff and its service providers so that the Board itself can get out of the business of reviewing and approving specific projects.

Direct Energy and Johnson Matthey essentially summarize and repeat Bloom's position. Air Tech, Izzi Trucking and Core States say they work with Bloom and they will lose business and have to lay off New Jersey-based employees if the Board were to imposed the Proposed Suspension; they therefore submit the Board should reject OCE Staff's Proposed Suspension. Professor Godrich says Bloom has been supportive of her and her students' education and research and that the elimination of All-Electric Fuel Cells from the Program could have broad and negative effects on NJCEP's ability to reach its goals.

Rate Counsel generally opposes fossil-fueled fuel cells and says that, if any such fuel cells are allowed to participate in the program, they should include heat recovery.

Response: As described in more detail below, OCE Staff agrees with some portions of the comments on the Proposed Suspension such as setting clear, technology-neutral standards. However, for the reasons set forth below and in the documents it released for public comment, OCE Staff considers its process related to the Proposed Suspension adequate and appropriate, and OCE Staff stands by its original substantive proposal that NJCEP funds should not be used for All-Electric Fuel Cells unless and until a thorough independent evaluation justifies such use.

Although OCE Staff acknowledges that the November 2015 CPUC staff proposal was not ultimately adopted, OCE Staff notes CPUC's rejection does not provide compelling support for the inclusion of All-Electric Fuel Cells in NJCEP because the subject CPUC program, i.e., its Self-Generation Incentive Program (SGIP), was designed to support self-generation, not EE or

RE like NJCEP, and because the rejection was based primarily on CPUC staff's erroneous application of an emissions metric.

OCE Staff also agrees the 2015 Rutgers study (<http://ceeep.rutgers.edu/wp-content/uploads/2016/02/WP2-Do-CHPs-Perform-Case-Study-of-NYSERDA-funded-Projects-11302015.pdf>) (2015 Rutgers Study) does indeed suggest some CHPs in New York have lower (i.e., < 60%) than expected capacity factors. However, the study concludes the likely cause is that those CHPs are oversized and/or poorly maintained, not some inherent superiority of All-Electric Fuel Cells over CHP. Thus, if engineering was used to right-size the CHPs and if incentives were based at least in part on post-construction performance in order to incentivize appropriate maintenance (as are NJCEP's, see 2015 Rutgers study at pp. 19-20), it seems likely that CHPs actual capacity factor would be closer to their peak capacity factor of $\geq 90\%$. (2015 Rutgers study, at p. 12).

As certain Board Commissioners have pointed out in the context of recent Board decisions, All-Electric Fuel Cells are more expensive than competing technologies and have a payback period longer than its expected equipment life.⁶

In the interest of administrative efficiency and clarity, it is often appropriate for an agency like the Board to make technology-specific determinations in order to avoid redundant, time-consuming, and expensive project-by-project analyses of projects using technologies that the Board can generically determine do not meet its policy needs.

OCE Staff submits the evaluation it recommends will provide the Board with the detailed and accurate information it will need to make an informed and appropriate determination whether to fund All-Electric Fuel Cells and that the determination could include, among other things, the setting of clear, consistent standards. OCE Staff recommends that the proposed evaluation include an evaluation of the costs, emissions and benefits of various distributed generation technologies, and assessment of potential program structures, and consideration of other criteria such as black start capability, resiliency, and islandability.

Comment: DCFA suggests NJCEP should place more emphasis on the potential resiliency that fuel cells might provide.

Response: The issue of whether resiliency should be considered and, if so, the weight it should be given, should be evaluated and considered in the context of the overall self-generation evaluation described above.

Comment: Bloom and NFCRC argue the proposed budget and incentive structure for the CHP / Fuel Cell Program are inadequate, especially when compared to those of neighboring states, which they argue is demonstrated by the table below:

⁶ In The Matter of the Clean Energy Program Authorization of Commercial and Industrial (C&I) Program Energy Efficiency Incentives Exceeding \$500,000 – Walmart Woodbury, Walmart Williamstown, and Credit Suisse, Docket Nos. QG15080966, QG15080967, QG15111313 (February 9, 2016).

Connecticut	New Jersey (Proposed)	New York
\$60M annual fuel cell program	\$15.7 M CHP and fuel cell program	\$153.5M annual fuel cell program(s)
Fuel Cell Net Metering at Retail Rate	No Fuel Cell Net Metering	Fuel Cell Net Metering at Wholesale Rate
Standby charge exemption	No standby charge exemption	Standby charge exemption
\$56.28/MWhr (last weighted average price for reverse auction based incentive 15-year contract)	\$1.00/W (>500kW-1MW) \$2.00/W (<500kW)	NY RPS - \$24.57/MWhr (last weighed average price for reverse auction based incentive 20-year contract) NY PON – \$2100 grid parallel, \$5,000kW grid islanding assuming 200kw 15-year contract. Program closed 2/16

Bloom also argues the proposed budget for the Program is too low to meet the demand for the Program, demonstrated in part by the unmet demand in FY16, and that this is especially unfortunate in light of the State's interest in promoting resiliency and microgrids.

DCFA suggests NJCEP should provide a higher funding level for the CHP / Fuel Cell Program. Assemblyman Johnson comments that the proposed reduction from \$4 to \$2/W for fuel cell projects with heat recovery under 500 kW, elimination of the EE adder, and removal of the \$0.25/W bonus through the Pay for Performance Program will make the Program weaker and less desirable.

Rate Counsel is concerned that NJCEP will not be able to expend the entire proposed budget for the Program.

Response: CHP / Fuel Cell's proposed FY17 budget is more than twice its FY16 original budget and based on current estimates includes over \$20,000,000 available for new applications. Its FY17 budget proposal was based upon OCE Staff's best estimate of the demand expected for the Program in FY17 and other factors identified in the Straw Proposal and the FY17 AEG Compliance Filing. Although OCE Staff acknowledges virtually any incentive reductions will impact program participation, it submits that the funds saved through the subject incentive reductions will result in greater overall energy savings by reallocating funds to other EE programs. In sum, OCE Staff submits the Program's proposed FY17 budget is appropriate.

Comment: NFCRC suggests the CHP definition be revised to delete the word "sequential" because the production of electricity and useful thermal energy by CHP systems occurs simultaneously (at the same instant), not sequentially.

Response: OCE Staff agrees that the production of the electricity and useful thermal energy need not occur sequentially and it therefore proposes that the Board delete the word

“sequential” from the final definition. For the avoidance of doubt, the definition would also not require that the production be simultaneous.

RE Energy Storage

Comment: Rate Counsel looks forward to working with OCE Staff and its service provider to develop an appropriate competitive solicitation process for the RE Energy Storage Program, but it questions how the budget for this Program will be expended given that the Program is under development.

Response: OCE Staff too looks forward to working with Rate Counsel on this. As to the budget, OCE Staff anticipates the solicitation will be developed and presented to the Board for consideration during the first quarter of FY17. As noted in the past, State accounting rules require that funds be budgeted prior to the release of a solicitation. OCE Staff anticipates the solicitation and award of incentives will occur prior to the end of FY17 therefore requiring that funds for those items be included in the FY17 budget.

Town Center DER Microgrid - Feasibility Incentive Program

Comment: Cape May comments on the Program criteria. Its primary concern is that it may not be eligible to participate in the Program because it was not identified in the NJIT Report described in the Compliance filing, despite the fact that it is located within one of the 9 Sandy-designated counties. It cites storms major damage from past events, including the Nor'easter of March 1962 and Winter Storm Jonas in January 2016.

Cape May also lists the steps it has taken to qualify it to develop a Town Center DER microgrid as follows:

- It holds Plan Endorsement Status as approved by the New Jersey State Planning Commission in October 2012 and is defined as a Town Center.
- It holds Silver Certification status since 2011 and its elementary school holds Bronze Certification status since 2015 from the Sustainable Jersey Program.
- During the past two years, it has collaborated with the Sustainable Jersey Program to complete Getting to Resilience and a Coastal Vulnerability Assessment to identify priority initiatives and capital improvement projects, as well as public and private research/technical assistance resources, to ensure the sustainability and resiliency of its community for future generations.
- The five-year update of its Hazard Mitigation Plan was approved by the Federal Emergency Management Agency (FEMA) on May 24, 2016. It is an active participant in the National Flood Insurance Program (NFIP) and the Community Rating System (CRS) under FEMA authorization.
- It has been collaborating with the National Disaster Preparedness Training Center (NDPTC) for the past year in the presentation of technical training programs for local municipal officials and employees as well as the development of a comprehensive resiliency plan.
- It has participated in several BPU Clean Energy programs to improve its energy efficiency and resiliency.

It accordingly requests that it be deemed eligible to participate in this Program.

Response: OCE Staff appreciates and acknowledges Cape May's time and efforts. In an effort to fairly and effectively distribute the Program's limited funds, OCE Staff originally proposed eligibility criteria that included being identified as a Town Center in the NJIT Report. However, after having considered Cape May's comments, OCE Staff has determined Cape May's comments and request are reasonable, well-founded, and consistent with OCE Staff's overall policy direction. OCE Staff therefore proposes the following revisions to the first sentence of the Target Market and Eligibility discussion of this Program in the OCE Compliance Filing (additions underlined and italicized):

2. Target Market and Eligibility

This new program will focus initially on Town Center DER microgrids that include critical facilities at the local level identified in the NJIT Report or similar Town Centers within the 9 Sandy designated counties that can document they satisfy the screening criteria set in the NJIT Report as follows:

The NJIT Town Center screening criteria were based on a cluster of critical facilities that included the following ranking:

1. Criticality based on the FEMA Category Classification of Facilities; and
2. Total electric and thermal loads based on Btu's per square foot.

A Town Center should have at least two Category III or IV facilities within 0.5 miles and a facility with an energy usage of approximately 90 M Btus per square foot.

Comment: Shoreline recommends a grant of up to \$50,000/project, depending on size, to study the suitability of a facility or collection of facilities for development of a microgrid focusing on critical qualifying loads, site characteristics, budget costs, and technical and economic feasibility.

Response: The proposed Town Center DER Microgrid--Feasibility Incentive Program would provide grants for feasibility studies of advanced microgrids up to a cap of \$200,000. OCE Staff's proposal defined a Town Center DER microgrid as a cluster of critical facilities within a municipality that could include multifamily buildings, hospitals, and local and state government critical operations in a small radius and connected to a series of DER technologies that can operate isolated and islanded from the main grid when power is down on the main grid. Under current NJCEP requirements, an individual microgrid project proposed by a local government agency, not for profit business, college or university or state agency can apply for an assessment of DER microgrid technologies, such as CHP, wind, or solar, under the LGEA program. Accordingly, OCE Staff submits that much of Shoreline's recommendation is already represented in Staff's proposal.

Comment: Shoreline recommends a grant of at least \$500/kW of capacity to defray the increased capital cost of developing and operating microgrids. This grant would be higher than past assistance in order to recognize the increased cost of resiliency.

Response: OCE Staff may in the future recommend the Board consider developing incentives for the development and operation of Town Center DER or other microgrids. However, those future incentive proposals would, in part, depend on the results of any completed Town Center DER microgrid feasibility studies. Under the current CHP program, the cost to develop and engineer, procure, and construct a microgrid, i.e., the cost of the equipment necessary for the

CHP to operate in island mode, would be part of the total cost of the CHP project. As such, that total cost would be included in the calculation of the total eligible CHP incentive using the amounts set forth in "Appendix C: Distributed Energy Resources Incentives" of the FY17 AEG Compliance Filing.

Comment: Shoreline recommends the BPU consider developing the following integrated program assistance to lower the cost of electric production for potential microgrids:

- Implementation of Virtual Net Metering (VRM).
- Establishment of preferred firm gas distribution tariffs.
- Implementation of a program that requires electric utilities to achieve a gradually increasing percentage of the generation serving customers in their territory with "resilient generation" analogous to the existing Renewable Portfolio Standard with an "Electric Resiliency Credit."
- If establishing an "Electric Resiliency Credit" including cogenerated thermal, reduction of the required efficiency to the 40 to 50% range.
- Streamlining regulatory requirements regarding distribution of thermal energy generated at the microgrids.

Response: OCE Staff thanks Shoreline for its innovative recommendations to assist in the development of microgrids. However, these recommendations are beyond the scope of the current proposals. At the appropriate time, OCE Staff may further evaluate Shoreline's recommendations.

Comment: Shoreline recommends reconsidering flexibility regarding the possible use of diesel generation as a backup fuel source.

Response: Staff does not support this recommendation for incentives under the DER program because the use of such generation would not be consistent with the objectives Goals/Objectives identified in the CRA Straw Proposal.

Comment: Shoreline suggested the Board develop a comprehensive program for using Thermal Energy Storage ("TES") to foster resiliency and, apparently efficiency, in that Shoreline suggests TES can be used to produce and store cooling and refrigeration at night when outdoor temperatures, generation costs, and line losses are lower than during the day. It also suggested the Board develop a program to drive the elimination of diesel-fueled vehicles in the public sector to reduce air emissions, and that it simplify the regulatory process for OSW projects.

Response: As to TES, OCE Staff believes it may have some promise for the cooling and refrigeration scenario Shoreline suggests, but is also concerned that historically TES is less efficient than simply producing the cooling or refrigeration. Accordingly, OCE Staff expects to include some evaluation of TES as part of its Strategic Planning Process in FY17. As to Shorelines' recommendations regarding diesel fueled-vehicles and OSW, they are beyond the scope of the current proposals; at the appropriate time, OCE Staff may further evaluate them.

Comment: Shoreline suggested the Board reduce the amount of emphasis on and funding of technologies that have not yet been commercialized.

Response: OCE Staff believes the Board currently strikes the appropriate balance in cost-effectively funding the development of potential new RE and EE technologies.

RE

Comment: EnGen suggests the Board expand NJCEP's support to include technologies that could convert non-vegetative waste, such as waste plastics and wood demolition debris, into a synthetic gas that could be combusted to produce electricity.

Response: EDECA and its implementing regulations limit the definition of "Class I renewable energy" to energy produced from methane gas from "biomass," and they define biomass in a manner that does not include non-vegetative wastes such as those mentioned by EnGen. Accordingly, OCE Staff does not support this recommendation.

Marketing

Comment: NJNG recognizes the challenges posed while a new Market Manager is being procured and supports OCE Staff's proposed interim marketing efforts.

Response: OCE Staff appreciates the support.

Comment: Clean Markets asks several questions about the relationship and intended effect of a budget line for New Marketing Contract of \$374,155, another one for Marketing of \$3,750,000, the Enhanced Outreach Plan, and the 2015 RFP.

Response: The budget line for New Marketing Contract of \$374,155 is for the FY16 Budget, not the FY17 Budget. The Board initially included funding for this line item in anticipation of the release of an RFP to engage a marketing contractor. However, due to delays in the release of the RFP, the remaining funds are now intended to cover interim marketing activities for the remainder of FY16.

The proposed FY17 budget includes funds for both Marketing and Outreach and Education. While there is some overlap between these two functions and the two functions can and should complement each other, "Marketing" and "Outreach" are separate functions.

Program Evaluation & Analysis

Comment: Rate Counsel recommends:

1. The evaluations planned for FY17 be completed in time for their results to be part of the FY18 CRA and Compliance Filings; and AEG's Compliance Filings provide more detail about how AEG intends to implement the recommendations contained in evaluations.
2. Staff should provide more detail about the assumptions underlying AEG's BenCost model and provide an opportunity for further review.
3. AEG's Compliance Filing be revised to include a discussion of free-ridership and the effect of certain persons being eligible to participate in programs where there is overlap between those managed by utilities and those managed by NJCEP.

Response: OCE Staff:

1. Shares Rate Counsel's opinion about the schedule for the FY17 evaluations. Staff will aim to provide more information regarding implementation of recommendations included in evaluations.

2. Agrees that the assumptions underlying the BenCos model will be important to the strategic planning process and will help to inform future recommendations. Staff looks forward to discussing the BenCos model with Rate Counsel and will defer including the model in the compliance filing until the strategic planning process is complete.
3. OCE Staff disagrees that AEG's Compliance Filings should include a discussion of free-ridership. While OCE Staff agrees that free-ridership is an issue that needs to be addressed and discussed, OCE Staff believes that any assessment of free-ridership should be performed independently of the program implementers and should be reflected in the Protocols to Measure Resource Savings, not the Compliance Filings.

Other (Memberships)

Comment: NJNG and the Consortium for Energy Efficiency (CEE) encourage the Board or one of its service providers to join CEE.

Response: OCE Staff has taken this suggestion under review.

FY17 Protocol Revisions

Comment: Rate Counsel recommends:

1. AEG provide a more detailed summary as to how the FY17 Protocol Revisions relate to the recommendations from a ERS benchmarking study.
2. Future Protocol revisions should include estimated peak reductions for winter, as well as for summer.

Response: OCE Staff agrees that:

1. More detail should be provided during FY17.
2. The topic of winter peak reductions should be explored and evaluated during FY17, probably in part through the Protocols Evaluation and Protocols Update scheduled to take place then.

OCE STAFF RECOMMENDATIONS

The FY17 Compliance Filings and Budgets set out in detail the rationale utilized by OCE Staff, coordinating with the PA Team, to develop those proposed plans and budgets. In addition, The FY17 Protocol Revisions set out in detail the rationale utilized by those same parties to develop those proposed revisions.

Having reviewed and considered the comments, OCE Staff recommends the Board adopt and approve the FY17 Compliance Filings and Budgets as modified in accordance with the responses set forth above in this Order that propose changes to OCE Staff's original proposals (as so modified, the Revised FY17 Compliance Filings and Budgets and the FY17 Protocol Revisions).

AEG has submitted a revised FY17 Compliance Filing, dated June 28, 2016 (Revised FY17 AEG Compliance Filing) and OCE Staff has submitted a revised FY17 Compliance Filing, also dated June 28, 2016 (Revised FY17 OCE Compliance Filing), each incorporating the above-described modifications proposed by OCE Staff. OCE Staff recommends the Board approve the Revised FY17 AEG Compliance Filing and the Revised FY17 OCE Compliance Filing.

DISCUSSION AND FINDINGS

Consistent with the Board's contract with its PA, OCE Staff coordinated with the PA regarding the FY17 Compliance Filings and Budgets and the FY17 Protocol Revisions, as well with regards to the comments received on same. Further, OCE Staff, in conjunction with the PA and the PA's subcontractors, discussed the FY17 Compliance Filings and Budgets and the FY17 Protocol Revisions at a public hearing and at public meetings of the EE and RE Committees, all to receive comments and input. Finally, the FY17 Compliance Filings and Budgets and the FY17 Protocol Revisions were circulated to the EE and RE Committee listservs, they were posted on the NJCEP web site, and written comments about them were solicited from the public. Accordingly, the Board **HEREBY FINDS** the processes utilized in developing the FY17 Compliance Filings and Budgets and the FY17 Protocol Revisions were appropriate and provided stakeholders and interested members of the public adequate notice and opportunity to comment on them.

The Board has reviewed the FY17 Compliance Filings and Budgets, and OCE Staff's recommendations regarding same, and the Board **HEREBY FINDS** the Revised FY17 Compliance Filings and Budgets will benefit customers and are consistent with the EMP goal of reducing energy usage and associated emissions, will provide environmental benefits beyond those provided by standard offer or similar programs, and are otherwise reasonable and appropriate. Therefore, the Board **HEREBY APPROVES** the Revised FY17 Compliance Filings and Budgets.

The Board has reviewed the FY17 Protocol Revisions, and OCE Staff's recommendations regarding same, and the Board **HEREBY FINDS** the FY17 Protocol Revisions are reasonable based on the need to update Protocols from time to time to reflect up-to-date energy savings baselines reflective of upgrades in energy codes or appliance efficiency standards, additions and changes to Clean Energy programs or measures, program assessments and evaluations, and other changes in the assumptions used to measure resource savings.

The Board **HEREBY FINDS** the Protocols should continue to be updated from time to time so that they remain current with federal and State codes and standards and are reflective of current technologies and building practices and other changes in the marketplace, including the addition of new NJCEP programs and program components. For the reasons set forth above, the Board **HEREBY FINDS** the proposed Protocols include reasonable methodologies and are appropriate for estimating energy savings and renewable and distributed generation. The Board supports ongoing program evaluation to inform additional updates to the Protocols and **HEREBY DIRECTS** the OCE to continue coordinating the development of an evaluation plan. Based on the above, the Board **HEREBY APPROVES** the FY17 Protocol Revisions for use in estimating savings from FY17 program measures.

Having issued the above-described approvals, the Board **HEREBY DIRECTS** OCE Staff to work with the PA, with appropriate notice to the public, to revise application forms and make other revisions necessary to implement the revisions ordered herein.

The budgets approved herein are based on estimated FY16 expenses and once final FY16 expenses are known, are subject to "true up" in a future Order. For example, if actual FY16 expenses are less than the estimated expenses for any program, then the unspent amount will carry over into FY17. To the extent that FY17 budgets approved herein are below FY17

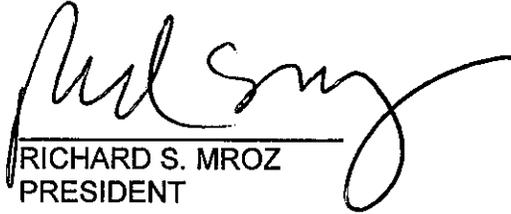
expenses due to actual FY16 expenses being less than estimated FY16 expenses, the Board's Fiscal Office is authorized to pay invoices for approved program expenses.

Pursuant to its authority under N.J.S.A. 48:2-40, the Board may reopen this matter and adjust the FY17 budgets, as required, in a separate Order. Such changes will be considered by the Board and memorialized in a separate Order. The budgets approved herein are contingent on appropriations by the Legislature and subject to State appropriations law.

This Order shall be effective on July 1, 2016.

DATED: 6/29/16

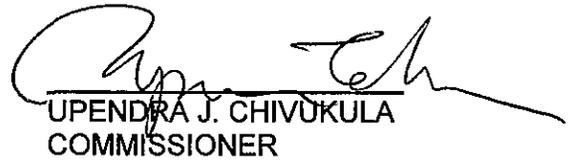
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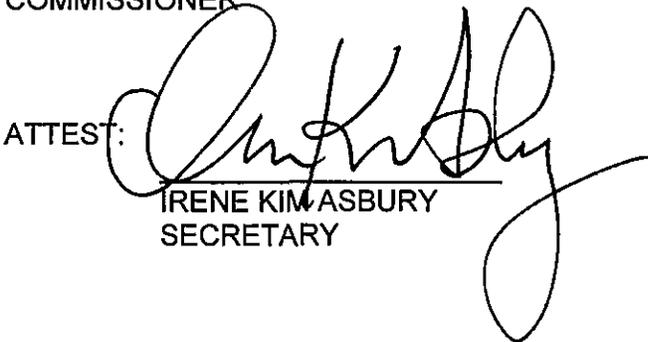

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SECRETARY

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



IN THE MATTER OF COMPREHENSIVE ENERGY EFFICIENCY
AND RENEWABLE ENERGY RESOURCE ANALYSIS
FOR THE FISCAL YEAR 2017 CLEAN ENERGY PROGRAM;
IN THE MATTER OF REVISIONS TO NEW JERSEY'S CLEAN ENERGY PROGRAM FISCAL
YEAR 2017 PROTOCOLS TO MEASURE RESOURCE SAVINGS
DOCKET NOS. QO16040353 and QO16060525

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