



South Jersey Gas

*Where we put all of our energy**

VIA ELECTRONIC MAIL (publiccomments@njcleanenergy.com)

June 17, 2016

Hon. Irene Kim Asbury, Secretary
N.J. Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
P.O. Box 350
Trenton, NJ 08625-0350

Re: Comments on Behalf of South Jersey Gas on the CRA proposal for Fiscal Year 2017

Dear Secretary Asbury,

South Jersey Gas has had energy efficiency programs that complement NJCEP programs in place since 2009. These are generally marketed to our customers through various marketing and trade ally channels. Our programs continue, as they always have, to work in partnership with New Jersey's Clean Energy Program.

These programs have helped our customers save energy, save money, improve the environment, and while providing them with greater comfort. The Company is pleased to offer these comments.

South Jersey Gas supports the effort to return to a four year planning and funding cycle at the conclusion of the Strategic Planning Process. Longer funding cycles helps to establish a degree of confidence that energy programs will be in effect for a long time. It also provides a degree of certainty and sustainability to the companies who deliver energy efficiency products, with regards to the planning of investment activities and the development of business models, which support the energy policies of the State. This will help instill confidence in the market and allow trade allies to better plan for marketing, as well as investments in their business and workforce.



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South Jersey Gas supports the proposed Strategic Planning Process. The Company has actively participated in many of the efforts that the Office of Clean Energy initiated over several years and is engaged in other national efforts and organizations to advance energy efficiency. We have been a major sponsor of Sustainable Jersey and the Sustainable Jersey Schools initiative for a number of years, and actively participate on the Sustainable Growth Committee of the American Gas Association. The Company would welcome the opportunity to participate in this Strategic Planning Process and to share its experiences as an organization that provides critical energy services, while partnering in energy efficiency delivery.

This partnership was created many years ago when the Company worked collaboratively with every investor owned utility in the State of NJ to help create and implement several of the energy programs now available through the NJ Clean Energy Program. Moreover, through our decoupled rate platform, and through our work on energy efficiency initiatives, we have seen our residential class of customers reduce their annual gas consumption by nearly 15% since 2009. Therefore, South Jersey Gas supports, and offers to play a vital role in the Strategic Planning Process, along with other like-minded utilities in the State.

Regarding some issues concerning the 2017 programs and budgets, South Jersey Gas would like to offer the following insights.

South Jersey Gas supports the policy recommendations for Residential HVAC Program to require proper sizing calculations (ACCA Manual J and Manual S). In fact, South Jersey Gas has advocated this practice since the beginning of the Warm Advantage Program, and has done so through communication with the Department of Energy. However, South Jersey Gas urges the Office of Clean Energy to recognize that such a change will require an intense change of culture in the HVAC industry, and will require a very intense training program. The Company therefore highly recommends that such a policy change be implemented in stages over the next twelve to eighteen (12 to 18) months. The HVAC industry is comprised of



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complex and diverse mix of manufacturers, distributors, retailers, and contractors, who will need training, education, and technological skills to meet the new program requirements. Without a massive outreach effort, the program risks a high degree of customer and contractor rejection. Careful planning and strategic communication can help to prevent serious unintended consequences of implementing an otherwise sensible policy.

The Company supports the Direct Install program by providing a repayment feature for our customers to finance portions of their project cost that are not covered by the approved NJCEP incentive. South Jersey Gas is again looking forward to working with the Office of Clean Energy on the relaunch of the Direct Install program. Hopefully, the available program budget is sufficient to accommodate market demand. Should budget constraints be an issue, we advocate that an analysis of the program be initiated quickly to prevent another program curtailment.

Thank you for the opportunity to comment.

Respectfully submitted,

Bruce S. Grossman

Bruce S. Grossman
Program Manager, Energy Efficiency

Cc: publiccomments@NJCleanEnergy.com



Doosan Fuel Cell America, Inc.
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June 17, 2016

Ms. Irene Kim Asbury
Secretary of the Board
New Jersey Board of Public Utilities
44 S. Clinton Avenue
Trenton, NJ 08625

Dear Ms. Asbury:

Doosan Fuel Cell America, Inc. is a new fuel cell company founded on the strength of the people and technology developed at United Technologies over the past fifty years. In July 2014, Doosan Corporation acquired the assets of ClearEdge Power (formerly UTC Power). We are building on the value of the organization and aspire to be the technology and market leader in the fuel cell industry.

Doosan Fuel Cell is a global leader in providing clean, continuous-duty, cost-competitive stationary fuel cell energy systems. Our combined heat and power (CHP) PureCell[®] systems operate 24/7 with high efficiency and ultra-low emissions, allowing our customers to generate their own electricity and heat on-site while reducing their utility expenses and environmental emissions. With over 12 million fleet operating hours, PureCell[®] systems have demonstrated unparalleled durability and reliability. Doosan Fuel Cell America, Inc. is headquartered in South Windsor, CT at the site of our world-class fuel cell R&D and manufacturing facilities.

The State of New Jersey is one of the most important markets for the emerging fuel cell sector, and fuel cells are contributing greatly to New Jersey's goals of reducing greenhouse gas (GHG) emissions, reducing peak load, providing resiliency and improving the reliability of the electric utility system. Doosan currently operates five units, supplying over 2 MW of clean and secure power to a major telecommunications company in the State, and there is significant possibility of installing additional systems to a variety of industries and customers.

Doosan appreciates the opportunity to provide comments on the New Jersey Clean Energy Program (NJCEP) Comprehensive Energy Efficiency and Renewable Energy Resource Analysis (CRA) for Fiscal Year (FY) 2017 and related programs and budgets for Fiscal Year 2017. We are encouraged that the CHP-Fuel Cells program experienced a higher than expected participation level since the beginning of FY2016; however, we are concerned that the available budget for new projects is significantly lower than in previous years. Doosan feels that the proposed \$15.7 million available for FY17 will be exhausted quickly and the program will face the same situation as in FY16, which will result in a shut-down mid-way through the year. Sufficient funding



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should be allocated that better reflects past success and current market demands in the State of New Jersey as evidenced by the current large backlog of projects.

Another area of concern has to do with the incentive levels. Doosan feels that fuel cells are being unfairly penalized by providing them with the same incentive level as traditional combustion CHP. Doosan fuel cells provide continuous, clean, high efficiency power 24/7 with virtually zero criteria air pollutants and no water consumption, therefore reducing GHG emissions. They are the cleanest way to use natural gas! Therefore, a higher value should be assigned to GHG and criteria air pollutant reductions in considering how to incentivize fuel cell technologies.

In the future, Doosan also recommends that the State move towards performance-based incentives (PBI) as is done in Connecticut and New York, where incentives are paid on a \$/MWh based of actual energy produced. Doosan is working with potential numerous customers such as hospitals, universities, hotels and industrial facilities to submit fuel cell project applications all of which work well within this type of incentive program.

Stationary fuel cells are a valuable contributor to the State's clean energy strategy, providing power that is continuous, efficient and resilient. Doosan continues to support the New Jersey Energy Master Plan (EMP) and believes that fuels cells will play a major role in providing on-site distributed generation, as well as improving critical infrastructure, that have been made vulnerable due to such incidents as Superstorm Sandy.

Doosan Fuel Cell looks forward to continuing to work with State of New Jersey on these important issues.

Respectfully submitted:

By: /s/ David Giordano

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Date: June 17, 2016



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June 17, 2016

Hon. Irene Kim Asbury, Secretary
New Jersey Board of Public Utilities
44 So. Clinton Ave., 3rd Floor, Suite 314
P.O. Box 350
Trenton, NJ 08625-0350

THE MATTER OF THE COMPREHENSIVE
ENERGY EFFICIENCY AND RENEWABLE ENERGY
RESOURCE ANALYSIS FOR FISCAL YEAR 2017
CLEAN ENERGY PROGRAM - DOCKET NO. QO16040352

IN THE MATTER OF THE CLEAN ENERGY
PROGRAMS AND BUDGET FOR THE
FISCAL YEAR 2017 - DOCKET NO. QO16040353

Dear Secretary Asbury:

New Jersey Natural Gas Company ("NJNG") has reviewed the Comprehensive Resource Analysis Staff Straw Proposal for New Jersey's Clean Energy Program ("NJCEP") Funding Levels for Fiscal Year 2017 ("CRA Straw Proposal"), which was released on May 31, 2016 by the Staff of the New Jersey Board of Public Utilities ("BPU" or "Board"), as well as the Draft Compliance Filings for the NJCEP Programs for Fiscal 2017 ("Compliance Filings"). Through this letter, NJNG hereby provides comments related to both the Straw Proposal and the Compliance Filings.

NJNG has had energy efficiency programs that complement NJCEP programs in place since 2009. These are generally marketed to our customers as The SAVEGREEN Project® ("SAVEGREEN"). Our programs have always worked in partnership with New Jersey's Clean Energy Program and since its inception in 2009, SAVEGREEN has helped over 43,000 customers reduce energy consumption and lower their energy bills. . . Our experience running SAVEGREEN has helped us see the benefits of these energy efficiency programs firsthand- both for the participating customers and for many small to medium size contractors. We have

more than 2,300 contractors that have participated in our programs. We keep them engaged with a robust training program and supporting communication channels developed to help them grow their business. This direct knowledge of the marketplace influenced our perspective on both the Straw Proposal and the Compliance Plans.

As a general comment, NJNG would like to acknowledge the efforts of Office of Clean Energy (“OCE”) Staff and the NJCEP Program Administrator team. NJNG recognizes the extremely challenging working parallel paths for policy and programs, especially when there is a need to balance priorities and stakeholder interests. Collectively, they have done a great job working through the transition of the administration of NJCEP programs while striving to keep most of the programs running.

CRA Straw Proposal

Multi-Year Approach

NJNG was pleased to see the stated intention to return to a four-year planning and funding cycle at the conclusion of the Strategic Planning Process. Even when program terms and conditions remain stable from year to year, the single year approval approach can affect the market by limiting marketing opportunities and it impacts both the quantity and the quality of interaction at outreach events. From first-hand knowledge we have learned that it is difficult to engage a customer when there is uncertainty as to what incentives may be available in the next six to eight weeks. That impact is magnified on some of the larger commercial programs because of the traditionally lengthy timelines for internal approval. Longer term views help instill confidence in the market and allow trade allies to better plan for their marketing, as well as make necessary investments in their business and workforce.

Strategic Planning Process and the Role of the Utility

NJNG strongly supports the proposed Strategic Planning Process. NJNG has actively participated in many of the Work Group efforts that OCE has initiated over the past few years and is engaged in several national efforts and organizations to advance energy efficiency, including being on the Executive Leadership team of the State and Local Energy Efficiency Action Network (“SEE Action”) and as one of the pioneers of the Department of Energy’s Home Energy Score Program. We are very interested in participating in this Strategic Planning Process to share insights as both an energy-efficiency program implementer and a lifeline service provider.

NJNG was pleased to see that the proposal acknowledges that utilities will play a role in Strategic Planning and that such conversations have already started. From our own perspective,

NJNG is proud that in the nearly 10 years since our Conservation Incentive Program was first approved, we have developed a strong corporate wide commitment to advancing energy efficiency. That corporate level commitment helps us broadly engage employees, leverage traditional utility customer communication channels and get broad support for launching new program and outreach approaches. Our Call Center employees proactively suggest conservation tips to thousands of customers every month and our E-tips service, which provides energy saving tips to our customers through a monthly email, passed the 110,000 subscriber mark (more than 20% of our residential customer base). We actively use these resources to help promote a broad range of NJCEP programs as well as our own efficiency programs. If New Jersey is committed to pursuing the most cost-effective way to lower energy costs, it is critical to engage utilities in the effort.

Transformative Programs

At the June 10, 2016 hearing, one commenter commended NJCEP's efforts to support micro-grids but also urged the Board to consider funding "transformative technologies" at the residential level. Given the timing of this year's budget cycle, we recognize that the suggestion is likely not feasible for the upcoming fiscal year. However, NJNG suggests it is appropriate to consider this suggestion as part of the Strategic Planning Process. From our interactions with program administrators in other jurisdictions we would note that many programs routinely dedicate a percentage of their budget to investigating such technologies in order to be ready to implement programs for such technologies as soon as they are market ready and to have a continual inventory of program concepts to help achieve energy saving goals. As part of the discussion within the Strategic Planning Process, it would be appropriate to also consider whether the state would like to see utilities exploring such new technologies as well. Given the current approval structure for utility energy efficiency filings, it is very challenging to get such programs approved since they are not likely to pass standard cost benefit tests when they are in such an exploratory stage.

Compliance Filings

Residential HVAC Programs

NJNG generally supports the recommendations for Residential HVAC Program to require sizing calculations (ACCA Manual J and Manual S). In fact, NJNG has been requiring ACCA Manual J and Manual S in our HVAC financing program since that program was started in July of 2013. However, we strongly encourage consideration of a longer timeline for the implementation of this requirement to allow for the development and implementation of a training and communications plan. While NJCEP has required submission of calculations on the COOLAdvantage side for several years, there are definitely some contractors that do not cover both markets and there may be more factors to consider for the heating side (e.g.

modulating systems, treatment of block loads, combination systems). We recognize that there are technical answers available to address the questions related to how to apply these calculations to various types of systems but the key consideration is that many contractors and even some municipal code officials may not be familiar with those answers without further communication, training and coaching. Given that the size of this contractor base is estimated to be more than 50 times larger than the Home Performance contractor base, it will be significantly more challenging to ensure all contractors are aware of the requirement and understand how the calculation should be performed for different types of equipment. A thoughtful transition can avoid creating significant customer satisfaction issues that will arise if customers are denied rebates and alienating some contractors which would not be in the best long term interest of the program. They can easily revert back to selling standard equipment with a lower price point and a quicker installation process.

Direct Install

NJNG directly supports the NJCEP Direct Install program by providing an on-bill repayment feature for the portion of the incentive not covered by NJCEP. This feature eliminates the upfront cost barrier making participation more accessible for many customers. We are anxious to work with NJCEP on the relaunch of the Direct Install program. While NJNG recognizes that the budget process always represents a balancing of objectives, we believe that the proposed budget may not be sufficient to cover potential interest for FY 2017 due to pent up demand. We hope that should that be the case, OCE may be able to revisit the budget level to avoid another disruption to serving this market segment.

Marketing, Outreach and Evaluation

NJNG recognizes the challenges that NJCEP faces in the absence of a separate Marketing Manager. We strongly support OCE's staff proposed interim marketing efforts to meet essential program needs. We will certainly continue our on-going commitment to help with outreach for NJCEP programs and general awareness.

NJNG supports the increased emphasis on evaluation. The absence of a strong evaluation component over the past few years definitely has presented some challenges for the program. OCE's renewed commitment to exploring the effectiveness of the programs and understanding the marketplace can definitely help inform what direction to take to improve the programs.

NJNG also strongly supports the Enhanced Outreach plan described in Appendix E of the Applied Energy Group compliance plan and subsequently presented at the June 14, 2016 NJCEP Energy Efficiency Committee meeting. Despite aggressive outreach in our own service territory, we frequently meet customers who are not aware of the programs or mistakenly believe that they may not be eligible for any programs. While general marketing is important, we believe that there is tremendous opportunity to raise awareness and deliver more targeted

resources and programs by working on a sector specific approach and leveraging the networks of other stakeholders. Further, we appreciate the stated interest in enhancing coordination with utilities. We have worked closely with NJCEP Market Manager staff over the past few years, and can confirm that working together has been the best way to meet the needs of our customers.

Memberships

In regard to the proposed memberships for NJCEP, we strongly encourage NJCEP to consider rejoining the Consortium for Energy Efficiency (“CEE”). CEE’s membership is limited to program administrators so it is an excellent source to:

- Help NJCEP maintain listings for qualified equipment and provide a robust resource for summaries of program design approaches in other jurisdictions;
- Learn about new technologies and the impact of code and standard changes; and
- Provide practical input about program design and delivery approaches from an implementers’ perspective. Hearing the successes and missteps of other program implementers can help NJCEP with their interest in continuing to refine program approaches to improve cost effectiveness. Dues for membership represent less 5 hundredths of a percent of NJCEP’s budget. It is always cheaper to learn from someone else’s mistakes in gaining insights that can make NJCEP programs more effective.
- Understand current trends in behavioral programs and evaluation, measurement and verification.

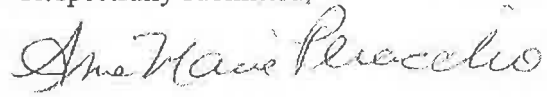
We are attaching a copy of a CEE overview brochure titled “CEE has Efficiency Covered” because it showcases the range of the initiatives and resources they can provide. After reviewing the document, it should be easy to see how participation could help inform discussions in NJCEP’s Strategic Planning Process.

Serving Low Income Customers

As a final note, NJNG would like to thank the Board and its Staff for its continued commitment to the Comfort Partners programs. In addition to providing energy savings, comfort and safety benefits to the participants, this program also has the potential to reduce future costs for all customers by reducing the costs associated with the Universal Service Fund program as the work performed, i.e. energy efficiency measures installed, through the Comfort Partners program directly reduces the energy burden of participating customers.

NJNG appreciates the opportunity to provide comments on these topics. Please feel free to contact me if you need any additional information regarding these issues.

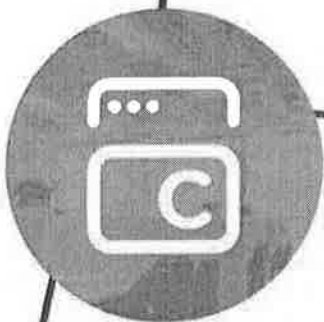
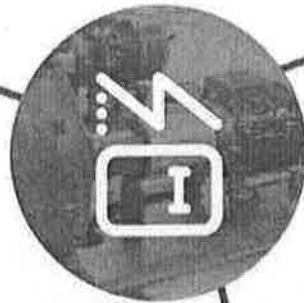
Respectfully submitted,



Anne-Marie Peracchio

Director- Conservation and Clean Energy Policy

CEE HAS EFFICIENCY COVERED





CEE MISSION

As the US and Canadian consortium of gas and electric efficiency program administrators, CEE works to accelerate the development and availability of energy efficient products and services, encourage market uptake, and attain lasting public benefit.

CEE HAS EFFICIENCY COVERED

To achieve the CEE mission, CEE members foster and participate in market scale initiatives that address key end uses of energy. Definitions, specifications, and approaches embedded in the initiatives come about from member consensus on the best way to meet program administrator needs in a feasible, cost-effective manner.

The market initiatives described in this pamphlet provide clear scope, strategy, and goals for member adoption. As members incorporate them into programs, they achieve their goals to influence binational markets, messaging, and behavior change. Relationships with regulatory bodies frequently improve with adoption of recognized CEE initiatives. Several initiatives also form a conduit to water savings.

WHAT DOES CEE CONSIDER?

As initiatives develop, CEE considers energy savings potential, readiness of the market, availability of industry-endorsed test procedures, cost-effectiveness, other market forces, and input from industry stakeholders. Ultimately, an initiative must present strategies that will gain market traction to bring about the desired change. Once an initiative is approved, CEE continually reconsiders market trajectory and updates plans accordingly.

WE INVITE YOU TO EXPLORE how 16 CEE initiatives and three explorations target areas where efficiency adds value cost-effectively for major energy end uses in Canadian and US markets.

RESIDENTIAL



HOME APPLIANCES INITIATIVE ⚡ 🔥 ≡

Covers clothes washers, room air conditioners, dishwashers, and refrigerators

84 members participating

1993

STRATEGIES

Household Awareness of ENERGY STAR® Survey
Binational specification
Bundled product mass market approach
ENERGY STAR® and higher tier differentiation



SPACE HEATING & COOLING INITIATIVE ⚡ 🔥

Replacing separate air-conditioning and gas heating initiatives, this initiative works through a whole systems approach across fuel types to achieve in-field efficiency

25 members participating

1996

STRATEGIES

Binational specification
Binational database of qualifying products
ANSI-ACCA installation standard
ENERGY STAR and higher tier promotion



LIGHTING INITIATIVE ⚡

Works through every point of the distribution chain to promote energy efficient lighting products in a technology neutral manner

61 members participating

1996

STRATEGIES

Mass market replacement approach
Technology neutral specification
Design competition
Controls and systems
ENERGY STAR



CONSUMER ELECTRONICS INITIATIVE ⚡

Works to identify and increase market share of energy efficient consumer electronics

16 members participating

STRATEGIES

Data analysis
Information sharing
ENERGY STAR

2007



GAS WATER HEATING INITIATIVE 🔥 ≡

Raises awareness among contractors, builders and developers; distributors, wholesalers, and retailers; and consumers about how to identify efficient products

48 members participating

STRATEGIES

Contractor outreach
Binational specification
ENERGY STAR
Binational database of qualifying products

2008



SWIMMING POOL INITIATIVE ⚡

Aims to increase purchase and proper installation of high efficiency swimming pool equipment and to deliver energy savings in residential swimming pools

30 members participating

STRATEGIES

Binational specification
Systems approach
Installer education
ENERGY STAR

2012

2016
 UNDER CONSIDERATION
 Connected
 Additional product inclusion

2016
 UNDER CONSIDERATION
 Connected
 Communicating thermostats
 Heating performance of efficient heat pumps
 Behavior

2016
 UNDER CONSIDERATION
 Connected
 Controls
 Niche marketing
 Daylighting and design

2016
 UNDER CONSIDERATION
 Connected
 Behavior

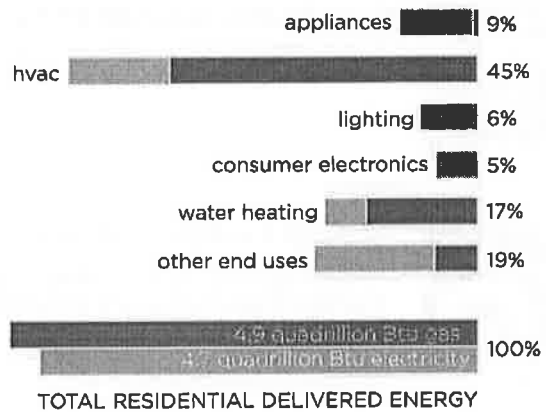
2016
 UNDER CONSIDERATION
 Systems approach

2016
 UNDER CONSIDERATION
 Connected
 Product expansion



THE WHOLE HOUSE

The Whole House Exploration seeks to identify savings opportunities in new and existing homes through analysis of current programs and national efforts, and to evaluate products and services that do not consume energy or that reduce energy use.



COMMERCIAL



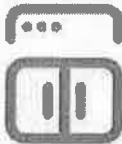
UNITARY AIR-CONDITIONING & HEAT PUMP INITIATIVE ⚡

Promotes market availability of high efficiency air-conditioning and heat pump equipment

STRATEGIES
Binational specification
Mass market approach
Higher tier differentiation

56 members participating

1993



KITCHENS INITIATIVE ⚡ ⚡ ⚡

Provides definitions of highly efficient energy and water performance in cooking, refrigeration, and sanitation equipment

STRATEGIES
Binational specification
ENERGY STAR®
Bundled product approach

99 members participating

2002



LIGHTING SYSTEMS INITIATIVE ⚡

Grounds CEE savings strategy in market conditions and program baselines, spanning programs from one-for-one lamp replacements to those that target deeper savings during full lighting system design

STRATEGIES
Binational specification
Mass market approach
Higher tier differentiation

67 members on committee

2004



DATA CENTERS & SERVERS INITIATIVE ⚡

Allows CEE to serve as a clearinghouse for relevant resources and information, clarifies and helps validate energy efficiency opportunities, identifies recommended program strategies, and mobilizes the efficiency program community to respond to industry and government proposals

STRATEGIES
ENERGY STAR
Information dissemination

52 members on committee

2007



GAS WATER HEATING INITIATIVE ⚡ ⚡

Establishes tiers of efficiency and works to raise awareness of the benefits of efficiency throughout the distribution chain

STRATEGIES
Distribution channel
Qualifying product database

28 members participating

2012



BOILER SYSTEMS INITIATIVE ⚡

Features guidance to help programs capture savings based on a variety of applications and system designs

STRATEGIES
Systems approach
Installation
Operations and maintenance
Strategic partnership

70 members participating

2012

2016
 UNDER CONSIDERATION
 Systems approach
 Connected
 Higher tier differentiation

2016
 UNDER CONSIDERATION
 Systems approach
 Binational market platform
 for emerging technologies

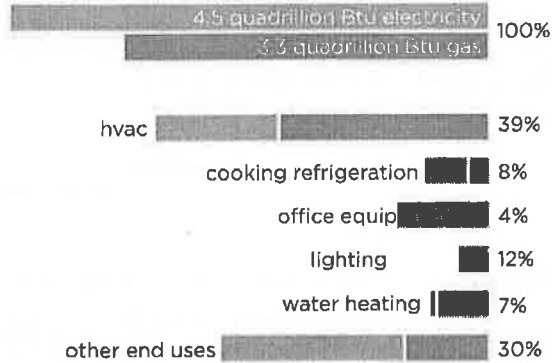
2016
 UNDER CONSIDERATION
 Systems approach
 Connected

2016
 UNDER CONSIDERATION
 Customer engagement approaches
 Systems approach

2016
 UNDER CONSIDERATION
 ENERGY STAR

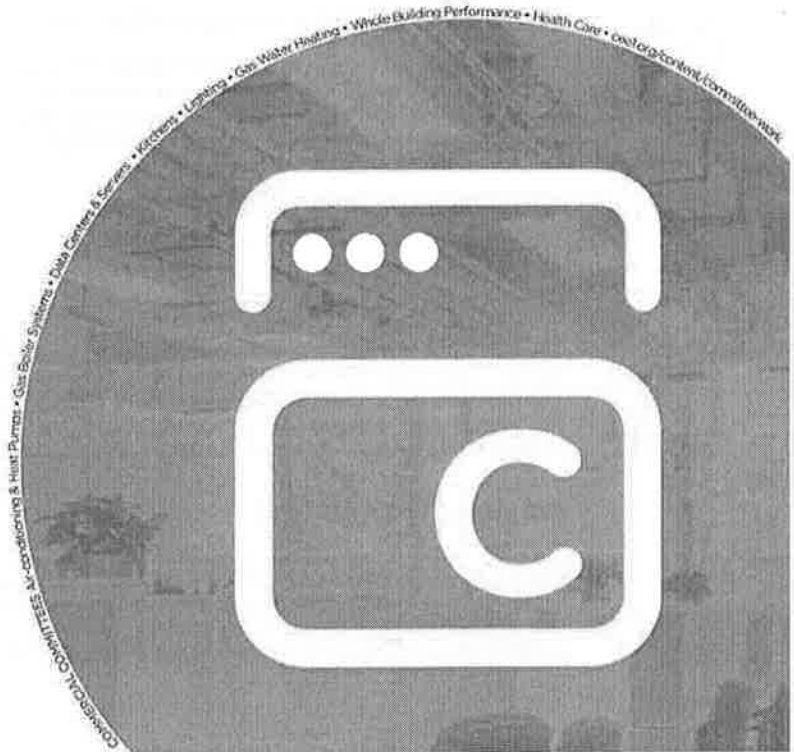
2016
 UNDER CONSIDERATION
 Behavior
 National platforms

TOTAL COMMERCIAL DELIVERED ENERGY



WHOLE BUILDING PERFORMANCE EXPLORATION

The Building Performance Exploration shares information among members on the metrics and methods of commercial building programs.



INDUSTRIAL



MOTOR SYSTEMS INITIATIVE ⚡

Creates a common platform for CEE activities related to high efficiency motor and motor systems optimization and customer outreach and education

STRATEGIES
Consumer education
Operations and maintenance
Information dissemination
Strategic partnership

87 members participating

1999



MUNICIPAL WATER AND WASTEWATER INITIATIVE ⚡

Addresses this opportunity-rich segment by raising awareness among municipal decision makers, focusing on key motor system and process opportunities, and building cooperative relationships with the water and wastewater industry and associations

STRATEGIES
Small facilities EE checklists
RFP guidance

22 members participating

2010



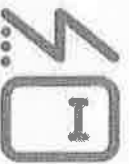
STRATEGIC ENERGY MANAGEMENT INITIATIVE ⚡

Defines strategic energy management from an energy efficiency program industry perspective, collects SEM program design and delivery strategies, and highlights key roles for industrial energy management technologies

STRATEGIES
SEM Minimum Elements
Program case studies report

21 members participating

2014



INDUSTRIAL PROGRAM PLANNING ⚡

Through the Industrial Program Planning Exploration, members exchange insights on program designs that target specific industrial market segments, systems, and processes, and monitor the development of comprehensive, whole plant program approaches. For example, the committee has explored energy management program designs, methodologies for machine tool energy baselines, industrial natural gas savings measures, and combined heat and power systems.

C&I HEALTH CARE ⚡

CEE C&I Health Care Exploration is advancing member electric and gas efficiency objectives with hospitals and smaller healthcare facilities. Based on program and end use research in 2015, exploration members are working with industry and government partners to advance a consistent, strategic energy management approach, and engaging strategic partners from industry and government to enhance program impact in the market.

UNDER CONSIDERATION
 Common specification
 Higher tier differentiation
 Packaged products
 Systems approach

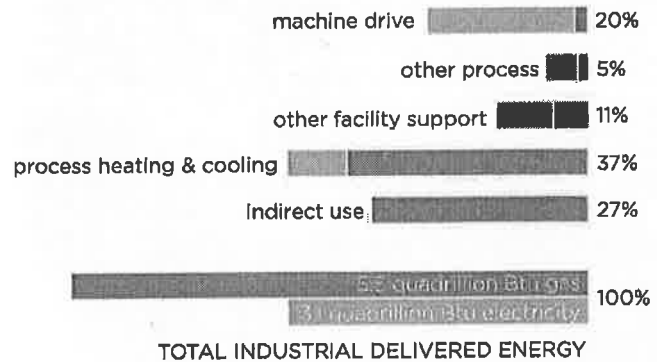
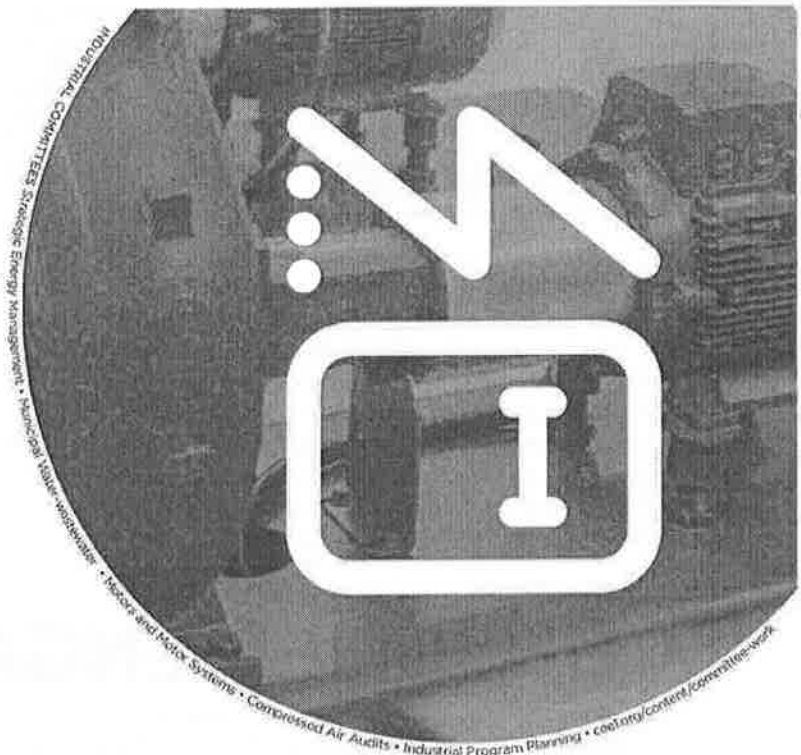
2016

UNDER CONSIDERATION
 New technologies
 Energy management

2016

UNDER CONSIDERATION
 SEM technology types and use cases
 Program framework
 Segment focus on health care

2016





CONNECTED

Work on connectivity began when a group of CEE members identified the need to send a clear message about the minimum communication requirements necessary for a connected product to leverage DSM programs across the United States and Canada. Today, CEE works in tandem with the federal government as well as the HVAC, water heating, lighting, appliance, and pool pump industries to specify communication pathways, standard load management capabilities, data sharing, and other product elements that yield benefits to utilities, consumers, and the environment.

CONSUMER ENGAGEMENT

CEE is working to identify common elements and strategies associated with energy information that will help members achieve greater savings and increase overall customer satisfaction. By defining the minimum informational components that are effective across service territories, residential portfolios will be better positioned to meet the evolving needs of both utility and customer.



RESEARCH

Since 2006, the Annual Industry Report documents the impact of ratepayer funded efficiency programs. The latest report found that CEE members directed over 80% of program expenditures in 2013. Visit cee1.org/annual-industry-reports for more information.



WHO IS CEE?

CEE is an award-winning consortium of efficiency program administrators from the United States and Canada. Members work to unify program approaches across jurisdictions to increase the success of efficiency in markets. The CEE role is to influence national players—product distribution chains, efficiency stakeholders, and government agencies—to maximize the impact of efficiency programs. Working together, administrators leverage the effect of their ratepayer funding, exchange information on successful practices and, by doing so, achieve greater energy efficiency for the public good.

STRATEGIC PARTNERSHIPS

Over the years, CEE has worked closely with US DOE and EPA, manufacturing trade associations, and key partners in lighting, HVAC, motors, consumer electronics, and other relevant industries. Collaborative partnerships between CEE and industry partners create more effective platforms to support greater energy efficiency and market needs. By working together at CEE, all stakeholders enhance individual efforts to advance energy efficiency in the market.

For more information, visit cee1.org.



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The Honorable Irene Kim Asbury
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Re: CRA Straw Proposal and Proposed Fiscal Year 2017 Budgets

Dear Secretary Asbury:

As a research professor at the department of Electrical and Computer Engineering (ECE) at Rutgers University I am writing to inform you on the support Bloom Energy has been giving to my research and the ECE students. Hope this can be considered in making the decision on the FY17 CRA straw proposal.

The board might be interested to learn some of the most important research working to advance all-electric fuel cell technology for the county is taking place right here at Rutgers. Over the last five years Bloom Energy, an all-electric fuel cell maker, has been on the advisory board of the ECE department playing an important role in supporting the department, providing advice and research, as well as electronic equipment donations for our students to further increase their own study.

Bloom Energy employees volunteer their time to visit Rutgers frequently and teach lectures on renewable and alternative energy in various opportunities, including in a multidisciplinary course I am teaching titled 'Sustainable Energy'. Engineers from Bloom Energy support our undergraduate and graduate student's research. Additionally, employment and internship opportunities have been made available to our students.

Through my work teaching smart grid and sustainable energy courses at Rutgers, as both a researcher and an educator, I can say without a doubt Bloom Energy's support has been invaluable in demonstrating real life distributed energy applications and in providing our students with hands-on experience. Going forward, I am confident all-electric fuel cells will prove to be a capable foundation for microgrid formations.

Given the significant potential all-electric fuel cells have in the State of New Jersey, and the significant amount of research and study taking place within the state to help New Jersey be a leader and at the forefront of energy technology research and development, I hope this can be considered in making the decision on the BU FY17 CRA straw proposal.

Successfully utilizing and implementing an all-electric fuel cell generator in this state directly contributes to our work at Rutgers as we continue to expand our offering in power systems, smart grid and renewable energy education and research with Bloom Energy taking a major role as an industry partner.

A move by the board to prohibit all-electric fuel cells from participating within the Clean Energy Program will have far reaching consequences beyond the BPU, and will affect on-going study and development taking place around the corner.

Sincerely,

Hana Godrich, Ph.D.
Assistant Research Professor



State of New Jersey
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CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

STEFANIE A. BRAND
Director

June 17, 2016

By Hand Delivery and Electronic Mail

Honorable Irene Kim Asbury, Secretary
NJ Board of Public Utilities
44 South Clinton Avenue, 9th Floor
P.O. Box 350
Trenton, New Jersey 08625-0350

**Re: CRA Straw Proposal and Proposed Fiscal Year 2017 Budgets
I/M/O the Comprehensive Energy Efficiency and Renewable Energy
Resource Analysis for Fiscal Year 2017 Clean Energy Program
BPU Docket No. QO16040352
and I/M/O the Clean Energy Programs and Budget for the
Fiscal Year 2017
BPU Docket No. QO16040353**

Dear Secretary Asbury:

Please accept this original and ten copies of Comments submitted on behalf of the New Jersey Division of Rate Counsel ("Rate Counsel") in connection with the above-captioned matter. Copies of the comments are being provided to all parties on the e-service list by electronic mail and hard copies will be provided upon request to our office.


We are enclosing one additional copy of the comments. Please stamp and date the extra copy as "filed" and return it in our self-addressed stamped envelope.

Honorable Irene Kim Asbury, Secretary
June 17, 2016
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Thank you for your consideration and assistance.

Respectfully submitted,

STEFANIE A. BRAND
Director, Division of Rate Counsel

By: 
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Assistant Deputy Rate Counsel

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CRA Straw Proposal and Proposed Fiscal Year 2017 Budgets

**I/M/O the Comprehensive Energy Efficiency and Renewable Energy
Resource Analysis for Fiscal Year 2017 Clean Energy Program
BPU Docket No. QO16040352**

and

**I/M/O the Clean Energy Programs and Budget for the Fiscal Year 2017
BPU Docket No. QO16040353**

Comments of the New Jersey Division of Rate Counsel

June 17, 2016

INTRODUCTION

The Division of Rate Counsel (“Rate Counsel”) would like to thank the Board of Public Utilities (“BPU” or “Board”) for the opportunity to present comments on the Comprehensive Energy Efficiency and Renewable Energy Resource Analysis (“CRA”) Straw Proposal and proposed Fiscal Year 2017 Budgets for the New Jersey Clean Energy Program (“NJCEP” or “CEP”).

On May 31, 2016, the Board’s Office of Clean Energy (“OCE” or “Staff”) released for public comment a “Straw Proposal” and supporting schedules describing the history and current status of the CEP and providing Staff’s recommendations regarding the CEP budget for Fiscal Year 2017. In addition, Staff posted Compliance Filings containing descriptions and budgets for OCE’s proposed individual program offerings. The Board’s Program Administrator, Applied Energy Group (“AEG”), submitted a Compliance Filing containing the details of a broad portfolio of programs designed to promote energy efficiency, distributed energy and renewable energy. The State’s seven electric and gas utilities submitted a Compliance Filing describing their proposals for the State’s Comfort Partners program, which is a program administered by the utilities using CEP funding to improve the affordability of energy for low-income households

through energy efficiency and conservation. The OCE submitted a Compliance Filing containing its proposals regarding OCE's administrative activities and for the CEP-funded programs managed by the New Jersey Economic Development Authority ("EDA") and Sustainable Jersey." Finally, the OCE released for comments proposed updates to its Protocols to Measure Resource Savings.

In accordance with the Notice posted by the Board on May 31, 2016, a public hearing on the above proposal was held on June 10, 2016. Rate Counsel participated in that hearing and presented some initial observations on the OCE's proposal.

The current CRA process is occurring a few months after the New Jersey Department of the Treasury's December 1, 2015 award of a Program Administrator contract to AEG. (OCE Straw Proposal, pp. 4-5.) As noted in the Straw Proposal, AEG is currently developing proposed refinements to the OCE's existing Clean Energy program offerings, while simultaneously initiating a broader strategic planning process aimed toward more comprehensive changes starting in Fiscal Year 2018. (OCE Straw Proposal, p. 6.) Staff is accordingly presenting proposal for a single fiscal year, Fiscal Year 2017 ("FY17"), with the expectation of returning to a multi-year CRA process starting with Fiscal Year 2018. (OCE Straw Proposal, p. 5.)

In view of the transitional status of the NJCEP, the limited changes in the current programs being proposed at the present time, and the short time period provided for comment, Rate Counsel is not providing comprehensive comments on the materials posted for comment on May 31, 2016. The comments below are to provide the Board with some general observations and concerns about the Board's CRA process in general and about some specific program elements. Rate Counsel also provides comments on the proposed Protocols for measuring energy savings.

GENERAL COMMENTS

Strategic Planning and Evaluation

As noted above, the OCE is proposing a single-year CRA which essentially maintains the status quo, with some refinements, while working toward a comprehensive program re-design to be incorporated in a multi-year CRA. As stated in the OCE' Straw Proposal, while AEG had begun to implement some refinements in the OCE's existing programs, the broader strategic planning process that is needed to develop a multi-year CRA has just begun. (OCE Straw Proposal, p. 6.) In order to maintain continuity, it is reasonable to maintain the status quo for one more year.

Rate Counsel is encouraged by the progress that has occurred to date following the award of the Program Administrator contract to AEG. As noted below, AEG appears to be working toward improved coordination between the NJCEP programs and the programs offered by the State's energy utilities. There also appears to be a focus on simplifying processes for program participants and contractors, and on improving levels of participation. Rate Counsel also is encouraged by the OCE's efforts to strengthen its data collection and evaluation program. As the OCE notes, strategic planning is a dynamic process that needs to be informed by market feedback, program experience and evaluation results. (OCE Straw Proposal, p. 7.) OCE's proposal recognizes program evaluation as an integral part of the Clean Energy Program, and describes the specific evaluation activities planned for FY17. (OCE Straw Proposal, pp. 7-8.) Rate Counsel looks forward to continuing to work with the OCE and the new Program Administrator to develop a comprehensive portfolio of Clean Energy programs for the State.

Budgeting Process

Rate Counsel has identified some concerns about the NJCEP budgeting process that should be addressed in future CRA and budget proceedings. The OCE's proposed FY17 budget and the related compliance filings were released for public review and comment late in the afternoon on May 31, 2016, allowing only 10 calendar days to prepare for the public hearing held on June 10, 2016 and less than three weeks to prepare written comments by the June 17, 2017 deadline. This is not a sufficient time to allow for a meaningful review of a budget totaling in excess of \$500 million.

Further, the materials provided for review are not sufficient to inform the public of the basis for the amounts budgeted. The OCE's proposed budget is presented in a summary table appearing at page 10 of the Straw Proposal, and seven pages of more detailed tables entitled "NJ Clean Energy Program Proposed FY2017 Budget" ("OCE Budget Tables") that were posted on the OCE's website. Neither source contains any narrative explanation of the historical experience, assumptions, and policy choices underlying the proposed budget amounts.

It is difficult to glean much information about the budgeting process from the OCE Budget Tables. The OCE appears to have based its budget proposals on forecast results for Fiscal Year 2016, which is presented in summary form on the fourth of the OCE Budget Tables. The forecasted results for Fiscal Year 2016 are merely listed by broad budget categories; there is no explanation of the basis for the forecasted results, and no indication of how these forecasts relate to actual expenditures to date. The OCE also has not explained the rationale for increasing or decreasing the budgeted amounts for each budget category and program to arrive at its proposed budget allocations for Fiscal Year 2017. Such explanation is also lacking in the compliance filings provided by AEG, the OCE and the utilities. For example, AEG's

compliance filing provides detailed descriptions of the many programs it is responsible for administering and a table depicting a detailed budget—but no explanation of how proposed budget for each program was determined.

In the future, the OCE and AEG should provide the public with additional information to allow for a meaningful review of its proposed budget. In addition to the summary schedules such as those provided in the current budget process, the public should be provided with supporting schedules that show how the budget proposals were calculated. In addition, the OCE Straw Proposal and the related Compliance Filings should also include explanations of the history, assumptions and policy choices underlying the proposals.

There is also a lack of transparency with regard to the “State Energy Initiatives” budget category. Based on prior NJCEP budget proceedings, this budget category appears to refer to Clean Energy funds amounts expected to be appropriated by the New Jersey Legislature as part of the State Budget. The OCE’s Straw Proposal includes only the following brief description of this budget category:

State Energy Initiatives

The expenditure for State energy initiatives recognizes that the State’s EE initiatives extend beyond the BPU. Through energy efficiency efforts implemented by sister agencies, the office of Air Quality, Energy and Sustainability in DEP, the State conducts valuable research on clean energy technologies. Funding SAGE [the State’s System for Administering Grants Electronically] is consistent with EDECA in that a goal of SAGE is to accelerate the transition to a clean energy economy. Specifically, SAGE aims to “speed deployment of solar energy, offshore wind, sustainable biomass, geothermal, alternative fuels and vehicles, and innovative technologies like energy storage, fuel cells and tidal energy.” By supporting SAGE, the NJCEP is furthering its commitment to EE and RE programs. Likewise, NJ Transit aims to implement strategic energy efficiency initiatives to lower utility costs. Such efforts have a direct impact on utility costs and should be encouraged. [OCE Straw Proposal, pp. 12-13.]

Fiscal Year 2017 Budgeted Amounts

The proposed total Clean Energy Fund budget (including appropriations) for FY17 of \$513 million is higher than both the originally adopted Fiscal Year 2016 budget of \$479 million total and the true up budget of \$492 million. The total CEP budget is about \$14 million higher than the originally adopted Fiscal Year 2016 budget, and State Energy Initiatives budget is \$20 million higher. With respect to sources of funds, SBC collections remain the same, at about \$345 million. Other resources of \$16 million, including loan repayments, interest, and carry forward of unspent /uncommitted balances from FY16, and a \$152 million carryover of the forecasted committed balance for FY16, bring the total proposed FY17 CEP budget to \$513 million.

In the past, Rate Counsel has expressed concerns about the OCE's record of failing to expend budgeted amounts and carrying over increasingly large amounts of unexpended funds to the following year's budget. This trend appears to have continued in Fiscal Year 2017. Rate Counsel is hopeful that, as a result of the strategic planning process, the OCE will be better able to utilize budgeted funds in the future. In any event, as Rate Counsel has suggested in other comments, that the Board should establish a mechanism for returning unexpended funds to ratepayers, rather than continuing the practice of simply rolling unexpended funds into the budget for the following fiscal year.

ENERGY EFFICIENCY

The FY17 CRA straw proposal for energy efficiency ("EE") programs includes a number of well-considered improvements to the previous programs, incentives, and budgets, and seems to be geared towards improved coordination between CEP programs and the utility programs. There also appears to be a significant focus on making things easier, more convenient, and less

confusing for contractors and customers, and on improving levels of participation among customers.

Overall, it seems like the OCE and AEG have proposed a modest and sensible set of changes for 2017 while the Board works on the multi-year strategic plan, the new marketing plan, and new website. Going forward, Rate Counsel looks forward to participating fully in the multi-year strategic planning process and associated implementation proceedings. Rate Counsel offers more specific comments below on the EE proposals.

While many of the proposed initiatives found in the CRA Straw Proposal are appropriate as described, Rate Counsel has specific recommendations for improvements in the following areas:

1. Program Evaluation;
2. Cost Benefit Analysis (“CBA”);
3. Protocols to Measure Energy Savings;
4. CEP Programs; and
5. Comfort Partners Program.

The following subsection sets forth Rate Counsel’s comments on these areas

Program Evaluation

There has recently been an increased focus on evaluation and accountability by the OCE and the program administrators, which should help to ensure that maximum benefits are derived from ratepayers’ investments in energy efficiency and low-income programs. This focus and associated improvements derive in part from recent studies such as the *ERS Process Evaluation Study* (January 2016) (“ERS Process Evaluation Study”), the *APPRISE New Jersey Comfort Partners Final Evaluation Report* (December 2014), CEEEP’s *2014-2015 Evaluation and Research Plan: New Jersey’s Clean Energy Program Energy Efficiency and Renewable Energy*

Programs (April 2014) and the *ERS Review and Benchmarking of the New Jersey Clean Energy Program Report* (February 2015) (“ERS Benchmarking Study”).

For example, according to the OCE’s FY17 Compliance Filing (p.6):

Rutgers University’s Center for Energy, Economic and Environmental Policy (CEEPP) has been engaged by the Office of Clean Energy (OCE) to manage program evaluation and related research activities and to perform cost-benefit analyses. CEEPP will develop evaluation and related research plans, solicit input on the plans from the OCE, the Energy Efficiency (EE) and Renewable Energy (RE) Committees, program administrators and managers and others, and it will implement such plans upon approval by the OCE.

CEEPP is also assigned a role in implementation, and/or in the development of RFPs for outside contractors to perform the evaluations, to track implementation, and “to track progress towards the EE and RE goals set out in the EMP [Energy Master Plan].” (FY17 Compliance Filing p.6) The OCE further notes the ongoing program evaluation activities scheduled to be completed in FY17 (OCE Compliance Filing, pp. 7-8.). These include impact evaluation studies, Commercial and Industrial (“C&I”) and residential baseline studies, protocols evaluation and update, cost-benefit analysis, and other program evaluation studies. Rate Counsel recommends that the results of these studies should be available in time to inform the multi-year compliance filings anticipated for Fiscal Year 18 and beyond.

Rate Counsel supports the continued use of CEEPP as an independent third-party manager of program evaluation, and for performance of cost-benefit analyses (“CBA”). CEEPP should develop and implement standard practices for program evaluation and cost-benefit analysis that should be applied by, or on behalf of, the utilities in support of their programs. This will ensure consistency of evaluation and CBA practices, and will help to prevent double-counting of benefits between CEP and utility incentive measures and programs.

With respect to the review and evaluation of protocols and CBA, Rate Counsel notes that in the past both the CEP and the State's utilities have not focused on spillover effects and free-ridership, assuming in many cases that these effects cancel out and yield a net-to-gross ratio of 1. Rate Counsel believes that research is now available that would assist the State's program administrators to better estimate the magnitude of these effects, and to provide a more sophisticated representation of them in all relevant program evaluations. This omission was noted in the ERS Benchmarking Study, as was the observation that comparison programs in other states "report both gross and net savings values, implying that they are performing regular impact evaluation that includes an assessment of free ridership." (ERS Benchmarking Study, p. 32) Rate Counsel believes that objective, quantitative estimates of free ridership are essential to obtaining meaningful and accurate program evaluation and CBA.

AEG's Draft Compliance Filing (AEG, *Energy Efficiency and Renewable Energy Program Plan Filing for Fiscal Year 2017*, draft dated May 31, 2016) cites a number of recommendations from the ERS Process Evaluation Study that will be "addressed in FY17 and in the comprehensive strategic planning process that will take place throughout FY17 to develop next year's FY18- FY21 Compliance Filing" (p.6), to wit:

- Update the IMS and improve tracking and reporting of energy savings goals and other metrics;
- Ensure that evaluations are used to effect program changes;
- Design and implement an online portal for customers and contractors to submit applications;
- Review the minimum eligibility requirements for custom C&I projects;
- Simplify the CHP program structure, and
- Develop a targeted outreach and trade ally engagement plan that includes increasing marketing expenditures to approximately seven percent of program budgets, consistent with industry best practices.

However, there is almost no mention of specific improvements in these areas in the report. AEG should be more specific throughout its final compliance filing about how the recommendations

from the ERS Process Evaluation Study were taken into account in developing its compliance filing and planning activities for FY17 and beyond. In addition, AEG should clarify its proposed priorities for improving program evaluation practices, including but not necessarily limited to deficiencies, opportunities, and priorities identified in the ERS Process Evaluation Study and the ERS Benchmarking Study.

Cost-Benefit Analysis (“CBA”)

AEG has provided CBA results for each of CEP programs, presented on Page 131 of its Compliance Filing. Rate Counsel has not had an opportunity to fully review the BenCost model used in this analysis, nor to vet the underlying assumptions supporting these results. In the past, Rate Counsel has found that free ridership has not necessarily been adequately assessed in OCE and utility CBA studies; nor has adequate account been taken of the fact that many customers qualify for and receive a combination of CEP and utility incentives.

Rate Counsel believes that a thorough discussion of combined incentives and free-ridership should be included in the final compliance filing. Rate Counsel also looks forward to providing a thorough review of the BenCost model and underlying assumptions, and to providing further comments based on that review.

Protocols to Measure Energy Savings Revisions

The OCE has proposed a number of revisions to its Protocols to Measure Resource Savings for FY2017 (“Protocols”). It would be very helpful to have the source(s) and/or rationale behind each of the proposed revisions, both in the primary document and in the summary of changes. In particular, a number of revisions to the Protocols were recommended in the ERS Benchmarking Study. To the extent that these recommendations were implemented in the protocols revisions, it would be helpful to have these changes identified. If the OCE has

chosen not to implement specific recommendations from the ERS Benchmarking Study, it would be helpful to identify these rejected recommendations and to provide a rationale accordingly.

Only by providing such a thorough response to the ERS Benchmarking Study, and to other independent evaluation reports, can the OCE, third-party evaluators, and stakeholders make consistent progress in improving New Jersey's evaluation, measurement, and verification practices.

The Protocols estimate peak electric demand savings only for the Summer period. Seasonal peaks should also be studied in light of recent trends. For example, the PJM Interconnection ("PJM") may be moving towards markets for seasonal capacity products, in recognition of the need for meeting both summer and winter peak demand and the fact that many types of resources do not have the same peak energy benefit in summer and winter. Even in the absence of a seasonal capacity market, PJM requires that most capacity resources be available in both summer and winter. Many energy efficiency measures are seasonal in nature – to state the most obvious, heating efficiency is most effective in winter, while air conditioning efficiency reduces summer peak load.

The draft Protocols only estimate peak reductions for the summer period (*Protocols*, p. 12). The Protocols should recognize this distinction, and in the future provide protocols for measuring seasonal peak reduction as appropriate. This will facilitate full participation in PJM's capacity markets, as well as a more detailed and comprehensive estimates of capacity savings associated with each EE measure.

Comments on CEP EE Programs

Incentives - Generally

The AEG draft compliance filing and its appendices detail the specific incentives to be provided through the NJCEP programs. In many cases, incentives are available at a range of levels, increasing as the recipient opts for higher efficiency construction, appliance, or retrofit options. Rate Counsel is concerned that some of these programs may be too generous in providing incentives for equipment that meets lower efficiency standards. As a general principle, customers should be required to invest in higher-efficiency equipment in order to obtain rebates. Paying customers incentives for equipment that only meets minimal efficiency standards not only misses the immediate opportunity for the installation of more efficient equipment, it also locks in the lower-efficiency equipment for years or decades to come. In many cases, incenting lower-efficiency practices and products will yield higher levels of free-ridership, as customers who are responding to incentives would more likely choose the higher-efficiency option. Finally, offering an incentive for lower-efficiency equipment effectively decreases the marginal incentive to select higher-efficiency equipment.

Comments on Specific EE Programs

Rate Counsel offers the following specific comments on certain EE program proposals:

- **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.
- **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.

- **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.
- **“Value” LEDs (Table 1, Table 15).** No incentive should be paid for lower-performing LEDs that do not meet Energy Star standards. 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.
- **C&I New Construction and Retrofit Incentives.** While Rate Counsel has no specific recommendations in this area, Rate Counsel recommends that these incentives should also be generally reviewed to ensure that recipients are actually achieving greater levels of efficiency than they would be without the incentives.

Comfort Partners

According to the draft compliance filing submitted by the utilities, it appears that the Comfort Partners program is now implementing the APPRISE recommendation of providing a wider scope of EE services to a smaller number of customers. This approach should reduce administrative and marketing costs to some degree. However, as this program involves a great deal of judgment and custom, on-the-spot project design, there exists the potential for a higher level of overhead expense.

The Comfort Partners filing does not address the issue of performance. As Rate Counsel note in its comments on the 2016 Comfort Partners Compliance filing, “Apprise...found a high rate of job inspection failures: of the 18 percent of jobs in the treatment group that had a third party inspection, 33 percent failed the inspection, most commonly due to health and safety problems and missed opportunities.” However, it is difficult to estimate without in-depth

analysis what a reasonable level of failure would be. Nonetheless, it should certainly be a priority to keep both health and safety problems, and missed opportunities, to a minimum.

DISTRIBUTED ENERGY RESOURCES

CHP-Fuel Cells

The OCE has significantly increased the CHP-Fuel Cell budget. The amount budgeted for Fiscal Year 2016, including the Board's transfer of \$19.8 million to this budget category in January 2016, was \$41.6 million. The FY17 proposed budget amount for CHP and fuel cells is about \$49.8 million. Rate Counsel has concerns about the OCE's ability to expend this amount. Based on the "Historical Results" table at page 9 of the OCE's straw proposal the Fiscal Year 2016 "total program need" was \$17.6 million through December 2015. However, most of that amount represents "year-end commitments." Actual expenditures through the end of 2015 were only \$1,440, 787. Actual expenditures for Fiscal Years 2014 and 2015 were respectively, only \$1,474,906 and \$2,448, 358. (OCE Straw Proposal, p. 9.) The materials posted for public comment provide no details on how the OCE expects to be able to expend the increased budget for Fiscal Year 2017.

Rate Counsel has concerns about ratepayer subsidies for fossil-fueled CHP and fuel cells. While voicing its concerns about the fossil-fueled fuel cell program in general, Rate Counsel supports the OCE's proposal to limit incentives to fuel cells with waste heat recovery. As AEG explains in its Summary of Proposed Program Modifications for Fiscal Year 2017, fuel cells without heat recovery have higher costs in relation to benefits than other distributed generation technologies, and concerns have also been raised about their CO₂ emissions levels. (AEG Summary Program Changes, pp. 22-23.) Rate Counsel is in agreement with AEG's analysis. If

Clean Energy funds are going to be used to promote fossil fuel technologies, then at a minimum such funding should be limited to technologies that provide greater benefits.

Renewable Energy Storage

The Renewable Electric Storage Program is currently being operated as an open enrollment program with prescribed rebates. As noted in past comments, Rate Counsel believes a competitive solicitation process would result in a more cost-effective program. The OCE's proposal notes that the Rutgers University Laboratory of Energy Smart Systems ("RU LESS") is conducting research that should help to inform how this program should be structured to maximize the results of ratepayer investments. (See AEG Compliance Filing, p. 77.) Rate Counsel supports this process, and looks forward to participating in efforts to develop a competitive solicitation process for the Renewable Electric Storage program that will maximize the impact of ratepayer investments in this program.

Regarding the proposed FY17 budget, Rate Counsel submits that the basis for the Renewable Energy Storage budget is unclear. The Fiscal Year 2016 budget for this program was \$6 million, of which \$3 million was designated for an open enrollment program with prescribed rebates, and the remainder for a competitive solicitation. The proposed FY17 budget is \$7.825 million, which appears to be the sum of adding \$6.3 million of "current-year funding need" to a \$1.525 million "commitment backlog." (OCE Budget Tables, p. 7.) However it is not clear how the OCE anticipates that this funding will be expended, especially in view of the fact that the program for Fiscal Year 2017 is still under development. The OCE's plans for Fiscal Year 2017 should be clarified.

RENEWABLE ENERGY

Proposed FY17 Renewable Energy Budget

As noted in the OCE Straw Proposal, proposed Renewable Energy budget reflects the transfer of the Renewable Energy Storage and biomass components of the Renewable Energy Incentive Program to the newly-created category for “Distributed Energy Resources.” (OCE Straw Proposal, p. 13.) With these transfers, the Renewable Energy Program budget now includes only \$2 million for the SRP Registration program, plus \$450,000 in committed funds remaining from the Offshore Wind program. Overall, the Renewable Energy budget of \$2.45 million is \$629,000 less than the FY2016 Forecast. Rate Counsel supports this recommendation.

It is important to note that the proposed Renewable Energy funding in this CRA is just a fraction (or small percentage) of the overall commitment made by New Jersey ratepayers to renewable energy development. As the OCE recognizes in its Straw Proposal. The proposed NJCEP funding does not include the cost of compliance with New Jersey’s Renewable Portfolio Standard, the subsidies provided through net metering of customer-sited renewables, or the costs of renewable energy programs managed by the State’s energy utilities. (OCE Straw Proposal, p. 13.)



June 17, 2016

Hon. Irene Kim Asbury, Secretary of the Board
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 08625-0350

Re: CRA Straw Proposal and Proposed Fiscal Year 2017 Budgets
Docket Nos. QO16040352 and QO16040353

Dear Ms. Asbury,

On behalf of Lime Energy (“Lime”), I would like to thank the New Jersey Board of Public Utilities (the “Board” or “BPU”) and the Clean Energy Program (“CEP”) staff for the opportunity to provide comments on the CRA Straw Proposal and Proposed Fiscal Year 2017 Budgets. As you may know, Lime is the nation’s leader in delivering energy efficiency solutions to small and medium sized businesses but, more importantly, since 2009/2010 Lime has been the Direct Install Program’s largest contributor. Accordingly, our comments are directed to the impact of the Straw Proposal and the 2017 Budgets on the Energy Efficiency Category and the Direct Install Program (“DI”).

Lime is a New Jersey company; our corporate headquarters and leadership team are based in Newark and we employ dozens of New Jersey subcontractors to implement DI. In turn, DI has been tremendously successful in helping small businesses across New Jersey and in meeting some of the goals of the Christie Administration’s Energy Master Plan, namely increasing the use of energy efficiency measures to conserve energy, lower demand and prices, and to promote economic development and job creation. Every economically challenged small business that DI reaches is another business that can redirect the money saved on energy costs to increase employment, expand operations or simply remain in New Jersey.

As detailed in Table 1, on page 2, DI has been tremendously successful in adding a significant number of jobs and bottom line cost savings to over 6,100 commercial customers, among which are the most underserved entities in New Jersey. The following is a small sample of low-income area businesses served to date:

Project Name	City	Zip Code	State
Paddy’s Service Station	Newark	07105	NJ
Iron Bound Auto Body	Newark	07105	NJ
Christo Beverage & Snack	Paterson	07513	NJ
Bridy Sales & Leasing Inc	Paterson	07524	NJ
Red and White Tavern	Passaic	07055	NJ
Wayne Bedding	Passaic	07055	NJ
NJ Books	Newark	07102	NJ

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www.lime-energy.com | NASDAQ: LIME

Category/Program		FY11	FY12-13 (18 Month)	FY14	FY15	FY16 6months	
Energy Efficiency	Direct Install	Incentive Budget	35,896	56,632	42,569	42,881	27,531
		Actual Project Dollars (NJOCE Incentive plus Customer Copay)	32,599	70,110	57,601	58,279	30,277
		Lifetime Jobs Created	833	1,260	878	1,180	841
		<u>Savings</u>					
		Electric	41,640	61,416	38,040	54,049	41,892
		Demand	6,693	14,288	9,390	13,937	9,864
		Gas	61,347	75,657	99,959	134,370	83,895
		Green Jobs Created Directly and Indirectly (impact by Total investment in retrofit projects; construction jobs, manufacturing jobs, supply chain jobs, other jobs)	98	210	173	175	91
		Additional Annual Green Jobs created within Local Economy (jobs resulting from energy bill savings due to investment into EE)	49	70	47	67	50
		Total annual jobs that will be created over next 15 years (measure life) as a result of realized energy bill savings	735	1,050	705	1,005	750

Table 1: Estimated Savings and Job Creation Since FY 11.

Note: ACEEE article and study, <http://aceee.org/files/pdf/fact-sheet/ee-job-creation.pdf>
<http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>

Demand for DI is strong and shows no signs of slowing down. Evidence of the program's popularity among small and medium-sized businesses is the substantial backlog of applications that has built up over the past six months, while the program has been suspended. Over 300 small businesses are anxiously awaiting the program's reopening, and we have many subcontractors ready to install these projects.

Given the historical success of DI and the pending backlog of applications, Lime was surprised by, and respectfully objects to, the proposed reductions in DI funding for Fiscal Year ("FY") 2017. As presented in Table 2, below, the proposed CRA budget reduces funding by over 40% from both FY 2014 and FY 2015, respectively. In fact, the FY 2017 budget is approximately equivalent to what was spent in FY 2016, when the program only ran for 6 months.

Clean Energy Program
FY17 Budget (\$000)

Category/Program		FY14 Forecast	FY15 Forecast	FY16 Forecast 6 months	Current-Year	Commitment	FY17 Total	vs. FY16
					Funding Need	Backlog	Budget	Forecast
Energy Efficiency	Direct Install	42,569	42,881	27,531	23,373	5,284	28,657	1,126

Table 2: Proposed FY 17 Total Budget

Given the backlog of applications described above, the proposed DI funding will be exhausted within approximately six months, essentially closing the program for close to two years to many of the businesses that would otherwise benefit. At the same time, the proposed budget will frustrate efforts to increase participation among DI contractors; without the assurance of adequate funding, potential contractors will be reluctant to make the necessary investments to plan, staff and market the program effectively.

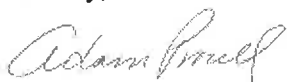
We recognize that, like any budget, the FY 2017 budget represents difficult decisions over competing priorities. At the same time, we must stress that New Jersey small businesses, the contractors that participate in DI, and the many trade subcontractors who handle the installation work will all be adversely affected from this significant budget reduction.

In closing, we understand and appreciate that program budget reallocations may be made during the program year to bolster DI. But, Lime – and the other DI contractors - can only depend on such mid-year course corrections by presuming that other CEP programs will not be as successful as predicted. In any event, uncertainty in funding levels on a year-to-year basis may send an adverse message to potential program participants.

Lime respectfully requests that the Board reconsider the proposed reduction in DI funding and increase the Direct Install Program budget in the final, adopted New Jersey Clean Energy Program FY 2017 Budget.

Once again, thank you for the opportunity to comment on this critically-important program, and we appreciate the BPU's consistent efforts to engage the stakeholders and general public.

Sincerely,



Adam Procell
CEO, Lime Energy



GORDON M. JOHNSON
ASSEMBLYMAN, 37TH DISTRICT

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NEW JERSEY LEGISLATURE

COMMITTEES

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COMMERCE AND ECONOMIC
DEVELOPMENT

VICE CHAIRMAN
JUDICIARY

BUDGET

June 17, 2016

The Honorable Richard Mroz, President
New Jersey Board of Public Utilities
PO Box 350
Trenton, NJ 08625

Dear Board President Mroz,

In reviewing the Fiscal Year 2017 filings, I noted that the Board of Public Utilities' staff requested that the Board authorize an Energy Efficiency and Renewable Energy Program Plan that discontinues incentives for hydrogen fuel cells without heat recovery. The Board should reject this portion of the Plan and move forward with a more measured response to supposed concerns with all electric hydrogen fuel cells.

The Plan proposes to eliminate incentives for fuel cells without heat recovery while studying their performance. This is in addition to a reduction from \$4 to \$2 per watt for fuel cell projects with heat recovery under 500kilowatts. As well, the Plan reduces the project cap to \$4 million and removes the \$0.25 per watt bonus through the Pay for Performance program. Though staff may be well intentioned with the suggested fiscal restraint, this series of reductions will serve to make the program weaker and less desirable. I must note that the Governor's proposed budget contains \$118.3 million in diversions from the Clean Energy Fund to the General Fund.

The most troubling aspect is the elimination of incentives for fuel cells without heat recovery. This is a drastic step that should not be taken until independent performance data can be gathered and analyzed. The Board should instead direct staff to conduct a study, and then use the data to modify the incentive structure. The draft Plan puts the cart before the horse when making policy decisions about the future of hydrogen fuel cells in our State.

Hydrogen fuel cells are a nascent industry in New Jersey that is worthy of additional incentives. As Chair of the Assembly Commerce and Economic Development Committee, I held a hearing that focused on the benefits of hydrogen fuel cells for our state. Without incentives, businesses are reluctant to utilize hydrogen fuel cells. As such, the Board should not adopt current version of the Energy Efficiency and Renewable Energy Program Plan.

Sincerely,

Gordon M. Johnson
Assemblyman, District 37



June 17, 2016

VIA ELECTRONIC FILING

Irene Kim Asbury
Secretary of the Board
New Jersey Board of Public Utilities
Email: publiccomments@njcleanenergy.com

Re: Straw CRA Proposal FY17

Dear Irene Kim Asbury:

Please accept these comments on behalf of the National Fuel Cell Research Center in response to the Notice requesting comments on the New Jersey Clean Energy Program (NJCEP) Comprehensive Energy Efficiency and Renewable Energy Resource Analysis (CRA) for Fiscal Year (FY) 2017 and related programs and budgets for Fiscal Year 2017.

Respectfully Submitted,

___/s/___ Scott Samuelsen ___

Dr. Scott Samuelsen
Director, National Fuel Cell Research Center
Professor of Mechanical, Aerospace, and
Environmental Engineering
University of California Irvine
Irvine, CA 92697-3550
Email: gss@nfcrc.uci.edu
Phone: 949-824-5468

**CRA STRAW PROPOSAL AND PROPOSED FISCAL YEAR 2017 BUDGETS
IN THE MATTER OF THE COMPREHENSIVE ENERGY EFFICIENCY
AND
RENEWABLE ENERGY RESOURCE ANALYSIS FOR FISCAL YEAR 2017
CLEAN ENERGY PROGRAM -DOCKET NO. QO16040352;
AND
IN THE MATTER OF THE CLEAN ENERGY PROGRAMS AND BUDGET FOR
THE FISCAL YEAR 2017 - DOCKET NO. QO16040353**

Comments of the National Fuel Cell Research Center

I. Introduction and Background

The National Fuel Cell Research Center (“NFCRC”) appreciates the opportunity to submit comments on the New Jersey Energy Efficiency and Renewable Energy Program Plan’s Summary of Proposed Program Modifications for Fiscal Year 2017, with particular focus on Staff’s recommended refinements to the Combined Heat and Power & Fuel Cell (CHP-FC) Section of the New Jersey Clean Energy Program (NJCEP).

The NFCRC facilitates and accelerates the development and deployment of fuel cell systems; promotes strategic alliances to address the market challenges associated with the installation and integration of fuel cell systems; and educates and develops resources for distributed generation and combined heat and power (CHP) stakeholders around the world. The NFCRC is working with GE-Fuel Cells, LLC; LG Fuel Cell Systems Inc.; Fuel Cell Energy; Doosan Fuel Cell America; and Bloom Energy.

The NFCRC is concerned that proposed changes to the Energy Efficiency and Renewable Energy Program will diminish support for both fuel cells and CHP, and would like to provide information on important distinguishing characteristics between the technologies and the unique advantages that are realized by fuel cell systems in clean power generation and

explain how these technologies can address the State of New Jersey's long term energy and emissions goals. Specifically, the NFCRC requests that Staff:

- 1. Correctly cite the latest Proposed Decision document for California's Self Generation Incentive Program that includes all fuel cell technologies as eligible technologies now and in the future.**
- 2. Assign higher value to GHG and criteria air pollutant emission reductions in considering how to incentivize technologies.**
- 3. Allocate sufficient funding to CHP and Fuel Cell projects that reflect past success and current market demand and consider performance-based incentives.**
- 4. Revise the definition of CHP and Fuel Cells to accurately describe their operation.**

Strong consideration of our recommendations is appreciated, as the CHP/Fuel Cell Program has been suspended for nine months, and recommendations have been put forward by Staff with a very short turnaround, and insufficient data and analysis to support the Staff recommendations.

Stationary fuel cells are rapidly emerging as well-suited to be the clean, high-efficiency 24/7 load-following power generation resource required with virtually zero emission of criteria pollutants, and no net water demand. To meet the demands of the next-generation grid, stationary fuel cells systems are being (1) developed and deployed with the requisite load-following attributes, (2) developed to operate on hydrogen as well as natural gas and biogas, and (3) developed to integrate with a gas turbine engine to create a "hybrid" power generator with remarkably high efficiency. Simply stated, stationary fuel cells are (1) a key resource, along with storage, required to manage and enable high penetrations of intermittent renewables, while offering options to realize a 100% renewable grid, and (2) a perfect match to hydrogen energy

storage in providing the ideal means for converting massive amounts of renewable fuel into electricity. Stationary fuel cells present attributes essential to the NJCEP by:

- Reducing greenhouse gas emissions through the displacement of less efficient central generating plants, especially those that are “on the margin;”
- Increasing system efficiency, avoiding transmission and distribution system investments, providing voltage support and reducing line losses;
- Providing customer and system resiliency while reducing program costs;
- Installing local distributed energy resources (DER) in locations as an alternative to increased transmission and avoiding or delaying upgrades to the distribution system based on projected local capacity increases.
- Essentially eliminating emissions of criteria pollutants as well as withdrawals and discharges of water;
- Avoiding visual impacts associated with large scale resources and their associated transmission infrastructure;
- Providing stable capacity additions that intermittent renewables cannot provide;
- Providing renewable power and heat.

Stationary fuel cells are today providing stable power and heat in New Jersey and around the world in microgrids and at wastewater treatment plants, food and beverage plants, office buildings, telecommunication hubs, data centers, retail stores, universities, hospitals, hotels, government facilities, and other applications. In New Jersey, highly efficient electric and CHP fuel cell systems have been successfully operating as part of the NJCEP.

Fuel cells can help mitigate an over-reliance on the long distance transmission of electricity from intermittent large scale resources that are located far from load centers. In the event of a grid outage, fuel cell systems can seamlessly island, separate from the utility grid network and support key loads for customers who increasingly require an un-interrupted supply of electricity. Fuel cells provide exceptional resiliency and have maintained heat and power for

critical communication hubs and cell towers, data centers, emergency shelters and other essential services across the Northeast during and after Hurricane Sandy and other severe weather events.

On the utility side of the meter, large-scale fuel cell systems are being deployed to create grid support solutions where transmission is constrained or increased reliability is sought. Examples range from a 15MW system in Connecticut, to a 30MW system in Delaware, to a 59MW system in Seoul, Korea. These resources are providing clean, 24/7, load-following power generation to complement the increasing deployment of intermittent solar and wind resources and support grid reliability in locations where it is most needed.

The flexibility of stationary fuel cells is captured in novel applications. In grocery stores, for example, stationary fuel cells provide 24/7 generation of clean, load-following power and back-up power generation in the event of utility grid outages. The heat from the stationary fuel cell is captured and processed through an absorption chiller to provide chilled water for air conditioning and offsetting refrigeration loads, and the heat emanating from the chiller is used to regenerate a desiccant dryer. Should a grid outage occur, the stationary fuel cell can seamlessly island (separate from the utility grid network) and support key loads allowing the grocery store to remain open to provide food and supplies to the community, and precluding the disposal of perishable goods that must be disposed after a few hours (e.g., 4 hours) of lost refrigeration.

II. Discussion

The Summary of FY17 Program Changes recommends extensive changes to the CHP and Fuel Cell Program. This program has been fully utilized and successful in its objectives. The proposed changes are not supported by the record, nor by analysis that has informed the record. The NFCRC is bringing forward new information and recommendations as follows:

A. Suspension of Incentives for Fuel Cells without Heat Recovery Pending Further Analysis

Fuel cells can produce combined heat and power, heat, power and cooling, and high efficiency electricity. The proposal cites reasons to eliminate fuel cells without heat recovery from the CHP Program including “the issues raised in a recent report by California Public Utilities Commission (CPUC) Staff regarding both the costs and benefits of fuel cells without heat recovery, 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).¹” The NFCRC would like to correct the record and advise the BPU Staff that fuel cells without heat recovery are included in the SGIP Proposed Decision, a document issued on May 16, 2016 that supersedes the referenced SGIP Staff Proposal. The Conclusions of Law in the SGIP Proposed Decision detail the inclusion of all currently eligible technologies, which includes all-electric fuel cells:

8. The current list of SGIP eligible technologies, with the exception of finding that as long as a technology is certified to emit less than the first-year emission rate for the program year for which incentives are sought, the technology passes the GHG eligibility screen, is reasonable and retained.²

¹ NJCEP Summary of FY17 Program Changes, p. 23.

² California Public Utilities Commission, DECISION REVISING THE SELF-GENERATION INCENTIVE PROGRAM PURSUANT TO SENATE BILL 861, ASSEMBLY BILL 1478, AND IMPLEMENTING OTHER CHANGES, issued May 16, 2016, <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=162005693>, pp. 64.

The Proposed Decision allows all technologies that meet the SGIP requirements, including all fuel cells for power generation, to participate in the SGIP. These requirements are to: 1) lower GHG emissions; 2) lower or shift peak load to off-peak; 3) be safe and commercially available; and 4) reduce criteria air pollutants.³

B. Incentive levels for fuel cells with heat recovery and CHP incentive levels

The lower incentive levels proposed by Staff significantly undervalue technology characteristics that meet the goals of the NJCEP. BPU Staff recommends lower incentives for fuel cells systems to match the incentive level for CHP systems without consideration for the significant environmental and technical advantages of fuel cell systems. Fuel cells are non-combustion energy systems that produce (1) lower criteria pollutant emissions than all other CHP systems,^{4,5,6} and (2) higher electrical efficiency than all other CHP systems^{4,5} (and electricity is more valuable - thermodynamically and fiscally - than heating/cooling). Fuel cells also have extremely high capacity factors (>98%) with greater potential for energy savings and emissions reductions.

³ California Public Utilities Commission, DECISION REVISING THE SELF-GENERATION INCENTIVE PROGRAM PURSUANT TO SENATE BILL 861, ASSEMBLY BILL 1478, AND IMPLEMENTING OTHER CHANGES, issued May 16, 2016, <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=162005693>, pp. 13.

⁴ California Energy Commission, CEC-500-2011-042, Final Report, National Fuel Cell Research Center, August 2011, available on-line at: <http://www.energy.ca.gov/2011publications/CEC-500-2011-042/CEC-500-2011-042.pdf>

⁵ Y Yi, VG McDonell, J Brouwer, M Fujiwara, M Adachi, Emissions sensors for high temperature fuel cell applications, IEEE Transactions – Sensors Conference, 2005.

⁶ Y Yi, A Rao, J Brouwer, S Samuelsen, Ammonia as a Contaminant in the Performance of an Integrated SOFC Reformer System, ASME Paper FC2006-97037, June, 2006.

Figure 1: Projected Nonattainment with a 65 Parts Per Billion (ppb) Ozone Standard



Projected Nonattainment in New Jersey (65 ppb)

The reduction of criteria air pollutant emissions, such as ozone, SO_x, NO_x and particulate matter, should be highly valued by the BPU in deciding incentive levels, along with the reduction of GHG emissions. Figure 1⁷ demonstrates that, as recently announced federal ozone standards are put in place, most of the State will be in nonattainment zones, and 21 New Jersey counties are already in nonattainment zones. New Jersey should invest in energy conversion technology that reduces criteria air pollutants as a priority, not only to meet federal requirements, but also to improve air quality and create societal and health benefits.

The 2015 SGIP Impact Evaluation Report shows (in Figure 2)⁸, clearly and based on actual performance data, that both CHP fuel cells and electric-only fuel cells reduce GHG emissions, and far exceed combustion technologies (internal combustion engines, and microturbines) like CHP, in these reductions.

⁷ New Jersey Ozone Data 2015. National Association of Manufacturers: <http://www.nam.org/Issues/Energy-and-Environment/Ozone/State-Data/NewJersey-Ozone-Data-2015.pdf>

⁸ Itron. 2013 SGIP Impact Evaluation Submitted to PG&E and the SGIP Working Group, April 2015. http://www.cpuc.ca.gov/NR/rdonlyres/AC8308C0-7905-4ED8-933E-387991841F87/0/2013_SelfGen_Impact_Rpt_201504.pdf Page 7-6

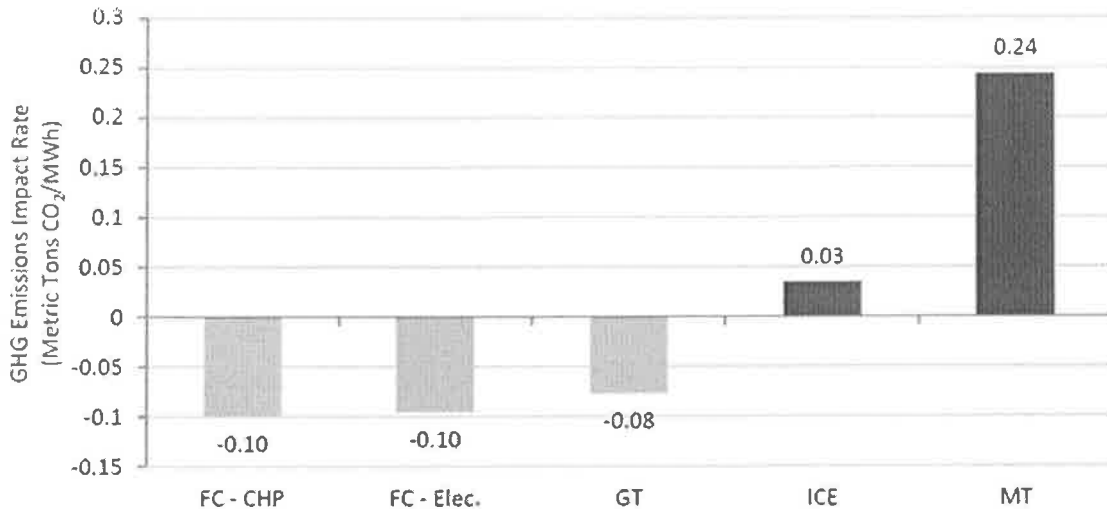


Figure 2: SGIP GHG Reduction Impact by Technology Type

New Jersey programs and policy to support fuel cell systems lag behind neighboring states that recognize the benefits that fuel cells provide, as demonstrated in Table 1 below. The NJCEP FY17 Budget document shows a Commitment Backlog of \$34.1 M for the CHP/Fuel Cell Program and only \$15.7 M of Current-year Funding Need.⁹ The allocation of \$15.7M for new projects does not support the demand for the program that is evidenced by the large backlog.

Connecticut	New Jersey	New York
\$60M program	\$15.7 M CHP/fuel cell program	\$153.5 M combined programs
Retail rate fuel cell net metering	No net metering	Wholesale rate fuel cell net metering
Standby charge exemption	No standby charge exemption	Standby charge exemption
\$56.28/MWh PBI	\$1.00/W (>500kW-1MW)	\$24.57/MWh PBI

Table 1: Comparison of State Fuel Cell Programs

⁹ New Jersey Clean Energy Program, Policy Updates and Request for Comments, FY17 Draft CRA and Budget: NJCEP Budget, p.6. <http://www.njcleanenergy.com/main/njcep-policy-updates-request-comments/policy-updates-and-request-comments>

Staff recommends that the payment structure shift to more emphasis on performance. As shown in Table 1, programs in Connecticut and New York reimburse with a performance-based incentive, per kilowatt hour. Performance-based incentives (PBI) are incentives that are paid based upon the actual amounts of energy produced by the energy conversion system. These PBI incentives are paid based on an energy (\$/MWh) basis over a period of time. Long-term, the NFCRC recommends that the NJCEP realize maximum pay for performance, and return on investment, by moving to such a performance-based incentive payment based upon the actual energy produced.

Based on experience in other states, the NFCRC also recommends integrating a manufacturer's cap to prevent one technology manufacturer from receiving a disproportionate amount of funding from the NJCEP.

Key objectives of the NJCEP are to save energy, money, and the environment. To this end, it is important to make informed, data-driven decisions to specifically address these attributes and to ensure use of a diversity of technologies that are proven to satisfy these needs. Eligibility and incentive levels should be based upon a technology's ability to reduce emissions, while maintaining cost effectiveness and reliability, not only the ability to recover heat.

C. Definitions

The NFCRC also requests removal of the word "*sequential*" in the definition of Combined Heat and Power (includes Fuel Cells with Heat Recovery)¹⁰, per the following revision:

¹⁰ NJCEP Summary of FY17 Program Changes, pp. 25-26.

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 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.

The production of electricity and useful thermal energy by CHP systems occurs simultaneously (at the same instant), not sequentially.

III. Conclusion

The NFCRC values the State of New Jersey's support for clean power generation and resiliency through the NJCEP, and will continue to participate in further refinement of changes to the current CHP and Fuel Cell Program.

From: [Edward J Mahaney Jr.](mailto:Edward.J.Mahaney.Jr.)
To: publiccomments@njcleanenergy.com
Subject: City of Cape May Response to CRA Regarding Proposed Microgrid Development
Date: Friday, June 17, 2016 4:37:30 PM

To Whom It May Concern:

As Mayor of the City of Cape May in Cape May County, my primary concern is that our municipality has not been included for eligibility to participate in the Microgrid Development initiative within the OCE Distributed Energy Resources Program despite the fact that Cape May City is located within one of the nine recognized counties in New Jersey who were adversely affected by Superstorm Sandy. Although our City did not suffer the traumatic human and property loss inflicted by the storm on Central and Northern New Jersey coastal and inland communities, Cape May was initially projected to receive the "direct hit" of this major storm. My point is that your eligibility for participation in the projected Microgrid Development program appear to be based upon event consequences primarily as an outcome of Superstorm Sandy which, will a devastating event, represents only one of a long chain of major storms that have inflicted significant damage and loss of human life on coastal and inland areas of New Jersey during at least the past eight decades. Future major storms may not possess the exact or similar characteristics of Sandy and may cause loss of human life and severe property damage in geographic areas of our State that were not major victims of Sandy's wrath. Cape May County in general and Cape May City in particular are geographically situated in a pristine environmental setting which, unfortunately, increases the probability for negative impacts of future major storms. The devastation heaped on Monmouth and Ocean County coastal communities during Sandy were previously inflicted on Cape May County coastal towns during the Nor'easter of March 1962 and subsequent periodic storms/flooding, culminating in Winter Storm Jonas in January 2016.

As "The Nation's Oldest Seashore Resort" and a "National Historic Landmark City", Cape May is 2.48 square miles in size with a year-round population of 3,800 residents. Cape May has 4,000 properties that represent a healthy mix of primarily residential and commercial uses. By means of collaborative efforts by the public and private sector, Cape May has grown back to a 10.5 month annual economy and has truly become a seaside resort for all seasons. As a result, the peak summer population approaches 45,000 people. The City's bond rating is AA and has progressed to that level since 2008. Our City installed the first, reverse osmosis, potable water desalination plant in New Jersey in 1998 which now supplies the City of Cape May, Borough of West Cape May, Borough of Cape May Point, the United States Coast Guard Training Center, and portions of Lower Township.

During the past eight years, our City Council has successfully integrated its long-range planning agenda with our long-term financial and capital planning programs to create and implement a comprehensive and systematic sustainability approach for our City over the next two decades. All pertinent City planning documents are now current, valid, integrated, and working documents which chart the future direction of Cape May. Our City holds Plan Endorsement Status as approved by the New Jersey State Planning Commission in October 2012. Thus, we are a Town Center. Our City holds Silver Certification status since 2011 and our elementary school holds Bronze Certification status since 2015 from the Sustainable Jersey Program. During the past two years, Cape May has collaborated with the Sustainable Jersey Program to complete the Getting To Resilience (GTR) and

the Coastal Vulnerability Assessment (CVA) 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 our community for future generations. The five-year update of the City's Hazard Mitigation Plan has now been approved by the Federal Emergency Management Agency (FEMA) on May 24, 2016. Due to the City's proactive hazard mitigation program, the City is an active participant in the National Flood Insurance Program (NFIP) and the Community Rating System (CRS) under FEMA authorization. As a result, owners of 70 percent of all properties in the City (almost 800 properties out of about 4,000 properties in our town) have flood insurance policy protection under both programs, and thus benefit from up to a 20 percent premium discount annually. During our five-year CRS review cycle, Cape May projects advancing from Class 6 (20 percent discount) to Class 4 (30 percent discount). As State records will verify, the City of Cape May has been a proactive participant and supporter in multiple NJ BPU Clean Energy programs since 2008.

Through a \$10,000 competitive grant awarded by Sustainable Jersey, our City is collaborating with Johnson Controls and has developed an Energy Savings Improvement Plan (ESIP), which has been approved by the New Jersey Board of Public Utilities, for critical City and school district facilities. This grant has provided the "seed money" and is the catalyst during the past two years for Cape May to partner with the New Jersey Energy Resilience Bank (ERB) to leverage a Combined Heat and Power (CHP) as a Microgrid for key City buildings and the Cape May Elementary School for use during major weather and operational emergencies. This particular opportunity has been coupled with a \$100,000 competitive grant award from FEMA-NJOEM for the installation of a state-of-the-art generator at Cape May City Elementary School. Such a combined project will modernize the HVAC system at the school as well as qualify the school facility as a multi-day shelter for our residents in times of emergency when evacuation from our City is not necessary or not possible. The City 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. The installation of a Microgrid in the City of Cape May will allow the continued functioning of the following critical facilities during emergency conditions: City Hall, Police Department, Fire and Rescue Department, Office of Emergency Management, City's Franklin Street School as a community center, Elementary School as a shelter, City library as a communications center, Victorian Towers (181 unit senior citizens apartment complex with 280 residents who represent a vulnerable population), City Housing Authority (HUD-approved low income housing with 85 units comprised of a vulnerable population of senior citizens, families with young children, and displaced adults). All of these critical facilities are located within a two-block stretch/total distance in our central downtown area of Cape May. The existence of a Microgrid will eliminate the need, under most emergency conditions, to evacuate the vulnerable populations in Victorian Towers and the Cape May Housing Authority to an in-town or out-of-town shelter which is an enormous undertaking given the age, mental and physical handicapping conditions, and health issues of these residents.

Based upon the above-cited reasons, rationale, and documentation, I respectfully request that the City of Cape May be included for eligibility to participate in the Microgrid Development initiative within the OCE Distributed Energy Resources Program. Thank you for the opportunity to provide comments, and the City of Cape May eagerly looks forward to collaborating with you.

Dr. Edward J. Mahaney, Jr.
Mayor
City of Cape May
643 Washington Street
Cape May, NJ 08204
Cell: (609) 425-1774
emahaney@capemaycity.com



June 17th, 2016

publiccomments@njcleanenergy.com

Irene Kim Asbury, Secretary of the Board
New Jersey Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
Post Office Box 350
Trenton, New Jersey 08625-0350

Re: Straw CRA Proposal FT17 Request for Comments

Stephen Izzi Trucking & Rigging, Inc (SIT&R) has been in business in the state of NJ since 1973. SIT&R employees seventy five (75) people, of which the majority live in NJ. In review of the NJ BPU 's FY17 CRA straw proposal to prohibit all-electric fuel cells from the Clean Energy Program, it will have a devastating impact to our company. SIT&R is projecting an 18% loss of business; subsequent layoffs are all but guaranteed due to this proposal and we bid the Board's rejection of it.

Since 2012, we have worked with Bloom Energy to transport and stall all-electric fuel cells within the state of NJ. Over the last four (4) years, we have watched the all-electric fuel cell market grow to where we have anywhere from 1 to 3 trucks per day delivering or picking-up material for Bloom Energy. Today, the all-electric fuel cell market represents one of the largest markets for SIT&R and it's a market we cannot afford to lose.

SIT&R personifies a business built from the ground up on the backbone of the NJ economy. Our company's stability and growth potential is under a direct and serious threat should the BPU's not reject this proposal.

We plead that the BPU not prohibit or terminate all-electric fuel cells from their Clean Energy Program.

Sincerely,

Eric J. Bober

VP Marketing & Public Relations

Stephen Izzi Trucking & Rigging, Inc.

116 Truman Drive, Edison, NJ 08817
1-800-524-1439
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Old Bridge Township Public Schools

Patrick A. Torre Administration Building
4207 Route 516
Matawan, New Jersey 07747
Fax (732) 583-4644

June 10th, 2016

Via email: publiccomments@njcleanenergy.com

David C. Cittadino
Superintendent of Schools
(732) 290-3976

New Jersey's Clean Energy Program
New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, New Jersey 08625

Re: Comment on inclusiveness for the Pay for Performance Program

Joseph J. Marra
School Business Administrator
& Board Secretary
(732) 290-3952

We are currently in the process of developing our Energy Savings Improvement Plan (ESIP) with Honeywell Building Solutions. We started this back in 2012 with the Local Government Energy Audits (LGEA) that were conducted by CDM Smith. The LGEA audits shed light on the available Energy Conservation Measures (ECMs) that were of opportunity for the Board of Education. With this information we moved forward with participating in the ESIP program to help guide, and develop an energy efficient project that met the needs of the Board of Education while being financially responsible.

Kathleen Hoeker, Ed.D.
Assistant Superintendent
of Schools
(732) 290-3970

One strong motivator to move forward with the project was the available incentive dollars provided by the New Jersey Clean Energy program for projects aligned with the ESIP program and those comprehensive in nature. These available incentive dollars proved to the Board of Education that a more inclusive energy efficiency project was in our best interest; that the energy efficiency project would pay dividends for many years to come. During and after our development of the ESIP Request for Proposals (RFP) it became apparent that the Pay for Performance program (P4P) was the right fit for the district. The incentive structure was generous and promoted a broad comprehensive project which would meet our needs. With twenty (20) buildings that would be included in our ESIP the P4P program would be a wonderful tool to further our energy efficiency agenda, help the economics of the project, and provide the most advantage to our taxpayers.

James Tuohy, Ed.D.
Executive Director
of Special Services
(732) 360-4461

However, it has come to our attention, that despite the comprehensive nature of the project and meeting the 15% energy savings requirement (projected at this moment as the project is not finalized) the vast majority of our schools would not qualify for the program due to a minimum 200kW requirement needed for each building. This being the only limiting factor preventing us from taking advantage of the P4P program. To our understanding this is a recent requirement, as public entities were previously exempt from this threshold. As a result, this 200kW requirement would eliminate 15 out of 20 buildings from the P4P program despite the intended comprehensive energy savings that these buildings would achieve. All, but possibly one of our Elementary Schools would not be able to participate in the P4P program. This requirement would result in hundreds of thousands of dollars of lost opportunity for the Board of Education and reduction in energy efficiency scope, particularly in the Elementary Schools, which we believe is not in the best interest to our Board of Education and taxpayers.

J. Scott Cascone, Ed.D.
Executive Director
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Rosanne Moran
Director of Technology
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Director of Athletics
(732) 290-3900 x-3925

We humbly ask that the NJ Clean Energy Program consider the removal of the 200kW requirement for public entities, such as ourselves, as the ESIP and P4P program are wonderful avenues to help districts such as ourselves overcome the challenges of available dollars to operate and improve our facilities. We look forward to your favorable decision and appreciate your concern in this matter.

Sincerely,

Joseph J. Marra
School Business Administrator / Board Secretary

JJM:jt

