

To: Aida Camacho-Welch,  
Secretary of the Board  
Board of Public Utilities

From: ABCO HVACR SUPPLY + SOLUTIONS (Distributor)

Subject: FY20 CRA, BUDGEST AND PROGRAM PLANS

Date: June 10, 2019

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ABCO HVACR is a premier distributor of HVAC Products from Delaware to Massachusetts. We have three branches in the New Jersey Market accounting for almost \$8 million in HVAC Products annually. Of that business almost 43% is in the Cold Climate Air Source Heat Pump market.

ABCO actively works and promotes Utility Rebates with our Contractors and drives our education to help them understand the NJ Clean Energy Program. Clearly our Contractors sell to the homeowners and purchases equipment based on these incentives.

The New Jersey market is a heating state and should be moving to the reduction in Fossil Fuels. Additionally, there are large areas in the state where gas is not available and we want to encourage those all-electric neighborhoods to be as efficient as possible. With the proposed change in requirement for the CCASHP for multi-zone with 20 SEER, 12 EER, 10 HSPF a majority of the product our Contractors are installing would no longer qualify. This would cause a shift in the multi-zone Heat Pump market back to the unitary furnace/A-coil design in order to satisfy the whole-home approach. Secondly the heat pump market has thrived with adoption not because of its high efficient cooling ability but rather its capability to provide comfort at the lowest winter conditions without stretching the homeowner budget with exorbitant heating costs. The high efficient nature of the low temperature heating product from the heat pump multi-zone manufacturers is one of the pillars of success for electrification. Gas and other fossil fuels are needed in much smaller quantities and emissions can easily be cut through this strategy. An increase in the SEER level will not ensure a collective greater outcome, rather it could position the installer to revert to older technology that is not incentivized but is still centralized and that would not be prudent for the energy goals of New Jersey.

From a distributor perspective, the rebate structure allows for robust discussion about higher efficient technology when the installer is working with the home or building owner. ABCO has seen a sharp increase in the demand for whole-home solutions centered on multi-zone heat pump systems and the catalyst to that rise has been encouragement from utilities and states in the form of rebate dollars. Without a program supporting this initiative, the relatively low cost products that are inefficient and do not qualify for said rebates will see a rise in demand solely from a first cost perspective and overall that will be counter to what this program was developed to achieve.

ABCO would like to partner with NJ Clean Energy to help our homeowners embrace the technology that CCASHP's provide to allow the state to meet their goals. Our recommendations would be:

- Maintain the NEEP CCASHP for single & multi-zone, 12 EER
- Allow a change of SEER REQUIREMENT for multi-zone to 17 SEER, 12 EER, 10 HSPF 1.75 COP @5°F

This would allow us to continue to partner with our Contractors and drive the most efficient technology to benefit the New Jersey homeowner and continue to put the incentive dollars in the best possible solution.

Thanks for your time and consideration as you finalize the program for FY20 CRA, Budgets and Program Plans.

Sincerely,



Brandon Z. Bradley, LEED AP  
Senior Vice President, HVAC Sales



ABCO HVACR Supply + Solutions

Office: 718-937-9005 ext. 1223

Cell: 860-488-0384

[bbradley@abco.co](mailto:bbradley@abco.co)

[www.ABCOhvacr.com](http://www.ABCOhvacr.com)

92DC42  
PO Box 6066  
Newark, DE 19714-6066

302.429.3105 - Telephone  
302.429.3801 - Facsimile  
philip.passanante@pepcoholdings.com

500 N. Wakefield Drive  
Newark, DE 19702

atlanticcityelectric.com

June 11, 2019

**VIA ELECTRONIC MAIL**  
[publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)

Aida Camacho-Welch  
Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 3<sup>rd</sup> Floor, Suite 314  
P.O. Box 350  
Trenton, New Jersey 08625-0350

**RE:** New Jersey Clean Energy Program FY2020 Budget & Plan

Dear Secretary Camacho-Welch:

On behalf of Atlantic City Electric Company (“ACE” or the “Company”), please accept these comments in response to the “New Jersey’s Clean Energy Program™ Fiscal Year 2020 Program Descriptions and Budget, Energy Efficiency and Renewable Energy Program Plan Filing” (the “Plan”), that was released by the Board of Public Utilities (“BPU” or “Board”) Office of Clean Energy (“OCE”) on May 29, 2019, along with supporting documents. The Plan was prepared for BPU by TRC to fulfill an annual requirement of the Clean Energy Act (P.L.2018, c.17) (the “Act”). The Company is grateful for the opportunity to comment on this Plan.

The Company appreciates OCE’s efforts to put forth programs to help meet the State’s two percent energy savings target. ACE is fully committed to achieving the goals established in the Act concerning energy efficiency (“EE”) and other priorities. The Company supports efforts to rapidly decarbonize the State’s economy and to create and expand economic opportunities resulting from this transformation. ACE’s analysis of the Plan and its active participation in the stakeholder process for the energy efficiency programs to date demonstrate the Company’s support of the Murphy Administration’s goals, and ACE’s commitment to supporting the State in developing the best possible framework for energy efficiency programs.

The Company, however, has specific concerns regarding OCE’s proposed expansion of programs, the FY20 budgets, the programs’ ability to reach all customers across the State, and the absence of publicly available evaluation, measurement, and verification (“EM&V”) of OCE programs. In particular, ACE recommends that the BPU not approve any increase in EE funding above FY2019 levels, and instead allocate the FY2020 budget increase to fund the EM&V efforts and other statewide non-programmatic energy efficiency initiatives that can be implemented outside a stakeholder process. Such efforts could include advancing energy efficiency codes and

standards, education, and supporting local government energy efficiency efforts through Sustainable Jersey.

In addition, the Act calls for the Board to establish an independent advisory group to study the EM&V process for EE and peak demand reduction programs, and for that group to provide recommendations to the Board for improvements to the programs. The creation of this advisory group was just announced by the Board at its May 28, 2019 agenda meeting. Given the stated purpose of this group, ACE submits that it is premature for OCE to implement sweeping program changes at this time. The Company also encourages the Board to reexamine the membership of the advisory group and to expand it beyond five members to include a broader mix of utilities and stakeholders. Broader membership would ensure that the critical and complex issues facing the Board related to EE are fully analyzed and would serve to ensure proper representation of the geographical and economic diversity across the State.

### **I. OCE Program Portfolio**

The OCE proposed program portfolio for FY2020 significantly modifies its existing programs, and further, adds new programs. The Company, however, does not support the development of any new OCE-managed programs for FY2020, for several reasons. First, as the Board itself stated in its May 28, 2019 Order regarding EE targets and Quantitative Performance Indicators (“QPIs”):

The Board acknowledges that there is still a lot of work ahead and that there are many details not fully contemplated in the law or addressed in the EE study which require further analysis and recommendations. Therefore, the Board advises that utilities should continue with their current energy efficiency programs, until the Board makes further determinations with respect to the program planning details required to implement the Energy Efficiency Program.<sup>1</sup>

Although the Board’s conclusions pertain to utility programs, the logic is equally applicable to OCE programs. Therefore, OCE should continue with its current portfolio until the Board makes further determinations about implementing EE programs under the Act. Key program design issues that the stakeholder process should address, which are not addressed in OCE’s Plan, include the role of utilities in supporting the energy-savings targets and revisions to the annual targets proposed within the recently completed Market Potential Study. The Company recommends that specific annual energy-savings targets be developed for each utility to reflect the energy-savings potential in each utility service territory. In any case, ACE believes there are currently too many unknowns, which serve to preclude the prudent design, approval, and launch of new OCE-administered programs.

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<sup>1</sup> See I/M/O The Implementation of P.L. 2018, c. 17 Regarding the Establishment of Energy Efficiency and Peak Demand Reduction Programs; Energy Usage Reduction Targets and Quantitative Performance Indicators, BPU Docket Nos. QO19010040, QO190505536 (dated May 28, 2018), at 4.

Second, it is not clear from the Plan how OCE will coordinate its efforts with the utilities. To meet the goals of the Act, both OCE and the utilities must propose programs aimed at increasing customer adoption, minimizing customer acquisition cost, and partnering to create a holistic customer experience that maximizes energy savings opportunities. By contrast, OCE's Plan creates market confusion by drastically changing the entire suite of programs (each of which will take years to ramp up), without factoring the role of the utilities or investigating what programs could be best managed by the OCE. A new or heavily modified program started in FY2020 by OCE, if modified, stopped or transitioned to the utilities in FY2021, will lead to increased costs and will make achieving the two percent energy-saving target more difficult. Therefore, ACE recommends that BPU refrain from approving any new programs or program modifications (other than eligibility requirements) until the EE advisory group is formed and submits a formal recommendation on the role OCE should play in meeting the EE objectives of the Act.

Third, to the best of the Company's knowledge, OCE has not performed any EM&V of the existing OCE-administered programs, and therefore it is not known whether OCE's current programs are performing effectively. OCE should be required to demonstrate, by way of EM&V, that its existing programs are effective and that the proposed expansions and modifications are necessary. Without this information, there is no way of knowing that new and additional investments in this area will result in greater energy savings. Therefore, the Company recommends that any increase in funds for EE be used to conduct evaluations of OCE EE programs for years FY2017 through FY2019, and that funds are set aside for EM&V on FY2020 programs. This analysis should be conducted by service territory, to identify opportunities in the State and to determine where to focus resources. Further, energy savings estimates should be made for the FY2020 program portfolio (by service territory) so that programs can be properly focused on areas of opportunity.

Fourth, the Company agrees with the findings of American Council for an Energy-Efficient Economy ("ACEEE"), as expressed in its February 15, 2019 comments in BPU Docket QO19010040 (hereinafter, the "ACEEE Comments"). ACEEE has determined that the most common categories for statewide administration of energy efficiency programs are: market transformation (including codes and standards and upstream/midstream programs), research and development, new construction, low-income programs, and workforce, marketing, and education programs. *See* ACEEE Comments at 6. The Company also believes it is important for state governments to support local governments in their efforts to increase operational energy efficiencies. There are many "Bronze Certified" communities in the Company's service territory, and we applaud these communities' efforts to increase energy efficiency and reduce carbon emissions. Funding for Sustainable Jersey should be revised to FY2019 levels, at a minimum.

## **II. Cost-Effectiveness**

It is not clear from the Plan that the proposed program changes and the program portfolio have been evaluated to ensure funds are being used effectively. The FY2020 Plan does not include an analysis of expected savings or estimates of cost-effectiveness. As mentioned, OCE has not performed a formal EM&V analysis on its existing programs, a process that would be crucial to ensuring that program benefits outweigh their costs. Notwithstanding the absence of EM&V with

respect to OCE's existing program, the Plan expands OCE's offering substantially, even though it is unclear whether such an expansion is in the best interests of ratepayers. In this regard, OCE should follow the guidance of ACEEE, which observed that: "[a]ny ratepayer investments should be reasonably scrutinized to ensure that they are delivered in a way that balances cost and efficiency with equity considerations about ease of access to programs as well as quality of program delivery." ACEEE Comments at 9.

OCE is currently underspending on its existing programs. Increasing incentives for existing programs is unlikely to increase program participation rates without corresponding increases in marketing and customer education. In particular, the proposed programs for FY2020 are likely to underperform if additional resources are not allocated to engage customers in harder-to-reach markets, such as rural and low-income communities. Notably, the marketing budget (\$4 million) is less than two percent of the OCE's efficiency portfolio budget, and the Company believes that this allocation will not provide adequate support for a program portfolio of the size contemplated by the Plan. By comparison, Potomac Electric Power Company ("Pepco") and Delmarva Power & Light Company ("Delmarva Power") (other Exelon Utilities) have marketing budgets of 7.5 percent and 11.3 percent of portfolio spend, respectively, to support EmPOWER MD. Notably, programs in these portfolios are effectively meeting participation and energy-savings targets. Accordingly, the Company suggests that OCE allocate resources towards marketing existing programs in order to increase participation, rather than initiate new programs.

The Company is particularly concerned that OCE's programs will not reach a sufficient number of ACE customers. At present, we do not know how many ACE customers are participating in OCE-administered programs. In general, many of ACE's customers are harder to reach because the Company's service territory is expansive and has a lower population density. Moreover, approximately 25 percent of ACE's customers earn less than \$35,000 a year. ACE's service territory also includes a high number of shore communities and rental properties (approximately 24 percent of the housing stock was vacant during the last census), presenting additional energy-savings challenges. To address these concerns, OCE should allocate significant portions of its program budget to harder-to-reach markets to equitably serve customers and to realize greater energy-savings opportunities. The Plan, however, is silent on these issues. Furthermore, the Company reiterates its request to conduct EM&V on OCE programs at the Statewide and utility service territory levels, as this information will be essential in planning and managing utility-administered EE programs.

ACE also recommends that OCE provide each utility with estimates of its EE program portfolio savings for FY2020 by service territory. Additionally, ACE proposes that OCE provide the utilities with historical energy efficiency savings data for Fiscal Years 2017 through 2019 (again, by service territory). This data will inform both OCE and the utilities' efforts to plan and coordinate the development of energy efficiency programs that meet the service territory-specific requirements of the Act and the needs of customers.

### III. Utility-Managed Programs

OCE's proposed program expansion limits the utilities' ability to develop programs to meet the State's energy-savings targets. The Plan does not address how OCE will coordinate with the utilities in the future, nor does it indicate what data OCE will provide to the utilities regarding program participation and energy savings in utilities' respective service territories. Furthermore, the Plan does not state whether OCE will transition management of some programs to the utilities in the future, nor does it indicate which program models and markets OCE envisions that the utilities will manage going forward.

To achieve the aggressive goals of the Act, EE program providers in the State (*i.e.*, OCE, the utilities, nonprofit groups, and other stakeholders) need to develop a collaborative and cohesive approach to providing customers with EE information and opportunities. ACEEE and other energy efficiency industry partners advise that meeting aggressive energy savings targets requires utility support and expertise: “[t]o achieve such a large increase will likely require a larger role for utilities, particularly utilities who show a sincere interest in implementing creative and successful programs.” ACEEE Comments at 10.

ACE, along with the other operating companies within Exelon—Pepco, Delmarva Power, Baltimore Gas and Electric, PECO, and ComEd—have tremendous experience designing and developing programs that exceed state-mandated EE targets. This expertise, along with the companies' resources and economies of scale, can help to design and implement EE programs in that will deliver significant benefits to New Jersey. Accordingly, BPU and OCE should recognize the challenges associated with achieving the two percent energy saving target and embrace the utilities' unique abilities to help achieve the State's aggressive EE goals.

In closing, ACE remains committed to achieving New Jersey's ambitious energy savings goals as part of its planned clean energy transition. We understand that the two percent EE goal is a crucial part of cutting greenhouse gas emissions in New Jersey, and that it is critical in helping the State reach its “50x30” clean energy goal, as well as its target of 100 percent clean energy by 2050. To deliver on these commitments, ACE strongly suggests that the Board accept our recommendations, *i.e.*, that BPU refrain from approving increases in EE funding above FY2019 levels, and instead allocate the budget increases to fund the EM&V efforts for existing OCE-administered programs and/or other non-EE programs that are not the subject of ongoing stakeholdering. Doing otherwise could have significant impact on the ability of the State to attain two percent energy savings by 2025.

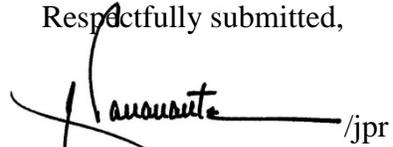
Aida Camacho-Welch

June 11, 2019

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Thank you for considering these comments. The Company looks forward to participating in the ongoing stakeholder process and collaborating with OCE and other stakeholders in developing a comprehensive, cost-effective, and equitable plan that complies with the Act and meets the needs of customers.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Passanante", followed by a horizontal line and the initials "/jpr".

Philip J. Passanante  
An Attorney at Law of the  
State of New Jersey



Renus Kelfkens  
Senior Vice President

Aries Clean Energy LLC  
Engineering & Operations

Aries Clean Energy LLC  
4037 Rural Plains Circle, Suite 290  
Franklin, TN 37064

+1 615 471-9299

[www.ariescleanenergy.com](http://www.ariescleanenergy.com)

June 11, 2019

Ms. Aida Camacho-Welch  
Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9<sup>th</sup> Floor  
Post Office Box 350  
Trenton, NJ 08625-0350

Subject: FY20 CRA, Budgets and Programs

Dear Ms. Camacho-Welch:

I write to you to urge the Board of Public Utilities (BPU) to process applications enabling Biosolids to Biogas Production (BBP) to be considered for energy efficiency and Class 1 renewable energy programs such as the NJ CEP. Additionally, we request that such BBP technologies be allowed to generate credits under the Renewable Fuel Standard (RFS) program. My company, Aries Clean Energy LLC, is a BBP technology company.

In New Jersey, we seek to process sludge as an owner/operator and are currently proceeding with permitting several facilities. Several of these facilities will be installed at municipally-owned wastewater treatment plants to replace older treatment and disposal systems. Wastewater treatment facilities have traditionally been deemed as critical infrastructure for NJ CEP qualifications.

Specifically, our request is for future NJ CEP applications wherein Aries proposes to install biosolids gasification systems that produce renewable natural gas (RNG). The RNG is used to fuel the gas burners that would normally use natural gas as a fuel source. As such, the produced RNG is used in much the same way as RNG would be used for fueling a Combined Heat and Power (CHP) plant. Additionally, the Aries design is very similar to how waste heat is captured in a traditional CHP application. Both applications increase plant efficiency, reduce natural gas usage, and lower greenhouse gas (GHG). In addition, the Aries technology has an additional landfill diversion benefit by reducing the un-dewatered domestic biosolids by a factor of up to 80 times for a typically residual biochar product. This biochar product represents about 1.2% of the original volume and consists of primarily complete inert mineral composition.

Since 2014, Aries has been offering practical solutions for processing vast amounts of wood, sludge and tires that have accumulated in communities such as Lebanon, TN. Currently, Aries seeks to establish a leading presence in New Jersey's Clean Energy Plan by providing industry-leading state-of-the-art proprietary Aries Biomass Gasification technologies ideally suited to meeting New Jersey's RFS goals. However, due to uncertain rate base treatment and other economic influences that are out of our control, our facilities may not be installed unless wastewater treatment plant owners' technology selection process is placed on the same level playing field as other sludge treatment technologies.

**The ability to participate in the NJ CEP and RFS programs will help our facilities to qualify for selection assistance while providing much needed economic benefits to our customers.**

For example, at one of our future New Jersey facilities, Aries has designed a system that will displace over 365,000 MMBtu of natural gas while processing over 140,000 tons of biosolids on an annual basis. Assuming a natural gas tariff price of \$5.00 per Mmbtu, that equates to over \$1,825,000 of fuel savings on an annual basis. These savings are incorporated in the economics that Aries offers local economies in the form of jobs, contractors, equipment, and other community benefits. As such, our facilities will be key economic contributors to an aging waste water treatment system in New Jersey. Indeed, Aries will invest over tens of millions of private equity dollars into the facility for construction, capital improvements, and continuing operations expenses.

Biosolids/ Biomass technology providers that produce RNG for process use do not receive a revenue stream from the production tax credit, and therefore cannot sell competing renewable electricity into the public grid for less than the cost of producing the energy. In general, Public Utilities Commissions are focused on the cost of a watt when determining allowable rates in purchase power agreements, and often do not account for the subsidies paid that allow for the lower price delivered to the public grid by other renewables. This lends to create financial winners in the subsidized energy source, and financial losers when no subsidy is available. Biosolids/Biomass energy needs a level playing field to compete, survive, and thrive.

Eleven years ago, Congress agreed that electricity generated from renewable sources should be eligible for incentives under the Renewable Fuel Standard (RFS) program. Four years ago, EPA approved application of this program to renewable energy sources, such as bioenergy plants. The Agency has since determined that certain solid forms of biosolids/biomass fuel qualify under the RFS program. However, the federal government to date has failed to act on this approval by processing formal applications from a number of renewable electricity producers seeking certification and identification numbers (Renewable Identification Number, or "RIN") under the RFS program. We understand that EPA now faces a four-year backlog of applications from power producers seeking registration, with many more requests expected to follow.

Aries Energy LLC intends to seek certification under the NJ RFS program. At the same time that our services are increasingly needed in New Jersey's urban and rural landscape, federal and state policy is instead bolstering other sources of waste treatment to energy technologies. It is essential to the financial well-being of Aries Clean Energy LLC that the NJ RFS program be extended to allow qualification of our plants, and it is only fair that biosolids/biomass plants be entitled to benefit from the RFS program on an equal footing with other generators of renewable energy, such as wind and solar.

We respectfully urge you to allow BBP technologies to qualify for the NJ CEP and RFS programs.

Respectfully yours,

A handwritten signature in black ink, appearing to read "Renus Kelfkens", with a horizontal line extending to the right from the end of the signature.

Renus Kelfkens  
Senior Vice President, Aries Clean Energy LLC

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor and operate a family owned business Bens Professional Services, a New Jersey based company which employs 28 New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, and Home Performance program for 2+ years. We started our company with the knowledge of these programs to better our ability of success. We have also participated in the South Jersey Gas fuel conversion financing program for 2+ years. These programs are a crucial part of our business with 99% of our residential HVACR projects utilizing at least but usually more of these programs.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,



Stan Orzechowski  
Vice President  
Ben's Professional Services  
NJ Master HVACR License #3396



June 11, 2019

VIA ELECTRONIC FILING

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 3<sup>rd</sup> Floor  
Suite 314, CN 350  
Trenton, New Jersey 08625-0350

Re: FY20 CRA, Budgets and Program Plans

Dear Secretary Camacho-Welch:

Please accept the following comments of Bloom Energy Corporation ("Bloom"), in response to the May 29, 2019 New Jersey Board of Public Utilities Request for Comments on the Clean Energy Program Fiscal Year 2020 Comprehensive Resource Analysis, Budget, and Program Plans.

I. Introduction

Bloom Energy is a manufacturer of solid oxide fuel cell systems that produce on-site power for many of the world's most demanding customers. Bloom's "Energy Server" fuel cells generate electricity through an electrochemical process—rather than combustion—and therefore do not produce the local forms of "criteria" air pollutants associated with most fossil fueled technologies or consume or discharge any water. When fueled by natural gas, Bloom Energy Servers produce 40% fewer greenhouse gas emissions and nearly 100% fewer smog forming local air pollutants as compared to the power plants they displace on the New Jersey grid.

Bloom Energy is increasingly focusing on grid-islanding and microgrid projects designed to operate indefinitely in the event of an outage of the electric grid. Bloom Energy Servers use a modular, fault-tolerant design that provides critical reliability with no downtime for maintenance. Bloom's systems have remained online through disruptive events including hurricanes, earthquakes, utility outages, physical damage, and fire damage—riding through over 500+ grid outages in 2018 alone. As a result, Bloom Energy Servers and Bloom-powered micro-grids are used by many of the world's leading organizations to secure their critical operations from the risk of utility outages.

## II. Eligibility and Program Design

Bloom Energy very much appreciates that Board Staff is recommending renewed eligibility for “fuel cells without heat recovery” in the Combined Heat and Power - Fuel Cell (“CHP-FC”) program. This development is critically important because (1) the universe of customers that have matching electric and thermal loads necessary to implement a well-designed CHP plant is quite limited – some estimates indicate fewer than five percent of New Jersey customers, and (2) the presence of a matching thermal load does not necessarily correlate with the significance of a given facility from a public security or resiliency perspective. As a result, renewed eligibility for fuel cells without heat recovery will once again enable the majority of New Jersey commercial customers to access the Board's distributed energy resource (“DER”) programs.

Bloom Energy would also like to recognize Board Staff for proposing significant improvements to the CHP-FC program design, including the introduction of a sliding-scale incentive that will promote enhanced performance as well as a specific bonus for DERs with grid-islanding capability. Bloom commends the

inclusion of these important improvements and fully expects that they will deliver results in accordance with the Board's policy objectives.

Bloom, in particular, supports the proposed incentive bonus for CHP-FC systems located at a Critical Facility that also incorporating blackstart/islanding technology. It is essential that the Board's distributed generation programs encourage increased deployment of reliable, on-site power that is capable of isolating critical facilities – both public and private – from the effects of the rapidly increasing number of weather-related outages. To enhance the resilience of New Jersey electricity customers, the Board should clarify that Critical Facilities include those that are determined to be Tier 1/Critical Infrastructure or could serve as a shelter, not and could serve as a shelter. The latter would be overly restrictive and would preclude use of the grid islanding bonus, for instance, at a 911 call center or similar facility. Critical facilities should include not only traditional critical facilities such as shelters and government buildings, but also private facilities that serve important public services like telecommunications hubs, supermarkets, large retail stores, and data centers.

### III. Budget

Despite significant enhancements to the CHP-FC Program's design, inadequate funding will stymie the effectiveness of the program.

The proposed FY 2020 budget now before the Board should be viewed in the context of the historic funding levels in New Jersey as well as the current funding levels for similar programs in other jurisdictions. The proposed FY 2020 Budget would continue the drawdown of DER funding initiated during the Christie

administration. In 2012, the Board approved a total budget of \$75M for CHP-FC projects. By 2015, CHP-FC program funding was reduced to \$19.5M. The FY 2019 budget expanded funding for DERs, but further reduce funding for CHP-FC to \$16 million. The Budget now before the Board would limit program funding for CHP and fuel cells to \$14M (and only \$10M if you exclude the incentive for projects incorporating blackstart/islanding technology) at a time of greatly increased focus on distributed generation, resiliency, and the need to prepare for increasingly severe weather induced by our changing climate.

Importantly, a review of the other states in the region reveals that the budgets for comparative categories in New York and Connecticut are dramatically larger than the proposed New Jersey FY 2020 program.<sup>1</sup> The Board should recognize that the other states in the region are, in many respects, competing against New Jersey to attract investment, expand their tax base, create job opportunities, reduce emissions, and prepare for extreme weather events. The clean energy industry is scaling up and increasingly moving to a business model that involves projects with customers that have multiple facilities funded by third parties capable of quickly redirecting capital across state lines. This trend is happening in solar, energy efficiency, and the fuel cell industry. As a result, the Board should revise the proposed distributed energy resource budget and increase the funding to an amount more commensurate with surrounding jurisdictions and the real-world events driving the energy industry toward a more distributed future. To the extent

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<sup>1</sup> New York provides up to \$75M in funding for behind the meter projects under the combined auspices of the NYSERDA PON 3841 and PSEG-Long Island energy efficiency programs. This is in addition to support for grid side projects in the form of the NY Clean Energy Standard, Non-Wires Alternatives, and Community Distributed Generation programs. Connecticut recently enacted legislation extending its successful Low Emission Renewable Energy Credit (LREC) program for an additional two years at a funding level of \$60M.

that budget constraints prevent increased funding the Board should, at a minimum, provide maximum flexibility to Staff to re-allocate program funding among the different Clean Energy Program categories without having to obtain further Board approval.

#### IV. Manufacturer Cap

The Summary of Program Changes includes a proposed manufacturer cap that would apply exclusively to fuel cell systems: *“For all FCs, both with heat recovery (FCHR) and without heat recovery (FCwoHR), no more than 30% of the New Funding portion of the NJCEP Budget for FC may be used to fund projects involving equipment from any single FC manufacturer.”*

Bloom Energy appreciates the concept behind the proposed cap – to avoid an excessive amount of program funding to be directed toward a single technology provider. However, in light of the extremely limited amount of program funding included in the proposed budget, a 30% manufacturer cap would effectively limit this program to *a single project* per fuel cell manufacturer.

We also note that Board Staff has not proposed a similar cap in other Clean Energy programs, including the Combined Heat and Power program. Moreover, in other jurisdictions where a “vendor cap” or “manufacturer cap” has been imposed, it has only been in the context of funding pools that are much larger than the \$5M overall program proposed for fuel cells in Clean Energy Program Fiscal Year 2020 Budget and Program Plans.

Considering the lack of a manufacturer cap in the other NJ CEP programs and the exceedingly limited 2020 fuel cell program budget, we recommend that the Board eliminate or increase the manufacturer cap to a minimum of fifty (50) percent of the program budget. At a minimum, the Board should provide the Staff with the flexibility to adjust or eliminate the cap during the program year in the event circumstances so warrant.

V. Conclusion

Bloom Energy commends Board staff for recommending renewed eligibility for “fuel cells without heat recovery” and appreciates the opportunity to provide these comments as the Clean Energy Program Fiscal Year 2020 Comprehensive Resource Analysis, Budget and Program Plans are finalized. Bloom stands ready to provide additional information wherever that information will be helpful to the process.

Very truly yours,

/S/

Charles Fox  
Senior Director, Regulatory Affairs  
& Business Development  
Bloom Energy Corporation  
PO Box 8902  
Princeton, NJ 08543  
212-920-7151  
[charles.fox@bloomenergy.com](mailto:charles.fox@bloomenergy.com)



June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor, Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Bovio Heating Plumbing Cooling Insulation, a New Jersey Company which employs 24 New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, Home Performance and SmartStart Buildings for over a decade. Our participation in these programs has been a positive to our business and led to dramatic job growth when the programs have been aligned with consumer needs and interests. However, when the programs have been out of line with consumer interests and/or unworkable for contractors, we have found that they fall flat with homeowners, hurting job growth and achievement of NJOCE goals.

Bovio's has also been heavily engaged South Jersey Gas's fuel conversion program for 30+ years, as well as their energy efficiency conversion programs over the last several years. These programs have been consistently successful for all of that time and has allowed us to grow our business from a 2-person mom and pop operation 30 years ago to the 24 skilled workers we employ today. Gas conversion programs are also a useful tool to help keep employees working during the slow seasons in our industry.

The reason the SJ Gas conversion program has been successful for so long is simple, it has always aligned with homeowners needs. Our customers want to have a convenient heating source that is affordable, provides maximum comfort and is efficient as possible in operating costs. Homeowners look at energy savings in dollars saved, not in BTU's, therms, or KW. The SJ Gas conversion loan programs help homeowners achieve their goals.

**I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.**

Sincerely,

Brian J. Bovio  
President/CEO  
NJ Master HVACR License # 1944



## **NJACCA FY20 CRA, Budgets and Program Plans Comments**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

The New Jersey Air Conditioning Contractors Association (NJACCA) has reviewed the Energy Efficiency and Renewable Energy Program Plan Filing and wish to submit our observations, concerns and questions. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. Our members install, service and repair air conditioning, heating, refrigeration, air purification and ventilating systems of all sizes and complexities. Supporting members includes major manufacturers of HVAC equipment and controls, wholesalers and distributors of equipment, vocational and technical schools and others with an interest in the HVAC industry.

We have reviewed the above referenced documents and are largely supportive of the changes, but we are concerned about a few items. Some of these changes are significant. Unfortunately, NJACCA and the OCE/Market Managers have not met for constructive dialog on the proposed changes prior to their release, as we have in times past. NJACCA, as the representative of the contracting community, (the boots on the ground delivering energy efficiency) have a keen sense of what programs and incentives are embraced by NJ rate payers.

### **Regarding - "Clarification Regarding Eligibility for Incentives for Fuel Switching"**

While we understand the long-term goals of this proposal, and we are proponents of newer high efficiency conventional and mini-split heat pump technology in the *proper* applications. We do have major concern with the "Clarification Regarding Eligibility for Incentives for Fuel Switching", which could have unintended negative impacts on NJ Ratepayers and Consumers.

First and foremost, NJ Ratepayers have among the highest electricity rates in the nation. This proposal will negatively impact ratepayers by coercing them into a primary heating source (electric heat pump) that will cost significantly more to heat their home than a high efficiency gas furnace.

Secondly, many of our members have been participating in natural gas conversion programs for decades and rely on these programs as part of their and their employee's livelihood. These programs are especially helpful in providing a means to maintain employment during the slower times of the year. Fuel conversion projects are more complex and require more labor with specialized skills. A sudden shift away from these programs will adversely impact employment in the HVACR industry in NJ.

Additionally, this policy could have the negative consequence of ratepayers choosing to keep low efficiency propane and oil furnaces, instead of converting fuels at all, leaving them with inefficient equipment that pollutes more and requires an onsite storage tank. It could also be counterproductive if they still convert to natural gas and opt for low efficiency equipment with the lack of encouragement to go with high efficiency equipment. As proposed, a ratepayer switching fuels would also not be eligible to participate in the Comprehensive Pathway, which seems counterproductive to NJ's energy efficiency goals. Many fuel conversion projects currently go through the HPWES Program as a heater changeout is one of the few times people stop to think about their home's energy efficiency. We will detail the potential negative impacts on ratepayers below.

### **Potential Negative Impacts on Ratepayers**

- **\$\$\$ Savings** – The heating cost savings for ratepayers for converting from an oil furnace to a Super High-End Heat Pump is significantly less than natural gas, meaning ratepayers will be steered into paying more for the most basic of needs, a warm home.
- **Affordability** – Many ratepayers in the state are in gas utility territories that offer low interest financing that make it affordable for ratepayers to be able to increase the efficiency of their home. The increased heating cost savings of gas offsets the financing payment to a large part. With this “clarification”, not only will ratepayers not be able to utilize such gas financing, there is no comparable financing for switching to a heat pump without going through the comprehensive approach which not everyone qualifies for and/or can afford.
- **Sizing/Capacity** – Heat pumps have come a long way in technology over the years, but they are still not appropriate for every application in our climate, especially as it pertains to older homes. Per ACCA Manual J and S, program requirements and the NJ Mechanical code, a heat pump needs to be sized to cooling load, which is typically considerably lower than heating load requirement. This creates the need for a backup heat source. Since ratepayers will be dissuaded from natural gas, that would leave them with the need for large amperage electric backup heating elements.

These electric heating elements are significantly less efficient and more expensive to operate. This issue becomes greater in older and less efficient the homes.

- **Comfort** – Heat pumps have considerably lower heating outlet temperatures (the temperature of the air coming out of the vent) especially when the outdoor temperature is low, when a homeowner needs heat the most. This low outlet temperature leads to comfort issues because the air feels cool to the skin. This issue is heightened in older and less efficient homes and can negatively impact senior citizen ratepayers more than others.
- **Baseboard/Boiler Homes** – In a hydronic home that uses a boiler for heating, converting to a heat pump configuration would be of major expense and require home modification, if achievable at all. These homes can rarely accommodate a new duct system and would require major renovations. The option of adding a multi head mini-split to heat an entire home (including bathrooms and other small rooms) can also be a large expense and is not a suitable fit as the sole heating source for many existing homes due to the limitations of the equipment and the lack of a backup heat source in most applications. We acknowledge the air to water heat pump incentive as an alternative, but this is an emerging technology that has not been widely adopted in this market and will take time to become universally accepted. Any of these solutions could cost multiple times more than converting an oil boiler to gas. A large percentage of homes in older housing stock is hydronic, especially in urban settings.
- **Equitability** – Why are residential ratepayers being denied NJOCE Incentives when switching to natural gas while Commercial/Industrial ratepayers are not? This seems to place additional burden on a family deciding what the best way to heat their home over a business making the same decision.
- **Marketability** – Heat pumps have a bad reputation in this state from the last time people were forced into buying them during the gas moratorium of the late 1970's. HVAC contractors have trouble selling them in the proper applications due to consumer resistance because of poor past experiences and/or reputation. Despite the vast improvement in today's heat pumps, unfortunately they are still not ready for every application as mentioned. Bad word of mouth from someone coerced into buying a heat pump now, could further stifle the acceptance of heat pump technology moving forward.
- **Other Technical Considerations that Could Negatively Impact Ratepayers** –
  - **Electric Service** – Many homes will not have the appropriate electrical service and/or breaker panel to accommodate the additional amperage of a heat pump and backup electric resistance heat.
  - **Duct Systems** – Many older duct systems were designed for furnace only airflow, heat pumps require more airflow and larger duct systems, which could require additional

major expense and/or alterations to the home. Also, the lower discharge temperatures mentioned before with heat pumps become exacerbated if ductwork is in an unconditioned space such as an attic or crawlspace.

- **Outside Equipment Location** – In settings with limited outdoor space such as urban settings, townhomes and in shore communities there are limitations as to where to locate an outdoor heat pump safely and within local zoning codes.
- **Lifespan** – In our members experience the lifespan of a gas furnace is longer than that of a heat pump. A heat pump generally lasts 14 years per industry data. However, within 15 miles of the shore the salt atmosphere causes accelerated deterioration on the outdoor unit shortening the lifespan to as little as 50% (7 years) of the national average in our members experience.
- **Extended Power Failure** – It is true that a furnace needs electricity to run, but in the event of a power outage it can be ran off a standard backup generator purchased at a big box store. Heat pumps have a higher electrical draw and coupled with an electric backup heater, a standard generator could not accommodate the electrical requirements.

Again, we are very supportive of heat pump technology in the proper applications such as newer low load homes, additions, and as an alternate/supplemental heat source for mild temperature conditions. These applications can provide proper comfortable heat at relatively low cost for ratepayers, such as a “hybrid system”. They are also a great alternative for adding air conditioning to older homes, but not as a sole heat source in older construction. Heat pump technology is improving constantly, but it is still not to the point of being a “One Size Fits All” solution.

Being that the technology isn’t ready to fully serve NJ Ratepayers heating needs, the high operating costs, the *14 years (or less)* expected lifespan, and that that we are aiming for a 100% renewable goal *30 years from now*, coupled with the fact that we are nowhere near fulfilling NJ’s energy needs from renewable sources today, let alone after adding all of this heat pump demand to the grid; it doesn’t seem the time is right. One might suggest this incomplete idea should be given more time to develop into a truly workable solution for 2050.

#### **Other Comments on Proposed Changes**

- **Orphaned Water Heaters** - The lack of a directed incentive towards ensuring “orphaned” gas water heaters aren’t left in an unsafe state when the old furnace is removed from the chimney in the Single Measures Program causes alarm. The Furnace/Water Heater combination rebate has been a helpful tool to encourage ratepayers to keep their home safe and efficient. We understand the extra incentive towards heat pump water heaters, but they have many limitations in application. They are also less desirable to someone who already has natural gas due to operating costs and installation considerations.

- **Mini-Split Efficiency Levels** – We are supportive of the incentive increases and see this as a great carrot to help ratepayers make the switch to this technology in the proper applications, but we do have reservations about 1 metric.
  - **Mini-Split Cold Climate Heat Pump – Multi (≥2) or ducted indoor units** – The 20 SEER requirement on Multiple head mini splits product seems a bit too high to be attained in all applications. Upon consulting with some of our manufacturing partners which are amongst the largest manufacturers of this equipment in the world, there are limited sizes/combinations that could meet this threshold. This is particularly true for any “ducted” units, with no matchups at all, making this unfeasible as a whole home solution for many homes. We would suggest lowering the SEER requirement in general and consider a lower threshold for “ducted” or “mixed” mini-split systems.
  - **Mini-Split Cold Climate Heat Pump Single ductless indoor unit** - The requirements were all universally achieved with these manufacturers higher end units.
- **LMI/UEZ Bonus Incentives** – We are certainly not opposed to the idea, but we do fear it could create market confusion with different incentive levels for different areas and/or even next-door neighbors. Different Incentives in different areas and/or for different people can convolute the marketing and sales process. We are also curious as to what the actual thresholds of LMI is and how a ratepayer would be qualified for such a thing, especially in the single measure rebate only environment.
- **Commercial vs. Residential** – It seems a little curious that non-residential incentive bonuses for LMI/UEZ are disproportionately higher than those for residential, which are the ratepayers who need it most to offset the cost of higher efficiency equipment.
- **Load Calculation Requirements** – Industry research and our members experience in NJ ratepayers’ homes tell us that properly sized equipment leads to more efficient and more comfortable homes. It is accurate that NJ mechanical code requires Manual J load Calculations and Manual S equipment selection forms during the permitting process. However, an overwhelming majority of the time these items are not even requested in the permitting process. As many municipalities do not have mechanical inspectors with HVACR background, the results if they suddenly did start reviewing these items would be inconsistent at best. While our members generally do not prefer extra paperwork, we feel this is a basic industry practice that should be required to ensure proper application and energy savings to attain incentives and protect the ratepayers.
- **Payment Timelines** – The Comprehensive Pathway’s Prescriptive Track has the potential to attract many new HVAC and Insulation Contractors into working with the program thanks to not having to deal with the current software/modeling requirements. However, the biggest stumbling block to most contractor participation and/or existing contractors growing in scale is

incentive payment timelines. For established contractors decoupling payment from the QA/QC process should also be explored, as this greatly slows payment timelines. *No other work our members perform outside of the NJOCE have 60-90 day payment timelines.*

- **Financing Flexibility** – The move to 0.99% financing for the \$15,000.00-dollar loan could be helpful in developing more comprehensive projects in the Comprehensive pathway if it remains a 10-year term. We would also continue to suggest exploring R-PACE in NJ as well as offering a cash incentive not to take the financing for those that do not need it.
- **Hybrid Heat** - This is an industry term where a heat pump is coupled with a gas heater. It is one of the most effective ways to take advantage of the low energy consumption of heat pumps most of the year while the gas heater provides economical heating during cold periods. The operation of a Hybrid Heat system is integrated with the proper thermostat or integrated control that allows the system to switch back and forth as outdoor temperatures demand. This is an excellent way of offering a homeowner cost effective operating costs while helping to manage demand on the grid. It can be set up to allow a consumer to use an existing gas heater while adding a heat pump. An even better application would be to incentivize it with a heat pump and high efficiency gas heater to ensure maximum energy reduction.

We largely agree with most other parts of the proposed Existing Homes Program, and like the structuring of it as a single program with multiple points of entry so it's not a one size fits all approach. We are also very supportive of the Smart Technology and Workforce Development Initiatives depending on the specifics as they are developed. It is evident that several details and deployment logistics still need to be determined to make these initiatives and the transition to the new programs successful in achieving NJ's energy savings goals. To that end, NJACCA would be willing to offer our members expertise and feedback in the HVACR and Energy Efficiency Contracting industries as well as their experience in the marketing and sales of these services, particularly in a government incentivized market, to help make these programs as successful as possible.

We would like to thank you for taking the time to read and consider our comments. We feel that the NJOCE Programs can be very beneficial to the ratepayers of New Jersey. Therefore, we want this program to continue down a successful path and hope that these suggestions will allow that. But we feel the proposed changes detailed above could hurt contractor participation and negatively impact ratepayers as currently proposed. We look forward to discussing this further with all interested parties.

Sincerely,

*Brian Riggs*

Brian Riggs  
Executive Director  
NJACCA



**COMMENTS BY THE BUILDING PERFORMANCE ASSOCIATION  
BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES  
JUNE 11, 2019**

**IN THE MATTER OF FY20 CRA, BUDGETS AND PROGRAM PLANS  
Public Stakeholder Comments**

As leaders in the residential energy efficiency industry, the Building Performance Association<sup>1</sup> (formerly the Home Performance Coalition) respectfully responds to the May 29, 2019 request by the New Jersey Board of Public Utilities (NJ BPU) to provide comments on the NJCEP Comprehensive Energy Efficiency and Renewable Energy Resource Analysis for Fiscal Year 2020, Program Descriptions and Budget. This response links to several studies and resources to assist the NJ BPU staff.

**Smart Technology**

We urged commission staff to consider opportunities to add smart home technologies to home performance retrofit programs to support better control for energy savings, in our previous comments submitted February 15, 2019 to the BPU on Docket No. QO19010040. We appreciate the inclusion in the FY20 budget of incentives for smart technology that allow ratepayers to reduce their energy consumption with items like smart thermostats.

In addition to energy savings, smart home technologies also provide extremely valuable data and granular level monitoring capabilities, as detailed in the Building Performance Association's recent report [Redefining Home Performance in the 21st Century: How the Smart Home Could Revolutionize the Industry and Transform the Home-to-Grid Connection](#). In addition to the smart technology incentives, the BPU should consider utilizing smart tools (AMI meters and home energy management systems) to do near real-time evaluations, address poor performing or over-predicting practitioners, and reward contractors for work that exceeds expectations. By reducing evaluation and paperwork costs, programs can reach more customers and have more opportunity to meet energy savings targets. The smart home interface should also be leveraged to connect customers with home performance contractors. For example, local qualified contractor recommendations could be displayed on the customer's home energy management (HEM) app when a problem is detected with equipment in the home, or a voice assistant could contact the contractor directly on behalf of the homeowner.

In terms of implementation of AMI, New Jersey has been behind the curve. Ensuring smart meter penetration across the residential sector would allow for data access and data monitoring that

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<sup>1</sup> The Building Performance Association is a 501(c)6 industry association dedicated to advancing the home and building performance industry by ultimately delivering improved energy efficiency, health, safety, and environmental performance of buildings. The Association was created to combine the expertise and resources of the Home Performance Coalition, Efficiency First, and Home Energy magazine.

could improve the EM&V of residential efficiency programs. Programs that utilize smart meter data can also emphasize savings when power is most expensive or polluting and, thus, energy savings are most valuable.

We urge the commission staff to review the Building Performance Association's report and its ten recommendations and to consider using smart technology for enhanced evaluation and other services that further support energy savings goals.

### **Existing Homes**

We are supportive of the merging of the HPwES and Residential HVAC program under the new Existing Homes Program to more effectively and flexibly allow participants to implement energy efficiency projects. To support the Quality Control Provisions of the program and ease data sharing of home performance retrofits, the Building Performance Association reiterates our recommendation from previous comments that NJ BPU support data standardization in the residential energy efficiency industry by requiring the use of the national open data standard, [Home Performance Extensible Markup Language](#) (HPXML), for all residential energy efficiency programs.

HPXML can significantly reduce administrative costs by incorporating automated data checks into its program software to validate for program eligibility, energy savings, quality assurance protocols, and more. For example, one year after implementing the standard, the [Arizona Public Service](#) reduced quality assurance administrative labor by 50 percent. Participating Arizona home performance contractors also reduced administrative labor by 31 percent per project, leading to a 50 percent increase in contractor satisfaction with the program.

HPXML includes a data dictionary that creates a common "vocabulary" for the residential energy efficiency industry and a data transfer protocol that provides the basis for communication between software systems. It can be used to exchange information across these different software systems and is currently used by 11 programs across five different states in the U.S., including New York, Arizona, and California. The Weatherization Assistance Program has also committed to adopting HPXML over the next two years as it upgrades its software system.

### **Clarification Regarding Eligibility for Incentives for Fuel Switching**

A concern for HVAC contractors in New Jersey is that limiting eligibility for HVAC-related incentives only to homeowners who switch to a high-efficiency electric heat pump would impede the adoption of efficiency upgrades for HVAC, given that heat pumps cannot provide for all the heating needs of New Jersey homes. Converting to a heat pump configuration may be cost-prohibitive or require major renovation. In addition, the cost savings for converting from oil to an electric heat pump are often less than the savings from converting to natural gas, especially because of New Jersey's current electricity rates. Homeowners who use propane or oil furnaces could increase their efficiency by switching to natural gas and high efficiency equipment, but the proposed changes would make them ineligible for an incentive to do so and could result in missed opportunities to increase access to efficiency. We recommend that this issue have further study to ensure adequate home performance with heat pumps in New Jersey. We also

recommend that while heat pumps receive an incentive, during the study phase, homeowners that have access to natural gas (no new lines are needed) should receive an incentive as well for advancing energy efficiency and reducing carbon emissions.

### **Cost-Benefit Analysis**

In previous comments<sup>2</sup> we requested that NJ BPU review the fundamental principles of the May 2017 National Standard Practice Manual (NSPM), [available on the National Efficiency Screening Project's website](#), which provides an implementation guide for reforming cost-benefit analysis methods. We recognize that one of the FY20 priorities for evaluation activities for the Office of Clean Energy is “Review of CBA Methods, including Net-to-Gross and Non-Energy Benefits” to be conducted by Rutgers University’s Center for Green Buildings (RCGB). The Building Performance Association recommends again that the NJ BPU establish a stakeholder process to utilize the NSPM and develop a “New Jersey” test that incorporates New Jersey’s energy policy goals and best meets the needs and values of the state.

In the TRC compliance filing, New Jersey’s current cost effectiveness testing framework appears in the cost-benefit analysis of the FY19 NJCEP energy efficiency programs. As described in Appendix H: Cost-Benefit Analysis, TRC used all five traditional cost-effectiveness tests from the California Standard Practice Manual for this analysis. This immediately raises the question of whether five different tests are needed, and if so, do any of the five current versions of the California Manual tests appropriately reflect the current state of New Jersey energy policy goals? For example, has Executive Order 28 been fully incorporated into the cost effectiveness tests? The NSPM sets forth the process by which NJ BPU can update and modernize its cost effectiveness testing framework to make certain that New Jersey’s current energy, health, climate and economic development laws, policies and regulations are accounted for in its cost-benefit analysis methods.

The NSPM offers a framework that is based on a set of core principles that focuses on ensuring alignment of testing practices with a jurisdiction’s applicable policy goals. It addresses the importance of treating energy efficiency as a resource and the range of associated utility system impacts that should be considered in any cost-effectiveness analysis. The NSPM further emphasizes the principle of symmetrical treatment of relevant costs and benefits, and provides a range of approaches that can be used to account for applicable hard-to-monetize costs and benefits (such as non-energy impacts). The guidance covers a wide range of fundamental aspects of cost-benefit analyses (including data, assumptions, and methodology) and on the adequate consideration of all relevant costs and benefits for both the utility system and the non-utility system.

The Building Performance Association believes the NSPM framework and its step-by-step approach would provide NJ BPU an opportunity to determine whether its current cost-

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<sup>2</sup> Comments submitted in the matter of the New Jersey 2019 Energy Master Plan, October 12, 2018; comments submitted on Docket QO19010040, February 15, 2019.

effectiveness testing reflects New Jersey’s own energy goals and policies. The Association and other members of the National Efficiency Screening Project would be pleased to brief the NJ BPU or other state Agencies on how a “New Jersey” test could be developed to best meet the needs of the policymakers and ratepayers in New Jersey.

**National Standard Practice Manual Principles**

<b>Efficiency as a Resource</b>	EE is one of many resources that can be deployed to meet customers’ needs, and therefore should be compared with other energy resources (both supply-side and demand-side) in a consistent and comprehensive manner.
<b>Policy Goals</b>	A jurisdiction’s primary cost-effectiveness test should account for its energy and other applicable policy goals and objectives. These goals and objectives may be articulated in legislation, commission orders, regulations, advisory board decisions, guidelines, etc., and are often dynamic and evolving.
<b>Hard-to-Quantify Impacts</b>	Cost-effectiveness practices should account for all relevant, substantive impacts (as identified based on policy goals,) even those that are difficult to quantify and monetize. Using best-available information, proxies, alternative thresholds, or qualitative considerations to approximate hard-to-monetize impacts is preferable to assuming those costs and benefits do not exist or have no value.
<b>Symmetry</b>	Cost-effectiveness practices should be symmetrical, where both costs and benefits are included for each relevant type of impact.
<b>Forward-Looking Analysis</b>	Analysis of the impacts of resource investments should be forward- looking, capturing the difference between costs and benefits that would occur over the life of the subject resources as compared to the costs and benefits that would occur absent the resource investments.
<b>Transparency</b>	Cost-effectiveness practices should be completely transparent, and should fully document all relevant inputs, assumptions, methodologies, and results.

**Workforce Development**

We are supportive of the proposed workforce development plan to continue outreach to contractors and trade allies for continuing education. The Building Performance Association sees workforce development and training as a key strategy for advancing building energy efficiency—ensuring that there is a qualified workforce to perform this important work.

One specific reason to motivate New Jersey to review its benefit cost ratios for energy

efficiency program measures would be to allow policymakers to focus more on the economic and business development impact of the energy efficiency business sector and its enormous potential for growth. New Jersey is currently underperforming in energy efficiency job creation and ranks 47<sup>th</sup> in the nation among states in per capita employment in this critical clean job creation category (See Exhibit A).

According to the September 2018 [Energy Efficiency Jobs in America](#) report, energy efficiency, as a market sector, employed **2.25 million Americans**, in whole or in part, in the design, installation, and manufacture of Energy Efficiency products and services, and is the fastest growing jobs sector in energy, accounting for half of the entire energy industry's job growth (133,000) in 2017.

The September 2018 [Energy Efficiency Jobs in America](#), adds to a growing body of research that puts energy efficiency at the top of the list of job creators in the clean energy business sector. For example, on January 13, 2017, the U.S. Department of Energy (DOE) released its [2nd Annual United States Energy and Employment Report \(USEER\)](#) providing a comprehensive analysis of 2016 data on energy related U.S. jobs. The [2017 USEER Jobs report](#) indicated that **2.2 million Americans** were employed, in whole or in part, in the design, installation, and manufacture of energy efficiency products and services in 2016; that more than 133,000 new energy efficiency jobs were created in the U.S. in 2016; and that U.S. energy efficiency employers projected the highest job growth rate (9%) in 2017-2018 in all energy sectors surveyed.

Both jobs Reports highlight one critical theme that New Jersey should consider in developing energy efficiency policy - properly designed and implemented energy efficiency and demand response programs have been demonstrated in numerous state and national studies to be the lowest cost, most predictable and most immediate method to reduce energy demand, create local jobs, provide opportunities for small business energy efficiency entrepreneurs while also providing health and comfort benefits to consumers and lower utility rates in the long term.

According to the [Energy Efficiency Jobs in America](#) report some 33,815 New Jersey residents were employed in energy efficiency in 2017 – a significant number of jobs in a state with approximately 9 million residents. However, [Energy Efficiency Jobs in America](#) also indicates that 84,556 Massachusetts residents were employed in energy efficiency industries in 2017 – That's more than twice the number represented in New Jersey, in a state with a significantly smaller population - less than 7 million residents. Massachusetts has adopted pro-job growth energy efficiency programs and policies. State policy in New Jersey could help develop more robust energy efficiency industry investment levels, entrepreneurial risk taking and small business development.

The Association believes that New Jersey could do better in economic development and job creation in the energy efficiency industry. Reforms and updates to New Jersey's cost effectiveness testing approaches through a comprehensive NSPM review and other measures

could help better align the state's energy efficiency programs to achieve its economic development and job creation goals.

Thank you for this opportunity to submit comments. Please do not hesitate to contact me with questions.

Sincerely,

Kara Saul Rinaldi  
Vice President of Government Affairs, Policy, and Programs  
Building Performance Association  
[kara.saul-rinaldi@building-performance.org](mailto:kara.saul-rinaldi@building-performance.org); 202.276.1773  
[www.building-performance.org](http://www.building-performance.org)

## Exhibit A

### US Energy Efficiency (EE) Jobs Per Capita

State	Gross EE Jobs	Population	EE Jobs Per Capita	Per Capita Rank	Gross Jobs Rank
D.C.	12,359	693,972	0.0178	1	38
VT	10,939	623,657	0.0175	2	40
DE	12,372	961,939	0.0129	3	37
WY	7,382	579,315	0.0127	4	45
MA	84,556	6,859,819	0.0123	5	6
RI	12,588	1,059,639	0.0119	6	36
MD	68,981	6,052,177	0.0114	7	11
WI	62,299	5,795,483	0.0107	8	14
OR	41,958	4,142,776	0.0101	9	19
UT	31,077	3,101,833	0.0100	10	25
CT	34,743	3,588,184	0.0097	11	22
VA	76,621	8,470,020	0.0090	12	10
WA	62,519	7,405,743	0.0084	13	13
NH	11,336	1,342,795	0.0084	14	39
MI	84,052	9,962,311	0.0084	15	7
SD	7,313	869,666	0.0084	16	46
NC	84,020	10,273,419	0.0082	17	8
IN	53,963	6,666,818	0.0081	18	16
MN	44,859	5,576,606	0.0080	19	18
MT	8,384	1,050,493	0.0080	20	42
CA	310,433	39,536,653	0.0079	21	1
TN	51,629	6,715,984	0.0077	22	17
OH	79,653	11,658,609	0.0068	23	9
IL	86,916	12,802,023	0.0068	24	5
ND	5,128	755,393	0.0068	25	49
NE	13,024	1,920,076	0.0068	26	35
MO	40,166	6,113,532	0.0066	27	21
IO	19,694	3,145,711	0.0063	28	30
ME	8,312	1,335,907	0.0062	29	43
AL	29,949	4,874,747	0.0061	30	26
AK	4,497	739,795	0.0061	31	51
AZ	41,886	7,016,270	0.0060	32	20
NY	117,339	19,849,399	0.0059	33	3
SC	29,286	5,024,369	0.0058	34	27
CO	32,036	5,607,154	0.0057	35	24

KS	16,628	2,913,123	0.0057	36	31
GA	59,065	10,429,379	0.0057	37	15
KY	24,579	4,454,189	0.0055	38	28
TX	154,565	28,304,596	0.0055	39	2
FL	112,620	20,984,400	0.0054	40	4
PA	65,288	12,805,537	0.0051	41	12
MS	15,055	2,984,100	0.0050	42	32
AR	14,782	3,004,279	0.0049	43	33
ID	8,227	1,716,943	0.0048	44	44
LA	20,839	4,684,333	0.0044	45	29
HI	5,496	1,427,538	0.0038	46	48
<b>NJ</b>	<b>33,815</b>	<b>9,005,644</b>	<b>0.0038</b>	<b>47</b>	<b>23</b>
WV	6,523	1,815,857	0.0036	48	47
NV	10,316	2,998,039	0.0034	49	41
OK	13,403	3,930,864	0.0034	50	34
NM	5,053	2,088,070	0.0024	51	50

Sources: Energy Efficiency Jobs in America published September 2018. Population numbers are US Census estimations for 2017

**From:** [Jesse Petersen](mailto:Jesse.Petersen@njcleanenergy.com)  
**To:** [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)  
**Subject:** FY20 CRA, Budgets and Program Plans  
**Date:** Tuesday, June 11, 2019 5:01:05 PM

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Dear Madam Secretary Aida Camacho-Welch,

Bright Power supports the Board's aggressive approach to galvanizing the energy efficiency on distributed generation market in New Jersey. We would like to formally submit the following comments and questions pertaining to the FY20 TRC Compliance Filing.

**FY20 Proposed Budget Comments:**

Regarding the proposed Multifamily budget of \$7,909,605 (\$6,443,234 in incentives alone), is the BPU considering any reserve funding since project volume may increase significantly with the doubling of Multifamily incentives? We would encourage the Board to consider potential reserve budget for the Multifamily program.

**FY20 TRC Compliance Filing Comments:**

- **Energy modeling:**

- Will the Board and TRC consider allowing other energy modeling pathways (normally reserved for TRANE, eQUEST software only) for the **Existing Building** portion of the new Multifamily Path C: Whole-Building/Comprehensive program? It has been our experience with whole-building (and other) Multifamily programs for existing buildings in California, New York, Connecticut, and Massachusetts over the last several years that allowing firms to also calculate savings using proprietary spreadsheets that can be QC'd by program administrators is an excellent way to drive more project volume in whole-building (existing building) programs so long as those spreadsheets and savings calculations are transparent for program administrators tasked with reviewing modeled savings projections. We would urge the BPU and TRC to consider allowing both energy modeling software submissions (such as TRANE and eQUEST) and also proprietary energy modeling spreadsheets to be submitted for review for existing buildings. The reason for this request has to do with the protracted amount of time a typical TRANE or eQUEST model typically takes to complete and, in many instances, the superfluousness of using these models for a package of measures whose savings can be arrived at in a much more straightforward and expeditious way. As far as we and other program partners working in other whole-building programs can attest, so long as the modeled energy savings calculations can be justified with the program reviewer, we have been able to truncate the amount of time it would otherwise take to complete a TRANE or eQUEST model, thus enabling us to move the project to the next stage much quicker and for a lower price to our clients. Moreover, we believe our excel model is as accurate and has been even more accurate in past instances in calculating resultant savings. While program administrators in different states and utility service territories maintain a rigorous QC process of our spreadsheet model submissions, we would welcome any such accommodation by the BPU and TRC in extending us (and other providers) the option of submitting spreadsheet models for an initial review and QC in the new Whole-Building (Path C.) Multifamily program for existing buildings. Additionally, we would of course be amenable to adhering to the typical whole-building program modeling requirements of

submitting a TRANE or eQUEST model if the spreadsheet model is deemed unsatisfactory.

- **CHP:**
  - The FY20 TRC Compliance Filing indicates that commercial and industrial customer are only eligible for the CHP-FC Program. We would strongly encourage the Board to consider Multifamily to be eligible too if that consideration has not yet been entertained.
- **Multifamily Incentives:**
  - The FY20 TRC Compliance Filing stipulates that an additional 100% bonus is afforded to UEZ and LMI customers participating in the Multifamily Path C: Whole-Building/Comprehensive program for existing buildings. Is the same proposed doubling of incentives also available to existing market-rate properties participating in the Multifamily Path C: Whole-Building/Comprehensive program? If not already contemplated by the Board or TRC, we would strongly encourage consideration for the same doubling of incentives for existing market-rate multifamily properties.
- **Multifamily Caps:**
  - The FY20 TRC Compliance Filing does not indicate an incentive cap for Multifamily Path C: Whole-Building/Comprehensive program, only that there is "no numeric cap; self-limiting". The TRC webinar slides dated from May 24th, 2019 indicate that there will be an "overall cost cap set at 80% of project cost..." for the Multifamily Path C: Whole-Building/Comprehensive program. We would like to have this discrepancy clarified if possible: will the Multifamily Path C: Whole-Building/Comprehensive program be capped at 80% of the total project cost, or will there be no numeric cap?

Thank you for your consideration of our comments and for clarifying any outstanding questions we have submitted.

Best regards,  
Jesse Petersen

Jesse Petersen, M.S., MFBA  
Sales Operations Manager



646-979-4715 | [jpetersen@brightpower.com](mailto:jpetersen@brightpower.com)  
[www.brightpower.com](http://www.brightpower.com)

11 Hanover Square, 21st Floor  
New York, NY 10005



The following comments are directed to the changes proposed for the **New Jersey Home Performance program**. These comments are more than just concerns, they are a plea to understand how these changes will impact the program label, the contractors involved, create a loss of benefit to the home owners, and financially steer people to a higher carbon footprint.

In our experience, we have yet to have a township request a manual J from us or any hvac company that we have worked with for the replacement of equipment in an existing home in over 5 years. On new construction, jobs they have requested manual J's and we are well aware through discussions with code officials that the manual J's are rarely reviewed if even understood. They openly admit that they do not receive training regarding reviews, and do not have the resources to review stacks of permits in detail. Their comment has been that ultimately the hvac company is responsible for the correct equipment. Most of our company work is done by working with hvac companies to perform air seal and insulation services. It is of great concern and risk to our company that by working with companies that may no longer be submitting a manual J or being allowed to put a larger system in, that we as insulators will be approached first and held accountable for any moisture problems within a home for the air sealing service that we perform with the program because of oversized equipment. The building science of which we are all held accountable in this program, differentiates us from our own competitors to not cause harm. If our competitors and code officials that work in the industry do not fully understand the importance of AC sizing, how can I expect a home owner not to hold us liable for an issue that actually relates to the AC sizing? The REVIEW of the manual J does not only protect the hvac company, they protect the small insulation companies that make much less money from risk of over sizing performed by others.

The proposed change of disqualifying oil to gas conversions is disheartening. People with oil boilers have no options for incentives unless they also replace their distribution with ducts that many times cannot reach the second floor without major renovations. Without incentives, they will be forced to continue to use oil or purchase low efficient gas boilers that put out higher carbons than the efficient ones. We just experienced record low temperatures this past winter and I would not take someone's word for it that a heat pump would suffice. An hvac company would not take the risk of selling a heat pump in hopes that some new technology heat pump will suffice to not get call backs for all customers. Most home owners will not take the risk of switching to electric based on common stories they hear and experienced. A typical home owner who has an oil furnace where gas is available; is going to switch to gas; and without incentives, is switching to a low efficient unit that puts out more carbons because it's more affordable. And without incentives, they are not looking to make air sealing and insulation improvements either, producing more carbons. Without gas available, they are simply replacing with an oil unit with no other efficiency improvements again. Purchasing cheaper equipment without incentives means less sales tax paid by the home owner and less income tax paid by the companies. This is what will happen the majority of the time and we will miss a huge opportunity to become a more efficient state now as New Jersey will fall shorter on taxes. We will have to wait for the lower efficient equipment they buy now to get replaced 15 years from now. New Jersey as a weather zone 4 and 5 needs to be taken into account as our weather climate is not the most ideal for heat pumps.

Our suggestion would be to continue to have the program **review manual J's**. Survey the participating hvac companies regarding this and most will not argue, even the largest participators. We highly suggest not eliminating the oil boilers **converting to gas** from the NJHP program. They would have no option but high carbons with low efficiency. I would also suggest that all gas heating equipment still be available for conversion for the NJHP program as most will still convert with lower efficiency equipment. Lastly, knowing the goal of utilizing electric, offer much higher incentives for the pioneers that are willing to convert to heat pumps using a more affordable 8.0 hspf efficiency to qualify. In 2008, the NJHP program offered \$10,000 rebate initially and lowered it down as the public became aware of the program and participated. Use that ideology for the heat pumps.

– Dan Brittin



**COMFORTNOW**  
By Bob McAllister

*Comprehensive Heating and Cooling Solutions*

505 New Rd, Suite 1, Somers Point, NJ 08244  
(609) 400-1005 Fax (609) 904-5606

[www.iWantComfortNow.com](http://www.iWantComfortNow.com)  
NJ HVAC Lic 19HC00333800

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Comfort Now LLC, a New Jersey based company which employs 22 New Jersey residents with a good living wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, and Home Performance for 5 years. We have also participated in the SJ Gas fuel conversion financing program for 5 years. I have been personally involved with the above programs for more than 20 years before opening this business in 2014.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,

  
Bob McAllister  
Owner



**DELTA  
MECHANICAL  
SERVICES LLC**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

**I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Delta Mechanical Services LLC a New Jersey based company which employs 30 New Jersey residents with a decent wage and benefits to provide for their families. .**

**I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.**

Sincerely,

Delta Mechanical Services

**David E Prewett**

**President**

**NJ Master HVACR License # 19HC00377400**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

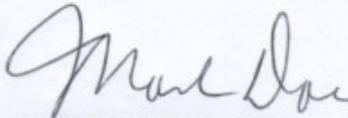
To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Mark A, Dormann , LLC, a New Jersey based company which employs 8 New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, and Home Performance for 17 years. . We have also participated in Gas utility company fuel conversion financing program for 9 years.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,



Name Mark Dormann

Title OWNER

NJ Master HVACR License # 19HC00140600



6/11/19

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: **Policy Updates and Request for Comments** posted on May 29, 2019

To whom it may concern,

Thank you for the opportunity to offer feedback to the proposed program updates. We appreciate that you value and respect our input and experience. Below, please find our comments on the proposals set forth for the NJCEP 2020 fiscal year.

**Comments to the Summary of Program Changes:**

**2.4 Existing Homes**

Proposed details of new programs:

- Increased incentives for Heat Pumps
  - Cold climate mini Split single ductless indoor unit. **The HSPF factor seems to be a little stringent based on current pricing and available units. Can the EER and HSPF ratings be adjusted a little lower to be attainable for this measure?**

**4.1 Multifamily EE Program**

Proposed Program changes

**Path C Whole Building**

- Revise the New Construction incentive table to reflect the new ENERGY STAR Multifamily New Construction program. **Existing Buildings are not mentioned, do they not qualify for Path C?**

**7. URBAN ENTERPRISE ZONES (UEZS)/OPPORTUNITY ZONE (OZS)/LOW-AND MODERATE INCOME (LMI)/MUNICIPAL ENTITIES (MUNIS) AND K-12 PUBLIC SCHOOLS**

- **Perhaps nonprofits and hospitals should be included in this program. In the past they have often been categorized with low income and K-12 Public Schools.**
- **RESIDENTIAL PROJECTS (IN UEZS OR OCCUPIED BY THOSE OF LMI) Why are Opportunity Zones omitted in this title?**
- Current HPWES and FY20 Comprehensive path. **Why are the bonuses not doubling the incentives, as to align with the rest of the measures in this program?**

**8.1 CLARIFICATION REGARDING ELIGIBILITY FOR INCENTIVES FOR FUEL SWITCHING**

**It seems that residential and MF projects are being phased out of fuel switching. Why should they not have this benefit along with the C&I program?**

**MF financing options – Can financing options be added to the MF program? This will allow for many more customers to participate in the program.**

Sincerely,

A handwritten signature in black ink, appearing to read 'Asher Hartman'.

Asher Hartman



June 10, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Thank you for this opportunity to provide comments on the FY20 Proposed CRA, Budgets, and Program Plans. EAM Associates is a high-performance building consulting firm working within the Residential New Construction Program since its inception in 2001. To date, we have certified over 18,000 single and multi-family homes to these standards.

We have reviewed the documents released on May 29, 2019 and would in general like to offer a statement of support for the proposal. The initiative for the Clean Energy Conference is an important one as many program stakeholders look to expand participation in NJCEP programs beyond the client base who have historically been involved. Likewise, the consolidation of the multi-family sector into a standalone program is both exciting and timely. EAM has provided comments during previous FY cycles which sought to remove some of the ambiguity these types of projects experienced due to the sector being split between several different NJCEP offerings. With EPA's release of the Energy Star Multi-Family New Construction Program it is the perfect time for NJCEP's offerings to be renovated into a more comprehensive and user-friendly platform. EAM agrees with the Program's sentiment that these changes should allow for increased participation by developers and types of projects that have traditionally been underserved by the program offerings.

EAM would like to offer the following comments on the proposal:

- Concerning the rollout of Pathway C of the new Multifamily EE program; full use of the ERI pathway in EPA's Energy Star Multi-Family New Construction Program requires that the ANSI/RESNET/ICC 301-2019 Standard be in effect. It is this new standard release which adapts the ERI process to be used on dwelling/sleeping units in buildings taller than the previous 3-story limit (4 to 5-story for Energy Star). On May 23<sup>rd</sup> RESNET announced that optional use of this standard would begin on October 1, 2019. For this reason, EAM



believes it is important that implementation of Pathway C occur on or after that Oct 1<sup>st</sup> date in order to avoid confusion and allow project developers to have full access to all the options intended in the EPA program that NJCEP is choosing to align with.

- During FY19 the Program’s “multi-single” definition changed to align with the IRC, with the intention that only true townhomes, and not low-rise “garden style” apartment buildings would be classified as multi-single. At the same time however, the multi-single tier was given the same \$500 base incentive as the multifamily tier. While this was potentially based on savings calculations done by the market manager, it has in the past year been an impediment to townhome participation. These 2 and 3-story townhome projects can have conditioned floor areas every bit as large as single family homes. Traditionally multi-single units received 75% of the incentive level of single-family homes. Even in the FY20 proposal the incentive chart at the ZERH level shows this 3-tiered approach with townhomes eligible for an incentive that falls in between single family and multi-family. EAM feels that participation in this sector of the market could be better if the Energy Star base incentive for multi-single units was moved from \$500 to \$750.

Please feel free to contact me if you have any questions. We look forward to continuing our work with the NJCEP in developing programs that help push the levels of efficiency and sustainability in New Jersey homes.

Sincerely,

Frank Swol  
Director of Technical Services  
EAM Associates  
3350 Hwy 138 West, Building 2 Suite 223  
Wall, NJ 07719

Phone: 732.556.9190  
Fax: 732.556.9195  
[fswol@eamenergy.com](mailto:fswol@eamenergy.com)  
[www.eamenergy.com](http://www.eamenergy.com)

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Residential - Commercial

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am the owner of T.J. Eckardt Associates, Inc., a New Jersey heating and air conditioning company which employs 19 New Jersey residents with a decent wage and benefits to provide for their families. Salvatore Marchese, my foreman and supervisor, holds the New Jersey Master HVACR Contractor license for T.J. Eckardt Associates, Inc. and he is also the bona fide representative for my company.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage and COOLAdvantage, Home Performance and SmartStart Buildings for many years.

We have also participated extensively in the South Jersey Gas fuel conversion financing program for many years. In fact we are one of the original contractor participants. Their programs have been both advantageous and successful for both our customers and our hvac company. It's given our customer peace of mind knowing that a convenient and affordable and efficient solution is possible for their comfort needs. And we all know that saving money and getting the best deal possible is at the top of their list when they are considering new hvac equipment. Their programs have always been beneficial for them and successful for us to grow our business.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,

A handwritten signature in black ink that reads 'Bernadette Eckardt'. The signature is fluid and cursive.

Bernadette Eckardt  
T.J. Eckardt Associates, Inc., President

Salvatore Marchese  
NJ Master HVACR License # 19HC00057600

*Serving South Jersey and the Shore Area Since 1980*

Salvatore W. Marchese, Master HVACR Contractor, License #19HC00057600

**From:** [Ed Janowiak](mailto:Ed.Janowiak@njcleanenergy.com)  
**To:** [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)  
**Subject:** FY20 CRA, Budgets and Program Plans.  
**Date:** Tuesday, June 11, 2019 1:53:00 PM  
**Attachments:** [attachment 1.pdf](#)

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To whom it may concern,

I have read the proposed plans and changes to FY 20 and 2 items that really stick out is the dropping of requiring the proper sizing and selection of HVAC equipment.

To put it simply, the HVAC as a whole does a poor job of sizing the equipment now. This is due to many reasons. One of the positive things the incentive programs did beyond getting more high efficiency equipment installed, was the systems tended to be sized correctly. This was due to the program requirements.

Now with the mini-split HP technology where sizing is even more critical, the requirement is being removed?

I'm of the opinion that if those who were making the decision to make the sizing calculations a requirement fully understood the impact, the sizing calculations would remain a requirement.

I've included a PDF from NJACCA that does a very good job of representing the contractors of NJ.

Sincerely,

Ed Janowiak  
NJ Master HVACR License # 6092  
NJ HVACR continuing education sponsor #58

: I'm sending this from my phone, please excuse any typos.

## Fujitsu General America, Inc.

353 Route 46W • Fairfield, NJ 07004

973-575-0380

www.fujitsugeneral.com



June 7, 2018

Submitted via E-Mail:

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Subject: FY20 CRA, Budgets and Program Plans

Fujitsu General America (Fujitsu) respectfully submits the following comments towards the New Jersey Clean Energy Program Fiscal Year 2020 Summary of Proposed New Initiatives and Program Changes. Fujitsu comments will pertain to the newly proposed Existing Homes program and specifically address the proposed criteria for the “Cold Climate Mini-Split Heat Pump – Multi-and ducted indoor units”.

First off, Fujitsu applauds the efforts of NJ Clean Energy Program and their recognition of the role that Heat Pumps will play in helping the State of NJ reach its goals for decarbonization. The proposed incentives of \$1,000 and \$2,000 respectfully will entice both contractors and homeowners to explore the option for a Heat Pump when replacing their HVAC system.

The area of concern for Fujitsu is with regards to the requirement of a 20 SEER and 10 HSPF for the multi-zone or ducted mini-split products. Although Fujitsu does have product that meets this requirement we believe the requirement to be too restrictive and will inhibit the penetration of these highly efficient products.

The table below shows various incentive criteria in the Northeast for Ductless Mini-split products and demonstrates the need for NJCE to have greater flexibility in its criteria in order to ensure a wide product mix resulting in accelerated adoption of the technology.

Program	SEER	HSPF
MassSave	15	9
National Grid (RI)	15	9
Energize CT	18	9
Central Hudson	15	8.5
PECO	18	8.5

It is for these reasons that Fujitsu General America believes NJ would be better served by adopting a Cold Climate Air Source Heat Pump, multi-zone or ducted mini-split requirement of 18 SEER/12 EER/9 HSPF.

We appreciate the opportunity to provide comments on this critical issue.

Sincerely;

*Michael Psihoules*

National Energy Solutions Manager  
Fujitsu General America

June 11, 2019

**VIA ELECTRONIC FILING**

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

**Re: FY20 Comprehensive Resource Analysis, Budgets and Program Plans**

Dear Secretary Camacho-Welch:

Please accept the following comments of Google, LLC (“Google”), in response to the May 29, 2019 New Jersey Board of Public Utilities Request for Comments on the Clean Energy Program Fiscal Year 2020 Comprehensive Resource Analysis, Budget, and Program Plans (“CEP FY20 Straw Proposal”).

**I. Introduction**

Google appreciates the opportunity to comment on the CEP FY20 Straw Proposal. Google is a multi-national technology company and manufacturer of the Google Nest Learning Thermostat and the Google Nest Thermostat E (“Google Nest Thermostats”), two of the leading smart thermostats. Google Nest Thermostats incorporate numerous features that help customers reduce their energy consumption for residential heating and cooling. Smart thermostats, like Google Nest Thermostats, are an important new energy efficiency measure which can save customers money on their energy bills, reduce their energy usage, while simultaneously building a dynamic and adaptable platform for managing system load.

Google supports the inclusion of the new Smart Tech initiative in the CEP FY20 Straw Proposal to allow ratepayers to reduce their energy consumption with items like smart thermostats

that assist in energy reduction through home and building connectivity. Google recognizes, however, that it will take some time for this new initiative to become operational. Google is happy to assist the Office of Clean Energy (“OCE”) to develop a successful program. In the meantime, Google urges the Board to approve funding for now-dormant utility smart thermostat programs that have exhausted their funding to ensure New Jersey customers have continued access to these important, new energy saving technologies.

## **II. Smart Tech is an Important Addition to New Jersey’s Clean Energy Program**

Google supports the new Smart Tech initiative in the CEP FY20 Straw Proposal, as it will advance smart technologies that assist in energy reduction through home and building connectivity. Smart technologies offer significant potential to save customers money on their energy bills, reduce their energy usage, while simultaneously building a dynamic and adaptable platform for managing system load.

Smart thermostats should be a central focus of the new Smart Tech initiative. Smart thermostats are a particularly important energy saving technology that provide a platform for other energy management measures. The U.S. Environmental Protection Agency defines smart thermostats as “a Wi-Fi enabled device that automatically adjusts heating and cooling temperature settings in your home for optimal performance.”<sup>1</sup> ENERGY STAR certified smart thermostats: work as a basic thermostat in absence of connectivity to the service provider; give residents feedback about the energy consequences of their settings; provide information about HVAC energy use, such as monthly run time; can report electric resistance heat use for heat pumps; are able to set a schedule; and can work with utility demand response programs to prevent brownouts

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<sup>1</sup> “ENERGY STAR Smart Thermostats.” Wi-Fi Enabled, Digital & Programmable | ENERGY STAR, 2019, [www.energystar.gov/products/heating\\_cooling/smart\\_thermostats](http://www.energystar.gov/products/heating_cooling/smart_thermostats).

and blackouts, while preserving consumers' ability to override those grid requests.<sup>2</sup> ENERGY STAR certified smart thermostats also meet rigorous energy savings criteria for reduction in cooling and heating—they must produce average annual reductions of system runtime of at least 10% for cooling and 8% for heating.<sup>3</sup> Accordingly, ENERGY STAR smart thermostats are certified to deliver energy savings, reliable performance, and environmental benefits, all while providing customers with enhanced convenience, insight, and control over their energy use.

The CEP FY20 Straw Proposal marks the first time that smart technologies, like smart thermostats, are included in the portfolio of energy efficiency programs. Google supports this development, while recognizing that the initiative is still being developed and thus will require some time to become operational. Google is happy to assist the OCE in developing a successful program in any way it can.

### **III. Advancing Smart Technologies This Year Will Require Additional Funding for Established Utility Programs**

Smart thermostat programs have a history of success in New Jersey, but regulatory uncertainty could prevent consumers from taking advantage of these important technologies in the coming year. To date, utility energy efficiency programs have been the primary catalyst for advancing smart technologies. Public Service Electric and Gas (“PSE&G”) blazed the trail for smart technology energy efficiency measures in New Jersey with its wildly successful Smart Thermostat Pilot Program. As part of that pilot, PSE&G created an online marketplace where eligible customers could buy a smart thermostat from several different manufacturers and get a \$150 instant rebate. The pilot program was so popular that the Company sold 35,000 smart

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<sup>2</sup> “ENERGY STAR Overview.” About ENERGY STAR | ENERGY STAR, 2019, [www.energystar.gov/about](http://www.energystar.gov/about).

<sup>3</sup> “Smart Thermostats Key Product Criteria.” Products | ENERGY STAR, 2019, [www.energystar.gov/products/heating\\_cooling/smart\\_thermostats/key\\_product\\_criteria](http://www.energystar.gov/products/heating_cooling/smart_thermostats/key_product_criteria).

thermostats in just eight months and had to close the program 16 months early, right before Christmas 2018. Today, PSE&G’s marketplace remains closed due to lack of funding.<sup>4</sup>

Several utilities have built on the success of PSE&G’s pilot by starting their own online marketplaces. New Jersey Natural Gas is offering a popular rebate program via its online marketplace—The Save Green Project. South Jersey Gas also recently launched an online marketplace where customers can receive instant rebates on smart technologies like smart thermostats. Unfortunately, these programs are not reaching most of the electric and natural gas customers in New Jersey.

Importantly, the Board recently “advise[d] that utilities should continue with their current energy efficiency programs, until the Board makes further determinations with respect to the program planning details required to implement the Energy Efficiency Program [in accordance with the 2018 Clean Energy Act].”<sup>5</sup> In order to follow this directive, and to assure that the majority of New Jersey customers have access to smart energy saving technologies, the Board will need to approve additional funding for utilities to keep their online marketplaces operational. Google urges the Board to do so immediately to ensure that New Jersey customers have uninterrupted access to energy saving smart technologies.

#### **IV. Conclusion**

Google supports the inclusion of the new Smart Tech initiative in the CEP FY20 Straw Proposal to allow ratepayers to reduce their energy consumption with items like smart thermostats. Google stands ready to assist the OCE to develop a successful program. In the meantime, Google

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<sup>4</sup> See “Get Instant Rebates and Save on Energy Costs.” PSE&G Marketplace, 2019, <https://psegmarketplace.com/>.

<sup>5</sup> *In The Matter Of The Implementation Of P.L. 2018, C. 17 Regarding The Establishment Of Energy Efficiency And Peak Demand Reduction Programs; Energy Usage Reduction Targets And Quantitative Performance Indicators*, Docket Nos. QO19010040 and QO19050536, p. 4 (May 28, 2019).

urges the Board to approve funding for now-dormant utility smart thermostat programs that have exhausted their funding to ensure New Jersey customers have continued access to these important energy saving technologies.

Thank you again for the opportunity to comment on these important policy questions. Do not hesitate to reach out if you have questions or want more information on the benefits of smart thermostats.

Very truly yours,

/S/ Rick Counihan

**Rick Counihan**

Head, Energy Regulatory Affairs

Hardware Partnerships

[rcounihan@google.com](mailto:rcounihan@google.com) | 415.517.1861





June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor as well as a representative of Harriett's Energy Solutions, a New Jersey based company which employs several New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, Home Performance and SmartStart Buildings for 12 years. We have also participated in SJGas fuel conversion financing program for 25 years.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,

A handwritten signature in black ink that reads 'Stephen Purdy'. The signature is fluid and cursive.

Stephen Purdy

Equipment Specialist

NJ Master HVACR License #19HC00825200



## **HARRIETT'S ENERGY SOLUTIONS**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a representative of Harriett's Energy Solutions, a New Jersey based company which employs several New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAvantage, COOLAAdvantage, Home Performance and SmartStart Buildings for 12 years. We have also participated in SJGas fuel conversion financing program for 25 years.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,

  
Setena Rose  
Install Coordinator/Program Administrator



**HARRIETT'S  
ENERGY SOLUTIONS**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

**I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Harriett's Energy Solutions**, a New Jersey based company which employs 35 New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the **WARMAdvantage, COOLAdvantage and Home Performance** for **over 10 years**. We have also participated in **Gas utility company** fuel conversion financing program for **over 3 years**. **Until now NJ has been one of the only states that actually got the use of energy incentives right.**

**I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.**

Sincerely,

A handwritten signature in black ink that reads "Bob Harriett". The signature is written in a cursive style.

Bob Harriett  
President

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor and partner of Hutchinson Plumbing Heating Cooling, LLC, a New Jersey based company. We employ three hundred (300) employees whom earn above average industry wages along with generous benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, Home Performance and SmartStart Buildings since each of the program's beginnings. We have also participated in Gas utility company fuel conversion financing program for when the offerings began.

Our organization fully endorses the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,

Fred Hutchinson  
C.E.O.  
NJ Master HVACR License # 5330



Residential HVAC  
6200 Troup Highway  
Tyler, TX 75707  
(903) 430-4470  
jim.vershaw@irco.com

June 7, 2019

Ms. Aida Camacho-Welch  
New Jersey Board of Public Utilities  
44 S. Clinton Avenue  
Trenton, NJ 08625

Re: New Jersey Clean Energy Program Fiscal Year 2020 Summary of Proposed New Initiatives and Program Change

Dear Ms. Camacho-Welch:

Ingersoll Rand Residential HVAC, manufacturer of Trane, American Standard, and Ameristar residential heating and air conditioning products, appreciates the opportunity to comment on the New Jersey Clean Energy Program Fiscal Year 2020 Summary of Proposed New Initiatives and Program Change, as presented by the Board of Public Utilities (BPU) on May 24, 2019.

Ingersoll Rand (NYSE:IR) advances the quality of life by creating and sustaining safe, comfortable and efficient environments. Our people and our family of brands—including Club Car, Ingersoll Rand, Thermo King, and Trane,—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. In 2014, we announced a roadmap to increase energy efficiency and reduce the environmental impact of our product portfolio and in our own operations, which will result in the avoidance of 20.85 million metric tons of CO<sub>2</sub> globally by 2020.

Ingersoll Rand strongly supports the New Jersey Clean Energy Program as a means to drive substantial market transformation toward energy efficient buildings and products, achieve the state's clean energy goals, and offer cost-effective solutions for consumers. We are encouraged by the proposed expansions of the initiatives for Fiscal Year 2020, both in whole building performance and appliance efficiency. There are two components of these initiatives where we wish to provide feedback, summarized below.

#### **Incentives for Cold Climate Heat Pumps**

Ingersoll Rand urges BPU to expand Cold Climate Heat Pump incentive eligibility to central ducted systems, based on the Northeast Energy Efficiency Partnerships (NEEP) Specification. Ingersoll Rand, as well as many other original equipment manufacturers, offer central ducted heat pumps that meet the necessary performance criteria at very cold outdoor temperatures, and are ideal for homes that have existing ductwork and a central air conditioning, heat pump, and/or furnace system. Allowing central ducted Cold Climate Heat Pumps to qualify for incentives will help maintain a robust marketplace with options for a larger pool of consumers



Ingersoll Rand supports the reference to the NEEP Cold Climate Heat Pump Specification, and urges BPU to maintain use of the NEEP approved equipment listing for rebate eligibility. The NEEP Specification sets different, appropriate requirements for central ducted, ductless mini-split, and ducted multi-split equipment in order to ensure high performance heating at very cold outdoor conditions, as well as technical feasibility, for each product category. Continuing to reference this specification, as opposed to setting revised requirements proposed in Fiscal Year 2020, will help maintain an appropriate set of requirements based on regional criteria for equipment manufacturers to follow.

### **Energy Efficiency Ratio (EER) Requirements for Central Air Conditioners and Heat Pumps**

Ingersoll Rand recommends relaxing the Energy Efficiency Ratio (EER) requirements in order to qualify for rebates for central air conditioners and heat pumps from 13 EER to 12.5 EER, consistent with the ENERGY STAR Most Efficient criteria for these products. As air conditioners and heat pumps shift toward multi-stage and variable speed technology, products tend to be optimized for higher Seasonal Energy Efficiency Ratio (SEER) part-load ratings, while sacrificing full load efficiency. Achieving 13 EER in these products can be difficult to meet cost-effectively; according to the Air-conditioning, Heating, and Refrigeration Institute (AHRI) certified product directory, relaxing the EER requirement from 13 to 12.5 increases the number of available 18 SEER air conditioner models by 26%, and the number of available 18 SEER, 10.0 HSPF heat pumps by 29%. Allowing 12.5 EER air conditioners and heat pumps to qualify for incentives will expand product availability without sacrificing seasonal energy savings.

Again, we appreciate the opportunity to comment on the New Jersey Clean Energy Program Fiscal Year 2020 Summary of Proposed New Initiatives and Program Change. If you would like to discuss these comments further, please do not hesitate to contact me.

Sincerely,

*James T. VerShaw*

James T. VerShaw  
Chief Engineer

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

We are an HVAC wholesaler with 7 locations in New Jersey and in business since 1987. Johnstone Supply is a New Jersey based company which employs 135 New Jersey residents.

Our company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage, COOLAdvantage, Home Performance and SmartStart Buildings for 10 or more years. We sell to HVAC licensed contractors and always believe in doing what's best for the homeowner. This plan does not seem to be a good plan for our NJ homeowners. A plan like this will cost many people lots of hard earned money. Please do not go forward with this plan.

**We would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.**

Sincerely,

Handwritten signatures of Bud and Bob Zimmermann in blue ink.

Bud and Bob Zimmermann

Johnstone Supply

908-298-1212

Name

Title

NJ Master HVACR License # XXXX



## **NJACCA FY20 CRA, Budgets and Program Plans Comments**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

The New Jersey Air Conditioning Contractors Association (NJACCA) has reviewed the Energy Efficiency and Renewable Energy Program Plan Filing and wish to submit our observations, concerns and questions. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. Our members install, service and repair air conditioning, heating, refrigeration, air purification and ventilating systems of all sizes and complexities. Supporting members includes major manufacturers of HVAC equipment and controls, wholesalers and distributors of equipment, vocational and technical schools and others with an interest in the HVAC industry.

We have reviewed the above referenced documents and are largely supportive of the changes, but we are concerned about a few items. Some of these changes are significant. Unfortunately, NJACCA and the OCE/Market Managers have not met for constructive dialog on the proposed changes prior to their release, as we have in times past. NJACCA, as the representative of the contracting community, (the boots on the ground delivering energy efficiency) have a keen sense of what programs and incentives are embraced by NJ rate payers.

### **Regarding - "Clarification Regarding Eligibility for Incentives for Fuel Switching"**

While we understand the long-term goals of this proposal, and we are proponents of newer high efficiency conventional and mini-split heat pump technology in the *proper* applications. We do have major concern with the "Clarification Regarding Eligibility for Incentives for Fuel Switching", which could have unintended negative impacts on NJ Ratepayers and Consumers.

First and foremost, NJ Ratepayers have among the highest electricity rates in the nation. This proposal will negatively impact ratepayers by coercing them into a primary heating source (electric heat pump) that will cost significantly more to heat their home than a high efficiency gas furnace.

Secondly, many of our members have been participating in natural gas conversion programs for decades and rely on these programs as part of their and their employee's livelihood. These programs are especially helpful in providing a means to maintain employment during the slower times of the year. Fuel conversion projects are more complex and require more labor with specialized skills. A sudden shift away from these programs will adversely impact employment in the HVACR industry in NJ.

Additionally, this policy could have the negative consequence of ratepayers choosing to keep low efficiency propane and oil furnaces, instead of converting fuels at all, leaving them with inefficient equipment that pollutes more and requires an onsite storage tank. It could also be counterproductive if they still convert to natural gas and opt for low efficiency equipment with the lack of encouragement to go with high efficiency equipment. As proposed, a ratepayer switching fuels would also not be eligible to participate in the Comprehensive Pathway, which seems counterproductive to NJ's energy efficiency goals. Many fuel conversion projects currently go through the HPWES Program as a heater changeout is one of the few times people stop to think about their home's energy efficiency. We will detail the potential negative impacts on ratepayers below.

#### **Potential Negative Impacts on Ratepayers**

- **\$\$\$ Savings** – The heating cost savings for ratepayers for converting from an oil furnace to a Super High-End Heat Pump is significantly less than natural gas, meaning ratepayers will be steered into paying more for the most basic of needs, a warm home.
- **Affordability** – Many ratepayers in the state are in gas utility territories that offer low interest financing that make it affordable for ratepayers to be able to increase the efficiency of their home. The increased heating cost savings of gas offsets the financing payment to a large part. With this “clarification”, not only will ratepayers not be able to utilize such gas financing, there is no comparable financing for switching to a heat pump without going through the comprehensive approach which not everyone qualifies for and/or can afford.
- **Sizing/Capacity** – Heat pumps have come a long way in technology over the years, but they are still not appropriate for every application in our climate, especially as it pertains to older homes. Per ACCA Manual J and S, program requirements and the NJ Mechanical code, a heat pump needs to be sized to cooling load, which is typically considerably lower than heating load requirement. This creates the need for a backup heat source. Since ratepayers will be dissuaded from natural gas, that would leave them with the need for large amperage electric backup heating elements.

These electric heating elements are significantly less efficient and more expensive to operate. This issue becomes greater in older and less efficient the homes.

- **Comfort** – Heat pumps have considerably lower heating outlet temperatures (the temperature of the air coming out of the vent) especially when the outdoor temperature is low, when a homeowner needs heat the most. This low outlet temperature leads to comfort issues because the air feels cool to the skin. This issue is heightened in older and less efficient homes and can negatively impact senior citizen ratepayers more than others.
- **Baseboard/Boiler Homes** – In a hydronic home that uses a boiler for heating, converting to a heat pump configuration would be of major expense and require home modification, if achievable at all. These homes can rarely accommodate a new duct system and would require major renovations. The option of adding a multi head mini-split to heat an entire home (including bathrooms and other small rooms) can also be a large expense and is not a suitable fit as the sole heating source for many existing homes due to the limitations of the equipment and the lack of a backup heat source in most applications. We acknowledge the air to water heat pump incentive as an alternative, but this is an emerging technology that has not been widely adopted in this market and will take time to become universally accepted. Any of these solutions could cost multiple times more than converting an oil boiler to gas. A large percentage of homes in older housing stock is hydronic, especially in urban settings.
- **Equitability** – Why are residential ratepayers being denied NJOCE Incentives when switching to natural gas while Commercial/Industrial ratepayers are not? This seems to place additional burden on a family deciding what the best way to heat their home over a business making the same decision.
- **Marketability** – Heat pumps have a bad reputation in this state from the last time people were forced into buying them during the gas moratorium of the late 1970's. HVAC contractors have trouble selling them in the proper applications due to consumer resistance because of poor past experiences and/or reputation. Despite the vast improvement in today's heat pumps, unfortunately they are still not ready for every application as mentioned. Bad word of mouth from someone coerced into buying a heat pump now, could further stifle the acceptance of heat pump technology moving forward.
- **Other Technical Considerations that Could Negatively Impact Ratepayers** –
  - **Electric Service** – Many homes will not have the appropriate electrical service and/or breaker panel to accommodate the additional amperage of a heat pump and backup electric resistance heat.
  - **Duct Systems** – Many older duct systems were designed for furnace only airflow, heat pumps require more airflow and larger duct systems, which could require additional

major expense and/or alterations to the home. Also, the lower discharge temperatures mentioned before with heat pumps become exacerbated if ductwork is in an unconditioned space such as an attic or crawlspace.

- **Outside Equipment Location** – In settings with limited outdoor space such as urban settings, townhomes and in shore communities there are limitations as to where to locate an outdoor heat pump safely and within local zoning codes.
- **Lifespan** – In our members experience the lifespan of a gas furnace is longer than that of a heat pump. A heat pump generally lasts 14 years per industry data. However, within 15 miles of the shore the salt atmosphere causes accelerated deterioration on the outdoor unit shortening the lifespan to as little as 50% (7 years) of the national average in our members experience.
- **Extended Power Failure** – It is true that a furnace needs electricity to run, but in the event of a power outage it can be ran off a standard backup generator purchased at a big box store. Heat pumps have a higher electrical draw and coupled with an electric backup heater, a standard generator could not accommodate the electrical requirements.

Again, we are very supportive of heat pump technology in the proper applications such as newer low load homes, additions, and as an alternate/supplemental heat source for mild temperature conditions. These applications can provide proper comfortable heat at relatively low cost for ratepayers, such as a “hybrid system”. They are also a great alternative for adding air conditioning to older homes, but not as a sole heat source in older construction. Heat pump technology is improving constantly, but it is still not to the point of being a “One Size Fits All” solution.

Being that the technology isn’t ready to fully serve NJ Ratepayers heating needs, the high operating costs, the *14 years (or less)* expected lifespan, and that that we are aiming for a 100% renewable goal *30 years from now*, coupled with the fact that we are nowhere near fulfilling NJ’s energy needs from renewable sources today, let alone after adding all of this heat pump demand to the grid; it doesn’t seem the time is right. One might suggest this incomplete idea should be given more time to develop into a truly workable solution for 2050.

#### Other Comments on Proposed Changes

- **Orphaned Water Heaters** - The lack of a directed incentive towards ensuring “orphaned” gas water heaters aren’t left in an unsafe state when the old furnace is removed from the chimney in the Single Measures Program causes alarm. The Furnace/Water Heater combination rebate has been a helpful tool to encourage ratepayers to keep their home safe and efficient. We understand the extra incentive towards heat pump water heaters, but they have many limitations in application. They are also less desirable to someone who already has natural gas due to operating costs and installation considerations.

- **Mini-Split Efficiency Levels** – We are supportive of the incentive increases and see this as a great carrot to help ratepayers make the switch to this technology in the proper applications, but we do have reservations about 1 metric.
  - **Mini-Split Cold Climate Heat Pump – Multi (≥2) or ducted indoor units** – The 20 SEER requirement on Multiple head mini splits product seems a bit too high to be attained in all applications. Upon consulting with some of our manufacturing partners which are amongst the largest manufacturers of this equipment in the world, there are limited sizes/combinations that could meet this threshold. This is particularly true for any “ducted” units, with no matchups at all, making this unfeasible as a whole home solution for many homes. We would suggest lowering the SEER requirement in general and consider a lower threshold for “ducted” or “mixed” mini-split systems.
  - **Mini-Split Cold Climate Heat Pump Single ductless indoor unit** - The requirements were all universally achieved with these manufacturers higher end units.
- **LMI/UEZ Bonus Incentives** – We are certainly not opposed to the idea, but we do fear it could create market confusion with different incentive levels for different areas and/or even next-door neighbors. Different Incentives in different areas and/or for different people can convolute the marketing and sales process. We are also curious as to what the actual thresholds of LMI is and how a ratepayer would be qualified for such a thing, especially in the single measure rebate only environment.
- **Commercial vs. Residential** – It seems a little curious that non-residential incentive bonuses for LMI/UEZ are disproportionately higher than those for residential, which are the ratepayers who need it most to offset the cost of higher efficiency equipment.
- **Load Calculation Requirements** – Industry research and our members experience in NJ ratepayers’ homes tell us that properly sized equipment leads to more efficient and more comfortable homes. It is accurate that NJ mechanical code requires Manual J load Calculations and Manual S equipment selection forms during the permitting process. However, an overwhelming majority of the time these items are not even requested in the permitting process. As many municipalities do not have mechanical inspectors with HVACR background, the results if they suddenly did start reviewing these items would be inconsistent at best. While our members generally do not prefer extra paperwork, we feel this is a basic industry practice that should be required to ensure proper application and energy savings to attain incentives and protect the ratepayers.
- **Payment Timelines** – The Comprehensive Pathway’s Prescriptive Track has the potential to attract many new HVAC and Insulation Contractors into working with the program thanks to not having to deal with the current software/modeling requirements. However, the biggest stumbling block to most contractor participation and/or existing contractors growing in scale is

incentive payment timelines. For established contractors decoupling payment from the QA/QC process should also be explored, as this greatly slows payment timelines. *No other work our members perform outside of the NJOCE have 60-90 day payment timelines.*

- **Financing Flexibility** – The move to 0.99% financing for the \$15,000.00-dollar loan could be helpful in developing more comprehensive projects in the Comprehensive pathway if it remains a 10-year term. We would also continue to suggest exploring R-PACE in NJ as well as offering a cash incentive not to take the financing for those that do not need it.
- **Hybrid Heat** - This is an industry term where a heat pump is coupled with a gas heater. It is one of the most effective ways to take advantage of the low energy consumption of heat pumps most of the year while the gas heater provides economical heating during cold periods. The operation of a Hybrid Heat system is integrated with the proper thermostat or integrated control that allows the system to switch back and forth as outdoor temperatures demand. This is an excellent way of offering a homeowner cost effective operating costs while helping to manage demand on the grid. It can be set up to allow a consumer to use an existing gas heater while adding a heat pump. An even better application would be to incentivize it with a heat pump and high efficiency gas heater to ensure maximum energy reduction.

We largely agree with most other parts of the proposed Existing Homes Program, and like the structuring of it as a single program with multiple points of entry so it's not a one size fits all approach. We are also very supportive of the Smart Technology and Workforce Development Initiatives depending on the specifics as they are developed. It is evident that several details and deployment logistics still need to be determined to make these initiatives and the transition to the new programs successful in achieving NJ's energy savings goals. To that end, NJACCA would be willing to offer our members expertise and feedback in the HVACR and Energy Efficiency Contracting industries as well as their experience in the marketing and sales of these services, particularly in a government incentivized market, to help make these programs as successful as possible.

We would like to thank you for taking the time to read and consider our comments. We feel that the NJOCE Programs can be very beneficial to the ratepayers of New Jersey. Therefore, we want this program to continue down a successful path and hope that these suggestions will allow that. But we feel the proposed changes detailed above could hurt contractor participation and negatively impact ratepayers as currently proposed. We look forward to discussing this further with all interested parties.

Sincerely,

*Brian Riggs*

Brian Riggs  
Executive Director  
NJACCA

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

THE MATTER OF THE OFFICE OF CLEAN  
ENERGY DRAFT COMPLIANCE FILING

June 7, 2019

Dear Secretary Camacho-Welch:

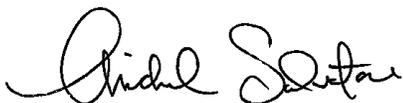
I recently learned the proposed funding for Sustainable Jersey has been drastically reduced for the ensuing fiscal year, which has a direct impact upon classroom teaching and learning in most districts promoting sustainable practices. The obvious implications are a direct reduction of support for schools educating professionals and children on energy preservation/conservation.

The magnitude of this decision is far reaching. Currently, more than 360 school districts have registered as active participants with Sustainable Jersey, which translates to 867 schools in New Jersey. More than 240 schools have worked collaboratively with Sustainable Jersey to reach the pinnacle standards for certification.

Fortunately, leading a district with nine Sustainable Jersey certified schools, two of which have been identified and honored as NJ Green Ribbon and US Green Ribbon Schools, we have witnessed first-hand the influence of Sustainable Jersey upon the thoughts and actions of our youth. Sustainable Jersey has guided our professionals as they launched 'Power Save' energy auditing clubs, 'lights out' campaigns and many more energy conservation programs for our children and families.

It is our hope you will be able to restore the necessary funding to continue these meaningful programs and sustainable practices for our children and our future.

Respectfully,



Michael Salvatore, Ph.D.

Superintendent of Schools

Long Branch Public Schools

**From:** Brian Houser <[bhouser@lskair.com](mailto:bhouser@lskair.com)>  
**Sent:** Wednesday, June 5, 2019 4:07 PM  
**To:** [publiccomments@nicleanenergy.com](mailto:publiccomments@nicleanenergy.com)  
**Subject:** FY20 CRA, Budgets and Program Plans

Dear Aida Camacho-Welch,

With regard to the proposed changes to the above referenced subject, I have some concerns I wish to express pertaining to ductless split air conditioning & heating systems.

Should the proposed changes outlined be passed, I feel concern that the purchasing decisions of homeowner's will regress to less efficient equipment options. In my opinion I believe this will be counterproductive to what we all are trying to accomplish, that being introduce more high efficient ductless air conditioning & heating systems into the marketplace.

The issue is not so much with the proposed EER rating requirements as it is with the minimum SEER requirement. I believe if the minimum SEER is proposed 17.0, leaving the proposed EER as is, this will greatly facilitate and ensure continued sales of high-efficient ductless air conditioning and heating products into the market.

I can be reach anytime if further comment is desired.

Thank you for your consideration.

Sincerely,

*Brian W. Houser*

Brian W. Houser  
Sales Manager  
Luce, Schwab & Kase, Inc.  
(973) 227-4840 x 537



***"We Promise, We Deliver"***



701 East Gate Drive • Mount Laurel, NJ 08054 • 1-888-MAGRANN • www.magrann.com  
New Jersey • New York • Pennsylvania • Maryland • Washington DC • Virginia • Ohio

June 11, 2019

Via Email: [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)

**Re: FY20 CRA straw proposal, program budgets and compliance filings**

Thank you for this opportunity to provide comments on the recently released FY20 NJCEP plans and filings, including changes to current programs and proposed additions to the NJCEP program portfolio:

**MULTIFAMILY – CONSULTANT INCENTIVE**

Path C includes a new “Consultant Incentive” for both new construction and existing building projects (p.142-143). We recall feedback (including our own) in early stakeholder discussions that indicated support for an incentive to help overcome the barrier to entry represented by the cost of performing an initial opportunity assessment without a guaranteed outcome – particularly for prospective existing building projects. As proposed, the purpose of the Consultant Incentive does include offsetting the “cost of developing the project” but then goes on to include the entire scope of work from development to completion. This presents a number of significant challenges that may not have been taken into account:

- “To offset the cost” implies that the incentive is to be applied directly against the consultant’s fees for service. We are concerned that this will have the unintended consequence of establishing a perceived value for these services and in effect setting a market price. We believe it is important that the market drive the price and that the services and service providers establish and stand on their own value as we are doing today. This is very different from tailoring an incentive to help overcome a specific market barrier.
- The incentive is available only upon “successful completion” of the project. Many consultants are smaller firms that simply cannot afford to carry the portion of the cost of their work covered by the incentive – which for a 50-unit affordable building would be a sizable \$10,000 – for the entire program lifecycle of the project, and then wait additional 3-6 months or more for payment of the incentive. Given the typical 2-year span of such projects from design through construction, we would be effectively deferring payment for work completed as much as two years prior! One solution to this might be to charge the full cost of the project and then pass the Consultant Incentive through to the client upon receipt – in which case this incentive would be better simply added to the total project incentive and not pass through the consultant at all. Regardless, an incentive paid at the end of a project will in no way overcome the hesitation that we encounter from potential new clients who are simply unwilling to pay for an initial assessment which they cannot be sure will identify a cost effective opportunity.



- The fact that this incentive is available only upon “successful completion” also creates both a risk and a conflict of interest on the part of the consultant, whose role often involves being an impartial advocate for the project’s performance and compliance with program standards despite any reluctance that may be encountered.

We strongly recommend that the program withdraw or rethink this incentive, and preferably solicit additional input from the stakeholders directly affected.

#### **MULTIFAMILY – OTHER**

Regarding Multifamily Program Path C – there is no mention in the description (p. 60-62) of utility bill data being required for true up of the model for existing buildings, as is currently required. Please confirm if this is still required.

“Add-On: Optional Savings Verification” (pg.62) is only listed as being available for Path C, with no similar opportunity available for Paths A and B. Given that there is no modeling involved in the savings for these installations, it would seem that post installation utility data would be even more interesting in these cases.

Please clarify whether there are any “Program/Project Incentive Caps” applicable to multifamily projects or if only “Entity Incentive Caps” apply (p.86).

#### **COMMISSIONING AND RETRO-COMMISSIONING**

As written, the proposed program changes for FY20 provide little if any provision for the commissioning of existing building systems. Commissioning is the process of ensuring that systems operate in accordance with the parameters for which they were designed and that buildings are operating according to the purposes and at the performance levels for which they were intended.

Retro-commissioning is the systematic process of reviewing an existing building’s systems in order to determine their current condition and operational status and to ensure that they support the currently intended function of the building. Retro-commissioning is an effective means of achieving improved building performance in a very cost effective manner – often without additional capital expenditures.

Retro-commissioning services also provide the opportunity to educate property owners, and a building’s operating and maintenance staff on proper equipment use and maintenance. This helps to ensure that systems continue to run at maximum energy efficiency.

We believe that without programmatic support from NJCEP, commissioning services will continue to be underserved – particularly in multifamily buildings – and that this will continue the persistence of problems that we encounter with increasing frequency in New Jersey and other regions. While these issues often manifest themselves in poor temperature and/or humidity control and indoor air quality complaints, they are almost always associated with excessive energy use and costs.

Commissioning and retro-commissioning are widely recognized as highly effective and cost-effective strategies to improve both the energy efficiency and long term performance of multifamily and other buildings, and to ensure that the systems and upgrades required by programs are operating as intended.

We strongly recommend that NJCEP consider introducing commissioning and retro-commissioning into current programs and as stand-alone initiatives, with associated incentives that will easily justify themselves in both immediate impacts and the long term persistence of savings.

#### **STAKEHOLDER INPUT**

Mechanisms for stakeholder input into ongoing programs, program updates and new program planning appear to have stalled in 2019. Opportunity for feedback from the companies, organizations and professionals directly engaged in the delivery of energy efficiency is appreciated by market based stakeholders such as ourselves and we believe essential to effective planning. We are particularly alarmed at the prospect of basing future planning on input from an Advisory Group that may not include adequate representation of industry partners, advocacy organizations and other experts in energy efficiency policy and delivery. We strongly request that NJCEP reconstitute monthly EE meetings as well as topic specific stakeholder meetings in an open and transparent process.

We believe this will be especially important given the significant budget allocations targeted towards new initiatives with little to no detail included in the CRA or compliance filings (for example, \$8m identified in the budget for "Smart Tech" but minimally described in the CRA and Program Changes summary). Smart Tech (smart thermostats, controls, connectivity, etc.) is specifically an area in which both the market and utilities have already gained significant experience that should not be ignored.

Thank you again for this opportunity to provide input. Our team at MaGrann would be happy to provide any additional information or clarification that would be helpful in evaluation of these comments.

Sincerely,



Ben Adams  
Vice President, Program Development

## MITSUBISHI ELECTRIC TRANE HVAC US LLC

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Date: June 7, 2019  
To: Aida Camacho-Welch  
Secretary of the Board  
Board of Public Utilities  
  
From: Rick Nortz  
Mitsubishi Electric Trane U.S.  
  
Subj: FY20 CRA, Budgets and Program Plans

My name is Rick Nortz of Mitsubishi Electric Trane US. In my role with Mitsubishi, I work to help educate Utility Programs and state energy offices from Florida to Maine, about heat pumps and building electrification. I help them develop and promote efficiency programs for air source heat pumps. In October of 2016, to show industry unity to the New Jersey BPU, Mike Psihoules of Fujitsu and I presented jointly to the Energy Efficiency Committee about the benefits of Cold Climate Heat Pumps that meet the Specification delineated by Northeast Energy Efficiency Partnerships (NEEP).

NEEP created the Cold Climate Heat Pump Specification in January of 2015. Since then, there have been several iterations, as the specifications change from stakeholder inputs. Stakeholders include Utilities, State Energy Offices, Implementers, Energy Consultants, and others. The value of the NEEP ccASHP Specification is that it is managed by a 3<sup>rd</sup> Party and provides consistency among programs that have adopted it. Since 2015, the ccASHP Specification has been adopted by Massachusetts, Rhode Island, Vermont, New York and 7 other states around the country. It has also been adopted by New Jersey, that is until the July 1<sup>st</sup> changes go into effect.

*In order to maximize the impact of the NJ CEP heat pump program, we recommend that New Jersey keeps the NEEP ccASHP Specification, and add 12 EER to the requirement to meet New Jersey protocols for rebate programs. At a minimum, we strongly recommend reducing the SEER requirement from 20 SEER to 17 SEER for multi-zone systems.*

At first glance, the July 1 program changes seem positive for ductless mini-splits. Increasing single zone rebates from \$500 to \$1,000 and multi-zone systems from \$500 to \$2,000 will indeed catch the attention of both contractors and homeowners. However, the problem arises when you research the requirements for the multi-zone portion of the programs. The new changes propose that qualifying systems have a SEER rating of 20. This drastically reduces the amount of qualifying product from all manufacturers. This change will most assuredly work the opposite way the program enhancements are intended, resulting in a reduced number of heat pumps incentivized, while spending more incentive dollars. This is NOT the result that the program wants.

On the east coast, there is not a single other program with requirements as high as 20 SEER for multi-zone systems. By establishing metrics that enable single and multi-zone systems to qualify, each of these programs is well on their way to establishing a robust heat pumps market in their respective states.

For example:

State	Requirements	NEEP ccASHP Specification
Maine	10 HSPF	No
New Hampshire	18 SEER, 12.5 EER, 10 HSPF	Yes
Massachusetts	15 SEER, 9 HSPF	Yes
Rhode Island	15 SEER, 9 HSPF	Yes
New York	18 SEER, 12 EER, 9 HSPF	Yes
Connecticut	18 SEER, 12.5 EER, 9 HSPF	No
Vermont	17 SEER, 12 EER, 10 HSPF	Yes

I conducted a survey of distributors that service New Jersey for Mitsubishi Electric including Pierce Phelps, Ferguson HVAC/Lyon Conklin, ABCO Refrigeration, and Luce, Schwab and Kase. Based on information that they provided to us, over 75% of the total multi-zone systems sold in 2018 will not qualify under the new program. If the 20 SEER requirement is kept, New Jersey will become a single zone ductless market, relegating incentives to a spot heating and cooling strategy only. This misses over 50% of the potential market, and it misses the important electrification goal of encouraging whole home electrification. Having only a handful of qualifying systems will also encourage contractors to improperly design homes around the rebate program, rather than use the proper system for the application.

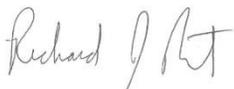
In addition to the impact on reducing qualifying product, SEER is a cooling metric. With New Jersey being a heating dominated state, a cooling metric shouldn't be what eliminates 75% of a category. Lowering the SEER requirement will have minimal impact on savings opportunities with homeowners. Based upon the amount of cooling hours, lowering SEER from 20 to 17 would only reduce savings by \$30 - \$50 total per year for the average home.

In conclusion, it is our collective goal for New Jersey to accelerate and maintain momentum as a strong market for building electrification utilizing ductless heat pumps, and create a thriving heat pump market that is eventually self-sustaining and does not require rebates. In order to achieve this, Mitsubishi Electric Trane recommends either:

- **Maintaining the NEEP ccASHP requirement**, plus adopting an EER of 12 to meet New Jersey rebate protocols, or
- **Lowering the SEER requirement** on multi-zone systems from 20 to 17.
  - In the latter recommendation, to qualify for the rebate, multi-zone systems would need to be 17 SEER, 12 EER, 10 HSPF and a COP of 1.75 at 5°F.

Either recommendation is consistent with most other programs in the Northeast and a growing number of programs around the country. It will not stifle the market by disqualifying the most popular systems. Rather, by having a broader selection this requirement would help build a thriving market in New Jersey that will encourage clean heating and cooling for buildings.

Thank you,



Richard J. Nortz  
Senior Manager, Utility and Efficiency Programs  
Mitsubishi Electric Trane U.S.  
Phone: 617-733-1058



**NORTHERN NEW JERSEY CHAPTER, INC.**

213 Summit Road, PO Box 1081, Mountainside, NJ 07092-0081

Tel: (908) 654-5770 Fax: (908) 654-1754

www.necannj.com chapteroffice@nnjneca.com



**MEMORANDUM**

June 6, 2019

To: New Jersey Board of Public Utilities

From: Northern New Jersey Chapter, NECA

Re: New Jersey Direct Install Program

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On behalf of the Northern New Jersey Chapter of the National Electrical Contractors Association (NECA), I am writing to express our opposition to the proposed increase to the project and entity caps of the "Direct Install Program" under the New Jersey Clean Energy Rebate program.

The proposal, which increases the project level cap from \$125,000 to \$250,000 and the entity cap from \$250,000/\$500,000 to \$4,000,000, will reduce the number of parties who receive bid requests for energy solution projects. Under the current framework, multi-measure energy projects that fall under the Direct Install Program are often not advertised publicly, therefore limiting the number of electrical install opportunities in the State.

NECA represents, for the purposes of advancing industry interests regarding labor relations, continuing education and legislative/regulatory affairs, IBEW-signatory electrical construction and Voice-Data-Video contractors. Our chapter currently has 75 permanent members located in our jurisdiction, roughly 50 traveling members (members from surrounding NECA chapters) and a further 400 union signatory contractors for whom we handle labor relations. As such, many of our member and signatory contractors would be directly impacted by these changes. We respectfully request that the Board of Public Utilities maintain the current project and entity caps to ensure competition among businesses performing work on multi-measure energy projects.



Aida Camacho-Welch  
Secretary of the Board  
Board of Public Utilities

June 7, 2019

Re: FY20 CRA, Budgets and Program Plans

Ms. Camacho-Welch,

Northeast Energy Efficiency Partnerships (NEEP) appreciates the opportunity to provide comments to the New Jersey Clean Energy program with a specific focus on the proposed changes to the COOLAdvantage program. NEEP commends the program for offering such robust incentives towards Air-Source Heat pump technologies. NEEP maintains an active regional ASHP initiative and have conducted several research projects as well as resources in this space. We have convened an ASHP Working Group for several years as well as maintained a qualified product list for ASHPs that performance well in cold climates (ccASHP).<sup>1</sup> We have reviewed the proposed changes and have the following comments.

**Leverage NEEP’s Cold-Climate ASHP Specification and Product List to qualify Cold-climate ASHPs in New Jersey.**

Clean Energy and energy efficiency stakeholders from the region lack confidence that the existing heating performance metric (HSPF) for air source heat pumps provides the necessary information to adequately characterize heating performance across the heating season, particularly at low temperatures. In addition, supplemental information provided by manufacturers to demonstrate performance in cold temperatures is not standardized or consistent. The current performance metric (HSPF) does not include low temperature testing points below 17°F, assumes the use of electric resistance elements, and tests in steady-state operation (as opposed to allowing modulation). These deficiencies add up to measurements that do not accurately reflect performance of the latest generation of air source heat pumps.

In order to address stakeholder concerns about these deficiencies, a group of interested stakeholders - working together as part of the [Air Source Heat Pump and Smart Controls Initiative](#) (facilitated by NEEP) - developed a specification to better characterize heat pump performance ([now on V3.0](#)). Initiative participants include energy efficiency program administrators, heat pump installers, state energy office staff, and technology experts.

The specification was designed to identify air source heat pumps that are best suited to heat efficiently in cold climates (IECC climate zone 4 and higher). It is intended as a model equipment specification to

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<sup>1</sup> More details at <https://neep.org/ashp>



be used broadly by clean energy and energy efficiency program administrators in cold climates as a minimum requirement for program qualification. It is also intended for engineers, contractors, and other practitioners who need assurance that the equipment they select will have the required heating capacity at design temperature without unnecessary oversizing, and will serve the load efficiently throughout the ambient temperature range. More details on the process taken to arrive at the V3.0 specification are in the [V3.0 Specification Memo](#).

The specification and associated product list is being used to identify high performance cold-climate ASHPs in [many states](#) throughout the Northeast including NYSERDA, Mass Save, NH Saves, Efficiency Vermont and National Grid in Rhode Island.

We believe there is tremendous value in a regional approach in defining cold climate heat pumps and recommend that New Jersey leverage the NEEP spec/list as appropriate.

We note that some programs take the NEEP list and add additional requirements above and beyond the NEEP requirements. For those programs that do this, they all require NEEP listing as a foundational requirement and take subsets of the NEEP list. This allows a single point of entry for Manufacturers to report the necessary data that is required beyond simply meeting the technical requirements. While there is still some diversity, NEEP listing has become common to many programs. Manufacturers have suggested that they appreciate this and that reporting to each program throughout the region would be burdensome.

Starting in 2019 NEEP launched a [subscription program](#) to have full access to the product list and all related information. There are associated costs with subscription. These costs help cover the work that goes into maintaining the product list. In parallel, we've also launched a listing fee program with manufacturers who are helping to defray the cost to programs and other users. We recommend that the New Jersey program contact NEEP about a potential subscription at [ccASHP@neep.org](mailto:ccASHP@neep.org).

Thank you for offering the opportunity for NEEP to provide comment to the New Jersey Clean Energy Programs. Please don't hesitate to contact us with any follow up questions or clarifications.

Sincerely,

A handwritten signature in black ink that reads 'David Lis'.

David Lis

Director of Technology and Market Solutions  
Northeast Energy Efficiency Partnerships (NEEP)

[djlis@neep.org](mailto:djlis@neep.org)

781-860-9177 x127

## **Comments re: FY20 CRA, Budgets and Program Plans**

We represent a collection of businesses that work with customers to drive the adoption of energy efficiency measures. Our businesses benefit from effective energy efficiency programs and have experience with best practices related to effective market engagement and transformation.

We appreciate the opportunity to provide comments on the New Jersey's Clean Energy Program ("CEP") Comprehensive Resource Analysis ("CRA"). We support the commitment to increased levels of energy efficiency in the context of the Clean Air Act ("CAA") signed by Governor Murphy on May 23, 2018, which furthers the Governor's and the State's historic commitment to leadership in this area.

We also appreciate the challenges inherent in proposing a 2020 CRA while longer term energy planning occurs via the newly released Energy Master Plan ("EMP") draft and broader structural issues are defined such as the utility role in program administration.

In this context, we believe that it is important that utilities are directed to take on a leadership role in the CRA efforts for the following reasons:

1. Enable the smooth transition of programs from the Office of Clean Energy ("OCE") to allow utilities to meet the aggressive energy savings goals as required by the CAA
2. Maximize the effectiveness of current and proposed programs by coordinating with existing utility programs that are complementary to OCE programs
3. Enhance the energy efficiency marketplace by connecting customers with utility and OCE programs through leveraging utility customer reach

Effective utility leadership and coordination will enable New Jersey to better meet both short and long term energy efficiency goals.

Based on the goals defined in the draft Energy Master Plan, New Jersey needs to act aggressively to meet 100% clean energy and 80% reductions in carbon emissions by 2050. Meeting these goals requires leadership from the New Jersey Board of Public Utilities ("BPU"), the Governor's office, utilities, and stakeholders.

To that end, we also believe that the BPU should expand and strengthen the existing Energy Efficiency Advisory Group ("Advisory Group"). For example, the Advisory Group does not currently include a market actor that engages residential or small to medium businesses, large and important customer segments.

We are concerned that the further development of the CRA, the EMP, and other energy efficiency planning efforts will not be informed by best practices from market practitioners on the ground who engage with customers on a daily basis. A full complement of stakeholders

provides the opportunity for the Advisory Group to leverage feedback, gather ideas, and establish buy-in on the most effective and efficient deployment of these programs. Without a diversity of perspectives, BPU's best laid plans may simply not be accomplished.

We have seen what works and what does not work in the development and execution of energy efficiency programs. What generally has not worked well is the absence of utility leadership in the execution of energy efficiency programs.

To that end we respectfully provide the following recommendations to encourage and support utility leadership in the CRA.

### 1. Enable Smooth Transition of OCE Programs to Meet Energy Savings Goals

The CAA directs utilities to meet goals of 2% electric and 0.75% natural gas efficiency savings per year in the next five years. We believe that utilities must be held accountable for meeting these goals.

To effectively meet these goals, however, utilities must be given the appropriate resources, administrative mandate, and incentives. Accountability and responsibility go hand in hand, and we believe utilities should have both.

Assuming some or all of the existing OCE programs proposed in the CRA are administered or replaced by the utilities in the future, the 2020 programs are an opportunity to enable a smooth transition of administration.

As the draft CRA states:

*"In FY20, additional discussions will take place related to utility-specific energy usage and peak demand reduction targets, the program structure, cost recovery, utility filing requirements, program timeframes, evaluation, and reporting requirements . It is anticipated that the Board will consider changes to clean energy programs in the fall of 2019. Subsequent to any Board decisions on related matters, utilities will be provided with adequate time in order to prepare their filings for a program start no sooner than July 1, 2020."*

Given the realities of changing program administration and structure, the existing CRA should focus on preparing for this transition. Specifically, we believe the CRA should be amended to enable the following:

- Utility engagement and involvement in program planning
- Budget set aside for utility marketing efforts that promote CRA programs
- Addition of utility incentives if CRA energy savings goals are reached

These changes to the draft CRA will enable New Jersey to provide for a smooth transition to utility program administration and avoid problems that other states have seen when transitioning program administration.

## 2. Maximize Program Effectiveness by Coordinating with Existing Utility Programs

While the CRA would represent the majority of state energy efficiency investments in 2020, many of New Jersey's utilities administer their own programs. Coordination between OCE and utilities will enable program effectiveness in 2020 and beyond.

We appreciate the references in TRC's draft filing to this coordination:

*"The TRC Team will continue to work with the NJ utilities that provide financing incentives to leverage these and any other applicable utility incentives, and to coordinate with the utilities to ensure programs offer complementary incentives to increase overall participation."*

We believe that the final CRA should provide more details on how this coordination will occur and what specific programs require coordination.

## 3. Enhance Energy Efficiency Marketplace by Leveraging Utility Customer Reach

We strongly believe that the CRA should enable and encourage utilities to leverage their customer reach to enhance the energy efficiency marketplace. Regardless of the program administrator, utilities are an important contributor to the success of energy efficiency programs.

Utilities have important and powerful assets, including their brand, customer relationships, operational and customer data, and market knowledge. These assets should be used to help connect customers with energy efficiency products and services that contribute to the utility energy savings goals.

We have seen the power of these utility assets to enhance the energy efficiency marketplace. Simple Energy, for example, runs utility marketplaces that promote products and services that save energy and contribute to utility energy efficiency goals. These marketplaces enable many different companies to reach customers at scale in a cost-effective manner.

In particular, PSE&G saw an unprecedented velocity of smart thermostat purchases, and a customer net promoter score over 70 during its Simple Energy powered marketplace pilot in 2018.

Similarly, Sealed has seen the power of the utility brand combined with a marketplace platform to reach more customers, more cost-effectively. Sealed finances home comfort improvements using the money homeowners currently waste on energy.

Sealed is a service provider on several utility marketplaces, including ones powered by Simple Energy. Compared to marketing efforts without utility marketplaces, Sealed saw lead volume increase by over 400% while the cost to acquire leads has gone down by over 200%.

Utilities have worked with companies like Simple Energy and Sealed to leverage their brand and customer reach to drive the adoption of energy efficiency products and services, even in the absence of rebates or incentives. See a recent blog [post](#) in AESP Strategies Magazine for more information on the power of the utility brand regardless of incentives.

As utilities are given the responsibility for meeting energy savings goals, they should be encouraged to leverage their customer reach in 2020 and beyond. Where CRA programs exist, these utility marketplaces can support cost-effective outreach and implementation. Where CRA programs do not exist, existing or new utility programs can leverage marketplaces and similar efforts that leverage utility market reach.

Utilities have the potential to grow the marketplace for energy efficiency products and services. Unfortunately, most people are not aware of many of these products and services. Utilities represent an opportunity for market actors to raise awareness cost-effectively and at scale.

We therefore strongly encourage the final draft of the CRA to include a path for utilities to leverage their market reach to support CRA and other programs. This path should include:

- Supplementary funding to enable utility marketplace and marketing efforts
- Creation of rules around how utilities claim energy savings based on these efforts
- Incentives for utilities driving energy savings based on these efforts

By leveraging utility customer reach and supporting the energy efficiency marketplace, the CRA can be significantly enhanced to reach energy efficiency goals in the most cost-effective manner possible.

Sincerely,

Tanuj Deora  
Simple Energy

Andy Frank  
Sealed

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Submitted electronically to: [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: FY20 CRA, Budgets and Program Plans

Dear Ms. Camacho-Welch:

The New Jersey Credit Union League (NJCUL) is the statewide trade association representing New Jersey's 160 credit unions and their more than one million members. New Jersey credit unions have partnered with the New Jersey's Clean Energy Program, Home Performance with Energy Star Program (HPwES), to provide affordable financing to eligible New Jersey homeowners for energy efficient upgrades. These upgrades increase their home's comfort, safety and durability, all while lowering energy consumption and costs.

Eligible homeowners participating in the green loan program enjoy low cost financing provided by NJCUL member credit unions. In addition, some projects are eligible for additional rebates to the homeowner. The partnership has worked well and we welcome the opportunity to share our thoughts on potential ways to expand the program's reach and would offer the following six recommendations:

1. **Loan Loss Reserve Pool:** Establish a loan loss reserve pool which will allow deeper penetration to low- to- moderate- income households through reduced risk to lenders.
2. **Marketing:** Establish a direct to the consumer marketing budget to increase awareness of the program and its varied options and benefits.
3. **Consumer Interest Rate:** Change the ten-year term interest rate to offer the consumer 0.99% instead of the 4.99%.
4. **Loan Amounts –** Increase the maximum loan amount eligible for interest rate buy-down from \$15K to \$20K.
5. **Contractor Incentives –** Contractors currently receive a \$500 incentive if they pass the inspection the first time. It is recommended to establish a second tier level to allow for an incentive if the contractor passes the inspection the second time.
6. **Expand the interest rate buy-down program to include professional and small business properties.**



There are 160 New Jersey credit unions with over one million members, or 12% of the state's population. Credit unions are member-owned, not-for-profit financial cooperatives. They provide a full range of financial products and services similar to banks but are structurally different from banks, savings institutions or licensed consumer lenders. Credit unions can be organized by groups such as an employer or group of employers, a community, house of worship, association or civic organization. As member-owned cooperatives, credit unions are able to focus on the financial well-being of individual members rather than shareholder profits.

The NJCUL thanks the Board of Public Utilities for the opportunity to comment. If you have questions or would like to discuss our comments in more detail, please contact Chris Abeel, Vice President of Corporate and Governmental Affairs, at [cabeel@njcul.org](mailto:cabeel@njcul.org), or by telephone at 800-792-8861, ext. 127.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Frankil', written in a cursive style.

David C. Frankil  
President/CEO



## **NJACCA FY20 CRA, Budgets and Program Plans Comments**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

The New Jersey Air Conditioning Contractors Association (NJACCA) has reviewed the Energy Efficiency and Renewable Energy Program Plan Filing and wish to submit our observations, concerns and questions. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. Our members install, service and repair air conditioning, heating, refrigeration, air purification and ventilating systems of all sizes and complexities. Supporting members includes major manufacturers of HVAC equipment and controls, wholesalers and distributors of equipment, vocational and technical schools and others with an interest in the HVAC industry.

We have reviewed the above referenced documents and are largely supportive of the changes, but we are concerned about a few items. Some of these changes are significant. Unfortunately, NJACCA and the OCE/Market Managers have not met for constructive dialog on the proposed changes prior to their release, as we have in times past. NJACCA, as the representative of the contracting community, (the boots on the ground delivering energy efficiency) have a keen sense of what programs and incentives are embraced by NJ rate payers.

### **Regarding - "Clarification Regarding Eligibility for Incentives for Fuel Switching"**

While we understand the long-term goals of this proposal, and we are proponents of newer high efficiency conventional and mini-split heat pump technology in the *proper* applications. We do have major concern with the "Clarification Regarding Eligibility for Incentives for Fuel Switching", which could have unintended negative impacts on NJ Ratepayers and Consumers.

First and foremost, NJ Ratepayers have among the highest electricity rates in the nation. This proposal will negatively impact ratepayers by coercing them into a primary heating source (electric heat pump) that will cost significantly more to heat their home than a high efficiency gas furnace.

Secondly, many of our members have been participating in natural gas conversion programs for decades and rely on these programs as part of their and their employee's livelihood. These programs are especially helpful in providing a means to maintain employment during the slower times of the year. Fuel conversion projects are more complex and require more labor with specialized skills. A sudden shift away from these programs will adversely impact employment in the HVACR industry in NJ.

Additionally, this policy could have the negative consequence of ratepayers choosing to keep low efficiency propane and oil furnaces, instead of converting fuels at all, leaving them with inefficient equipment that pollutes more and requires an onsite storage tank. It could also be counterproductive if they still convert to natural gas and opt for low efficiency equipment with the lack of encouragement to go with high efficiency equipment. As proposed, a ratepayer switching fuels would also not be eligible to participate in the Comprehensive Pathway, which seems counterproductive to NJ's energy efficiency goals. Many fuel conversion projects currently go through the HPWES Program as a heater changeout is one of the few times people stop to think about their home's energy efficiency. We will detail the potential negative impacts on ratepayers below.

### **Potential Negative Impacts on Ratepayers**

- **\$\$\$ Savings** – The heating cost savings for ratepayers for converting from an oil furnace to a Super High-End Heat Pump is significantly less than natural gas, meaning ratepayers will be steered into paying more for the most basic of needs, a warm home.
- **Affordability** – Many ratepayers in the state are in gas utility territories that offer low interest financing that make it affordable for ratepayers to be able to increase the efficiency of their home. The increased heating cost savings of gas offsets the financing payment to a large part. With this “clarification”, not only will ratepayers not be able to utilize such gas financing, there is no comparable financing for switching to a heat pump without going through the comprehensive approach which not everyone qualifies for and/or can afford.
- **Sizing/Capacity** – Heat pumps have come a long way in technology over the years, but they are still not appropriate for every application in our climate, especially as it pertains to older homes. Per ACCA Manual J and S, program requirements and the NJ Mechanical code, a heat pump needs to be sized to cooling load, which is typically considerably lower than heating load requirement. This creates the need for a backup heat source. Since ratepayers will be dissuaded from natural gas, that would leave them with the need for large amperage electric backup heating elements.

These electric heating elements are significantly less efficient and more expensive to operate. This issue becomes greater in older and less efficient the homes.

- **Comfort** – Heat pumps have considerably lower heating outlet temperatures (the temperature of the air coming out of the vent) especially when the outdoor temperature is low, when a homeowner needs heat the most. This low outlet temperature leads to comfort issues because the air feels cool to the skin. This issue is heightened in older and less efficient homes and can negatively impact senior citizen ratepayers more than others.
- **Baseboard/Boiler Homes** – In a hydronic home that uses a boiler for heating, converting to a heat pump configuration would be of major expense and require home modification, if achievable at all. These homes can rarely accommodate a new duct system and would require major renovations. The option of adding a multi head mini-split to heat an entire home (including bathrooms and other small rooms) can also be a large expense and is not a suitable fit as the sole heating source for many existing homes due to the limitations of the equipment and the lack of a backup heat source in most applications. We acknowledge the air to water heat pump incentive as an alternative, but this is an emerging technology that has not been widely adopted in this market and will take time to become universally accepted. Any of these solutions could cost multiple times more than converting an oil boiler to gas. A large percentage of homes in older housing stock is hydronic, especially in urban settings.
- **Equitability** – Why are residential ratepayers being denied NJOCE Incentives when switching to natural gas while Commercial/Industrial ratepayers are not? This seems to place additional burden on a family deciding what the best way to heat their home over a business making the same decision.
- **Marketability** – Heat pumps have a bad reputation in this state from the last time people were forced into buying them during the gas moratorium of the late 1970's. HVAC contractors have trouble selling them in the proper applications due to consumer resistance because of poor past experiences and/or reputation. Despite the vast improvement in today's heat pumps, unfortunately they are still not ready for every application as mentioned. Bad word of mouth from someone coerced into buying a heat pump now, could further stifle the acceptance of heat pump technology moving forward.
- **Other Technical Considerations that Could Negatively Impact Ratepayers** –
  - **Electric Service** – Many homes will not have the appropriate electrical service and/or breaker panel to accommodate the additional amperage of a heat pump and backup electric resistance heat.
  - **Duct Systems** – Many older duct systems were designed for furnace only airflow, heat pumps require more airflow and larger duct systems, which could require additional

major expense and/or alterations to the home. Also, the lower discharge temperatures mentioned before with heat pumps become exacerbated if ductwork is in an unconditioned space such as an attic or crawlspace.

- **Outside Equipment Location** – In settings with limited outdoor space such as urban settings, townhomes and in shore communities there are limitations as to where to locate an outdoor heat pump safely and within local zoning codes.
- **Lifespan** – In our members experience the lifespan of a gas furnace is longer than that of a heat pump. A heat pump generally lasts 14 years per industry data. However, within 15 miles of the shore the salt atmosphere causes accelerated deterioration on the outdoor unit shortening the lifespan to as little as 50% (7 years) of the national average in our members experience.
- **Extended Power Failure** – It is true that a furnace needs electricity to run, but in the event of a power outage it can be ran off a standard backup generator purchased at a big box store. Heat pumps have a higher electrical draw and coupled with an electric backup heater, a standard generator could not accommodate the electrical requirements.

Again, we are very supportive of heat pump technology in the proper applications such as newer low load homes, additions, and as an alternate/supplemental heat source for mild temperature conditions. These applications can provide proper comfortable heat at relatively low cost for ratepayers, such as a “hybrid system”. They are also a great alternative for adding air conditioning to older homes, but not as a sole heat source in older construction. Heat pump technology is improving constantly, but it is still not to the point of being a “One Size Fits All” solution.

Being that the technology isn’t ready to fully serve NJ Ratepayers heating needs, the high operating costs, the *14 years (or less)* expected lifespan, and that that we are aiming for a 100% renewable goal *30 years from now*, coupled with the fact that we are nowhere near fulfilling NJ’s energy needs from renewable sources today, let alone after adding all of this heat pump demand to the grid; it doesn’t seem the time is right. One might suggest this incomplete idea should be given more time to develop into a truly workable solution for 2050.

#### **Other Comments on Proposed Changes**

- **Orphaned Water Heaters** - The lack of a directed incentive towards ensuring “orphaned” gas water heaters aren’t left in an unsafe state when the old furnace is removed from the chimney in the Single Measures Program causes alarm. The Furnace/Water Heater combination rebate has been a helpful tool to encourage ratepayers to keep their home safe and efficient. We understand the extra incentive towards heat pump water heaters, but they have many limitations in application. They are also less desirable to someone who already has natural gas due to operating costs and installation considerations.

- **Mini-Split Efficiency Levels** – We are supportive of the incentive increases and see this as a great carrot to help ratepayers make the switch to this technology in the proper applications, but we do have reservations about 1 metric.
  - **Mini-Split Cold Climate Heat Pump – Multi ( $\geq 2$ ) or ducted indoor units** – The 20 SEER requirement on Multiple head mini splits product seems a bit too high to be attained in all applications. Upon consulting with some of our manufacturing partners which are amongst the largest manufacturers of this equipment in the world, there are limited sizes/combinations that could meet this threshold. This is particularly true for any “ducted” units, with no matchups at all, making this unfeasible as a whole home solution for many homes. We would suggest lowering the SEER requirement in general and consider a lower threshold for “ducted” or “mixed” mini-split systems.
  - **Mini-Split Cold Climate Heat Pump Single ductless indoor unit** - The requirements were all universally achieved with these manufacturers higher end units.
- **LMI/UEZ Bonus Incentives** – We are certainly not opposed to the idea, but we do fear it could create market confusion with different incentive levels for different areas and/or even next-door neighbors. Different Incentives in different areas and/or for different people can convolute the marketing and sales process. We are also curious as to what the actual thresholds of LMI is and how a ratepayer would be qualified for such a thing, especially in the single measure rebate only environment.
- **Commercial vs. Residential** – It seems a little curious that non-residential incentive bonuses for LMI/UEZ are disproportionately higher than those for residential, which are the ratepayers who need it most to offset the cost of higher efficiency equipment.
- **Load Calculation Requirements** – Industry research and our members experience in NJ ratepayers’ homes tell us that properly sized equipment leads to more efficient and more comfortable homes. It is accurate that NJ mechanical code requires Manual J load Calculations and Manual S equipment selection forms during the permitting process. However, an overwhelming majority of the time these items are not even requested in the permitting process. As many municipalities do not have mechanical inspectors with HVACR background, the results if they suddenly did start reviewing these items would be inconsistent at best. While our members generally do not prefer extra paperwork, we feel this is a basic industry practice that should be required to ensure proper application and energy savings to attain incentives and protect the ratepayers.
- **Payment Timelines** – The Comprehensive Pathway’s Prescriptive Track has the potential to attract many new HVAC and Insulation Contractors into working with the program thanks to not having to deal with the current software/modeling requirements. However, the biggest stumbling block to most contractor participation and/or existing contractors growing in scale is

incentive payment timelines. For established contractors decoupling payment from the QA/QC process should also be explored, as this greatly slows payment timelines. *No other work our members perform outside of the NJOCE have 60-90 day payment timelines.*

- **Financing Flexibility** – The move to 0.99% financing for the \$15,000.00-dollar loan could be helpful in developing more comprehensive projects in the Comprehensive pathway if it remains a 10-year term. We would also continue to suggest exploring R-PACE in NJ as well as offering a cash incentive not to take the financing for those that do not need it.
- **Hybrid Heat** - This is an industry term where a heat pump is coupled with a gas heater. It is one of the most effective ways to take advantage of the low energy consumption of heat pumps most of the year while the gas heater provides economical heating during cold periods. The operation of a Hybrid Heat system is integrated with the proper thermostat or integrated control that allows the system to switch back and forth as outdoor temperatures demand. This is an excellent way of offering a homeowner cost effective operating costs while helping to manage demand on the grid. It can be set up to allow a consumer to use an existing gas heater while adding a heat pump. An even better application would be to incentivize it with a heat pump and high efficiency gas heater to ensure maximum energy reduction.

We largely agree with most other parts of the proposed Existing Homes Program, and like the structuring of it as a single program with multiple points of entry so it's not a one size fits all approach. We are also very supportive of the Smart Technology and Workforce Development Initiatives depending on the specifics as they are developed. It is evident that several details and deployment logistics still need to be determined to make these initiatives and the transition to the new programs successful in achieving NJ's energy savings goals. To that end, NJACCA would be willing to offer our members expertise and feedback in the HVACR and Energy Efficiency Contracting industries as well as their experience in the marketing and sales of these services, particularly in a government incentivized market, to help make these programs as successful as possible.

We would like to thank you for taking the time to read and consider our comments. We feel that the NJOCE Programs can be very beneficial to the ratepayers of New Jersey. Therefore, we want this program to continue down a successful path and hope that these suggestions will allow that. But we feel the proposed changes detailed above could hurt contractor participation and negatively impact ratepayers as currently proposed. We look forward to discussing this further with all interested parties.

Sincerely,

*Brian Riggs*

Brian Riggs  
Executive Director  
NJACCA

**Michele N. Siekerka, Esq.**  
President and CEO

**Chrissy Buteas**  
Chief Government  
Affairs Officer

**Frank Robinson**  
Vice President  
Government Affairs

**Andrew Musick**  
Vice President  
Government Affairs

**Michael Wallace**  
Vice President  
Government Affairs

**Tony Bawidamann**  
Vice President  
Government Affairs

**Raymond Cantor**  
Vice President  
Government Affairs

**Nicole Sandelier**  
Director Economic  
Policy Research

TO: New Jersey Board of Public Utilities Office of Clean Energy

FROM: Ray Cantor, Vice President, Government Affairs

DATE: June 11, 2019

RE: In the Matter of the Comprehensive Energy Efficiency and Renewable Energy Resource Analysis for Fiscal Year 2020 Clean Energy Program - Docket No. QO19050644; And In the Matter of the Clean Energy Programs and Budget for the Fiscal Year 2020- Docket No. QO19050645

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On behalf of our member companies that provide more than 1 million jobs in the state and make the New Jersey Business & Industry Association the largest statewide business association in the country, I would like to offer the following comments.

The NJBIA is supportive of the Board of Public Utility's efforts to reduce energy usage by promoting energy efficiency programs. Energy efficiency is the most effective means to manage our energy supplies and to reduce the emissions of harmful pollutants, including carbon. We also recognize the breadth of the filings, reports, and processes currently underway or recently made. We and our members have a strong interest in ensuring that the Board and the Office of Clean Energy make appropriate and informed decisions.

NJBIA has three primary concerns with the NJCEP filings. One, there was not a sufficient stakeholder process in the development of these filings and not enough details to fully appreciate the impacts. Secondly, there remains considerable uncertainty as to program administration to meet the State's mandated energy efficiency goals. Finally, we object to the proposed elimination of incentives to switch to high efficiency gas burning furnaces. I will address each below.

**Process:** There was an insufficient stakeholder process leading up to these filings. While there have been some limited opportunities to submit comments or respond to questions in a formalized setting, there was not an opportunity to engage in discussions and engage with staff and consultants as concepts were developed. This process is not consistent with previous stakeholder engagements conducted by the Office of Clean Energy. While we recognize that the Office has been under pressure to meet numerous deadlines over the last year, we would rather have more time taken to produce more thought out and collaborative filings.

It is also difficult to analyze and comment on many of the proposals because of a lack of details provided. These programs will result in the expenditure of hundreds of millions of dollars and will impact businesses throughout the state. They will partly determine how utilities meet their energy efficient mandatory targets. It is incumbent on the Office to provide more details to allow for informed comments.

**Administration:** The Clean Energy Act requires that public utilities be required to reduce energy consumption by prescribed amounts. The Act does not make clear if the utilities will be given specific authorities to meet these goals or if the Office of Clean Energy will assume that responsibility.

These filings do not clarify this question. The filings do, however, expand the role of the Office of Clean Energy in energy efficiency. However, even with that expanded role, we do not see how the Act's mandated energy reductions will be achieved. There must be clarity on how the relative roles of the public utilities and the Office should be structured, in order to achieve the goals, and before the responsibilities of the Office are expanded.

**Natural Gas:** NJBIA continues to believe that given the current state of technology and the cost of energy, that natural gas needs to remain as part of our energy mix. Given that belief, it was distressing to see that the filings are proposing to eliminate the incentive to convert to high efficiency gas furnaces. NJBIA believes that this proposal to eliminate incentives to convert to high efficiency gas furnaces is not supported by current technology, will not work to reduce carbon emissions, will end up costing consumers more money, and is not needed to meet our obligations under the Global Warming Response Act.

While at some point it may be laudable, and perhaps even necessary, to electrify our building heating systems, that time is not now. Incentivizing electrification for home heating at this time is not good public policy. The current technologies are not adequate to work on a continual and efficient basis in a cold weather climate. We have confirmed this fact with both utilities and installers. No other state has taken this step. Until replacement technologies can be implemented that work, as well as gas furnaces, the incentives should stay in place.

Cost is also a significant issue for our members and New Jersey residents. The filings do not provide any analysis of affordability or reliability. The abundance of natural gas over the last decade has resulted in a significant reduction of gas and electric bills. If natural gas were to be eliminated or reduced from our energy sector, what impact would that have on rates?

As more people use electric to heat their buildings, it is likely that they will be paying higher rates given the very real potential for higher electricity rates due to our renewable and nuclear subsidy policies. The electrification of heating buildings needs to be better thought out before the Office takes a half measure to phase out these incentives.

If the intention of the Office is to move the public from carbon fuel heating sources to electrification, we believe this policy will fail, at least at this time. What is more likely to happen is that a person seeking a new furnace to replace an existing gas or oil furnace will install a lower efficiency gas furnace instead. They will not likely switch to an electrified source at this time. This will result in more emissions than would otherwise have resulted if they were incentivized to install an energy efficient gas furnace. These higher emissions will be essentially locked in over the useful life of the equipment, as high as 30 years. Has the Office undertaken an analysis of the emission impacts?

It is also not necessary at this time to begin to eliminate natural gas as a heating fuel source. The goals of the Global Warming Response Act can likely be met with natural gas as part of our energy mix. Even if the Office disagrees with the point, it really should wait until the Energy Master Plan has been adopted and the IEP process has concluded. This pause will allow for decision making based on fully thought out analyses of our energy future.

Thank you for your consideration.

June 11, 2019

Aida Camacho-Welch, Secretary of the Board of Public Utilities  
44 South Clinton Avenue  
9<sup>th</sup> Floor  
P.O. Box 350  
Trenton, New Jersey 08625-0350

Re: FY20 CRA, Budgets and Program Plans

Dear Secretary Camacho-Welch:

The Alliance to Save Energy (Alliance) is pleased to submit comments in support of the New Jersey Board of Public Utilities' (BPU) 2020 Fiscal year budget for the New Jersey Clean Energy Program (NJCEP). In particular, we commend the allocation of \$4.5 million for K-12 energy savings curricula, and for promoting career awareness among high school students around new mobility and other emerging technologies that will transform their use of energy, create career opportunities, and that will require their participation and leadership.

The Alliance is a nonprofit, bipartisan coalition of business, government, civil society and academic leaders working together to drive greater U.S. energy productivity to achieve economic growth; a cleaner environment; and greater energy security, affordability and reliability. For over 30 years, a key component of the Alliance's advocacy for energy efficiency has been K-12 education, specifically the PowerSave Schools program. Since 1988 the Alliance has designed and implemented education programs in 15 states and over 2,500 schools, teaching students about energy efficiency, empowering them to lead behavior change in their schools, homes and communities, and preparing them for careers in energy and sustainability. The program has also generated average energy savings of 5-15% based on no-cost, student-led behavior campaigns. The Alliance has worked with leading utilities such as the Tennessee Valley Authority, Pacific Gas & Electric, Southern California Edison, the Los Angeles Department of Water & Power and the Sacramento Municipal Utility District, continually updating and revising program materials to align with best practices. Most recently, curricular updates have reflected an increased focus on demand response (DR), distributed generation (DG), the energy-water nexus and career readiness. The Alliance also works with participating schools and curriculum specialists to ensure that the program reflects student and teacher feedback, remains current with state and national content standards, and incorporates new technologies and best practices in curriculum delivery.

Since 2015, the Alliance has partnered with New Jersey Natural Gas (NJNG), expanding across NJNG's service territory and developing new curricula to match NJNG's priorities. With NJNG's support, the Alliance developed a Residential Pathway for students to take their energy savings skills into their homes, and curriculum specifically tailored to PreK-2<sup>nd</sup> grade students. The Alliance has also worked in close concert with the Sustainable Jersey (SJ) program. Sustainable Jersey staff participate in the Alliance's teacher workshops, making SJ's programs and resources available to PowerSave schools; and participation in the PowerSave program helps students satisfy the energy components of the SJ

certification, including for Behavior-Based Conservation Programs, Professional Development for Sustainability, and Community Education and Outreach. In 2018, the Alliance also began working with South Jersey Gas, bringing the energy education to their service territory.

The benefits of investing in K-12 energy education are manifold. It provides hands-on STEM education and project-based learning; supports teamwork, critical thinking and leadership skills; and inculcates cultures of efficiency across school communities. It also trains students to be agents of change and ambassadors of energy efficiency, educating their peers and families. And it prepares them for the educational and professional pathways to lead a cleaner, more resilient energy future.

Thank you for the opportunity to comment the BPU's proposed NJCEP FY20 budget. We applaud its focus on energy education, and specifically on preparing students for leadership in the evolving energy sector. We believe this represents a wise long-term investment and look forward to supporting New Jersey's efforts.

Sincerely,



Jason Hartke

President, Alliance to Save Energy

# RECURVE

SHAPE THE FUTURE OF ENERGY

## Request For Comment FY20 Proposed CRA, Budgets and Program Plans



44 S Clinton Ave, Trenton, NJ 08609

**June 11, 2019**

## Introduction

Recurve (formerly OpenEE) offers the New Jersey Board of Public Utilities (BPU) brief comments on their Fiscal Year 2020 (FY20) Straw Proposal for NJ's Clean Energy Program (CEP) Comprehensive Resource Analysis (CRA) and the proposed FY20 program budgets and compliance filings.

Our comments are intended to support the valuation of energy efficiency as a resource and ensuring implementation decisions will support scaled investments in distributed energy resources in New Jersey.

## Summary of Comments

Recurve offers comments on the New Initiatives and changes proposed for the Residential and Commercial program areas described in the 2020 plan.

- The **New Initiatives** show good opportunities for integrated solutions across distributed energy resources to meet the goals of the Clean Energy Plan.
  - We encourage the BPU to also consider comprehensive tracking and monitoring of changes in energy consumption, as well as impacts across these interventions to enable cross resource comparison and master planning.
- The plans to streamline the **Residential** program offerings and focus on multi-measure solutions alongside deep retrofits is encouraging.
  - We encourage the BPU to take a whole building meter-based savings approach to incentivize program implementers and drive deeper savings, rather than one-off technology incentives.
  - Consider incorporating a pay for performance model for aggregators interested in delivering savings with greater flexibility.
- The plans to streamline the **Commercial** program offerings will offer greater flexibility, measurement and verification options should also be expanded.
  - Automated M&V solutions may serve to further enhance the program options; including portfolio-based savings claims on the performance path.
  - To support the Energy Master Plan, we believe BPU should be embracing more monitoring and tracking to ensure interventions can be tied to grid impacts, but doing so with open and transparent automated M&V tools like the OpenEEmeter.

## New Initiatives

The New Initiatives proposed to support the Clean Energy Plan show opportunities for integrated solutions across distributed energy resources to meet the goals of the plan.

Wind, Community Solar, Storage, and Smart Tech will all have significant impacts on the future of resource planning in New Jersey. Comprehensive tracking and monitoring of changes in energy consumption will support optimization across resources. It is foundational to monitor impacts consistently across these interventions, as well as energy efficiency, to enable cross resource comparison and master planning.

To drive innovation and ensure that energy efficiency and demand reduction can address changing grid needs, New Jersey should consider the following among the new initiatives and program changes:

- Embrace **meter-based quantification** of distributed energy resources to enable consistent, transparent valuation of grid and customer benefits;
- Adopt **performance-based** deployments of programs and interventions to drive accountability;
- And adopt **comprehensive energy consumption monitoring** as part of the New Initiatives to support the Energy Master Plan.

Meter-based performance and comprehensive monitoring will help prime the market for **procurement-based financing**, in which secure, long term and stable investments can be channeled into distributed energy resources, simultaneously increasing private capital and reducing the need for ratepayer funding for energy efficiency and demand response.

## Residential Programs

The plans to streamline the Residential program offerings are encouraging and we strongly support the BPU intent to “...*more effectively and flexibly allow participants to implement energy efficiency projects.*” Allowing vendors and other market actors to meet customers needs directly is essential to program success. Furthermore, we applaud the BPU for acknowledging the power of these market actors and supporting them by “...*providing more and better opportunities for participating contractors to grow their clean energy businesses.*”

We encourage the BPU to take these concepts one step further by including meter-based tracking and monitoring<sup>1</sup> as part of the program implementation. This will provide participating

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<sup>1</sup> Meter-based tracking and monitoring can be done at the monthly level using consistent and transparent methods for whole building impacts. See [CalTRACK.org](http://CalTRACK.org) for more information.

contractors with more actionable intelligence on the impacts of their interventions and allow the BPU to optimize their program deployments through targeting.

We also encourage BPU to consider meter-based pay-for-performance contracting options for contractors who wish to maximize flexibility in their program offerings to customers. In addition to improving flexibility for energy efficiency and supporting multi-measure interventions, it opens opportunities for BPU to encourage contractors to offer integrated solutions to customers. As the New Initiatives mature, in this flexible procurement model they can integrate across energy efficiency, demand response, or on-site generation and be consistently valued for their meter-based contributions to the Energy Master Plan goals and objectives.

- We encourage the BPU to adopt a whole building meter-based savings approach for the streamlined Residential program to drive deeper savings, rather than one-off technology incentives.
- We encourage BPU to adopt a pay for performance contracting option for aggregators interested in delivering savings with greater flexibility.

## Commercial Programs

The plans to streamline the Commercial program offerings “...*more effectively and flexibly allow participants to implement energy efficiency projects.*” is wise and we wholeheartedly agree with this sentiment. Likewise, we support BPU’s interest in “...*providing more and better opportunities for participating contractors and raters to grow their clean energy businesses.*” However, we also strongly support meter-based pay-for-performance model as a means to achieve these objectives.

The tiered paths for the new C&I program makes sense in terms of creating opportunities for customer participation with varying needs. However, we believe that BPU can be tracking the meter-based impacts of all participating customers without significant cost and with significant benefit for targeting interventions. In addition, the Path C Optional Add-On incentive for verified savings should be mandatory for all participants. This practice can be automated<sup>2</sup> for most customers in the existing buildings programs and would provide critical information for the overall impacts of the program.

- Automated M&V solutions make it possible to monitor all projects participating in Path C, rather than making the M&V incentive optional.
- Portfolio-based pay for performance can also serve to balance risk and allow for greater innovation in program design.

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<sup>2</sup> Using CalTRACK methods and the [OpenEEmeter](#); most building types are amenable to a straight forward M&V model. See [CalTRACK Results Week 8](#)

- To support the longer term goals of the Energy Master Plan, monitoring and tracking should be commonplace for all programs to ensure interventions can be tied to grid impacts,

## Conclusions

New Jersey has a unique opportunity to re-invent efficiency to meet the needs of the Energy Master Plan and a distributed energy future in which efficiency and demand reduction programs will be valued and aligned with grid needs and eventually procured as a key grid resource.

New Jersey can start preparing for the future with this 2020 set of programs by transparently and consistently measuring impacts of saving energy in any given location. As advanced metering infrastructure evolves in the state, time-based efficiency can be added and be offered at scale to enable grid optimization.

Flexible distributed energy resources (DERs) that can balance load are part of the solution to these grid management challenges when they are valued consistently.

VIA ELECTRONIC MAIL ([publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com))

June 11, 2018

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

THE MATTER OF THE OFFICE OF CLEAN  
ENERGY DRAFT COMPLIANCE FILING

Dear Secretary Camacho-Welch:

We have reviewed the Fiscal Year 2020 (FY20) Straw Proposal for NJ's Clean Energy Program (CEP) AND the proposed FY20 Staff Straw Proposal for New Jersey's Clean Energy Program ("NJCEP") Funding Levels for Fiscal Year 2018. We are concerned about that the proposed reduction in the level of financial support for Sustainable Jersey will slow the momentum of municipalities and schools on clean energy, and have a negative impact on participation in NJCEP programming due to the diminishing of a crucial local conduit for local action. We request funding be restored to \$500,000.

We appreciate the Board of Public Utilities' (Board) significant level of support and commitment to Sustainable Jersey to date. With the Board's financial support and technical assistance, Sustainable Jersey and Sustainable for Jersey for schools have developed a national role model for promoting energy efficiency and renewable energy actions at the local level. Currently, 450 municipalities participate in Sustainable Jersey, representing 80% of the communities within the state. There are 331 School Districts enrolled representing over 50% of all public districts and they have engaged 864 individual schools as well. The number of participating municipalities and schools continues to rise each year, increasing demand on the program.

Sustainable Jersey has motivated hundreds of communities to form official Green Teams, creating a receptive environment in local governments and communities for NJCEP programs and energy efficiency generally. For example, not included in the action tally above are the hundreds of school and municipal "green fairs" that have been launched due to Sustainable Jersey where tens of thousands of citizens are educated about NJCEP programming and clean energy every year. Outreach by NJCEP contractors is far more likely to be successful in municipalities and schools where Sustainable Jersey has established a Green Team and primed them to pursue NJCEP actions.

The fact that most of the municipalities in New Jersey are already orienting their sustainability efforts around the Sustainable Jersey program means that there are strong synergies, and critical good-will, that can be tapped when Sustainable Jersey makes the efforts to align State Programs with the SJ certification standards. Sustainable Jersey's program is also aligned with national programs and standards such as the Urban Sustainability Directors Network, American Council for an Energy Efficient Economy, and others.

As you may know, energy actions are among the most popular actions that municipalities and school districts pursue through Sustainable Jersey. Sustainable Jersey develops these actions in partnership with NJBPU specifically to incentivize municipalities and schools to utilize NJCEP programs. There is a tremendous amount of administrative work behind the scenes at Sustainable Jersey to develop and refine these energy actions, to provide support to the entities trying to earn points in the energy category, and to review the submissions.

The funding NJCEP has historically provided is critical to maintaining the quality of the content and provide the strong customer service that participants expect. It has also provided an opportunity to develop innovative approaches as a partnership. The loss of funding will limit Sustainable Jersey's ability to provide new and updated guidance on the broad slate of energy programs and high impact strategies, in particular the NJCEP programming, and it will drastically reduce the technical assistance they can provide. This includes losing momentum on Sustainable Jersey's work with a growing cohort of 30+ municipalities to implement a core slate of actions to lower greenhouse gas emissions. Entitled the Gold Star Standard for Energy, and created through research and stakeholder engagement funded by NJBPU, this slate of actions details the specific high-impact strategies that municipalities could and should implement immediately to help New Jersey reach our climate goals. It includes managing fleets and municipal facilities, and ordinances, programs, plans, and policies to move the community to increase energy efficiency and renewables, and lower emissions from mobile sources.

Reduced funding will also leave municipalities without support on key issues such as how to build internal capacity for energy management, and how to effectively implement local comprehensive energy planning. They are well positioned to help the state with the core interest in expanding access to these clean energy strategies across all types of communities through their efforts to review all actions through an equity lens and adjust as necessary. In the future Sustainable Jersey hopes to be able to support municipalities in taking advantage of all the work that has already been done by engaging and supporting the municipal energy planning grants that the NJBPU is currently promoting.

We recognize that the NJCEP budget has numerous priorities. However, we believe Sustainable Jersey funding has played a critical role in engaging local communities and the public, amplifying the impact and participation rates of NJCEP programs, and strongly urge funding be restored to \$500,000 for the fiscal year.

We appreciate the opportunity to provide comments on the draft and remain hopeful you can restore funding for the critical Sustainable Jersey programs. Please feel free to contact us if you need any additional information regarding these issues.

Signed:

Mary Barber  
Director  
New Jersey Clean Energy  
EDF

Ed Potosnak  
Executive Director  
New Jersey League of Conservation Voters



June 11, 2019

Honorable Aida Camacho-Welch, Secretary  
New Jersey Board of Public Utilities  
44 S. Clinton Ave., 9<sup>th</sup> Floor  
P.O. Box 350  
Trenton, NJ 08625-0350

Re: IN THE MATTER OF THE COMPREHENSIVE ENERGY EFFICIENCY AND RENEWABLE ENERGY RESOURCE ANALYSIS FOR FISCAL YEAR 2020 CLEAN ENERGY PROGRAM - Docket No. QO19050644; AND IN THE MATTER OF THE CLEAN ENERGY PROGRAMS AND BUDGET FOR THE FISCAL YEAR 2020 - Docket No. QO19050645

Dear Secretary Camacho:

Please accept these comments on behalf of New Jersey Natural Gas Company ("NJNG") in response to the May 29, 2019 release of the Fiscal Year 2020 ("FY20") Straw Proposal for NJ's Clean Energy Program ("CEP") Comprehensive Resource Analysis ("CRA") and the proposed FY20 program budgets and compliance filings. While NJNG appreciates the opportunity to offer these comments, however, we share concerns with many other stakeholders about the compressed time period for review and the lack of stakeholder input in the development of these plans. In addition to the comments shared through this submission, NJNG fully supports the comments filed by the New Jersey Utilities Association ("NJUA") in this matter.

#### ***GENERAL CONCERNS***

##### **LACK OF ALIGNMENT WITH THE CLEAN ENERGY ACT:**

Our review didn't identify a clear comparison of the projected NJCEP savings for FY20 in relation to the Clean Energy Act target of .75% energy savings for gas. Our estimate based on available data was that NJCEP would strive for .16% energy savings for gas. If that's accurate, the NJCEP portfolio would account for approximately 20% of the mandated savings target for gas. As an entity that has worked collaboratively in serving some customers with NJCEP for nearly a decade and recently launched some independent programs to expand our ability to serve customers, we are struggling to understand how NJNG could meet the mandated targets if our ability to propose new programs could be severely limited by an expansion of NJCEP programs assuming that the state intends to avoid competing programs.

If after extensive stakeholder input and thoughtful consideration there is a decision that some programs should continue to remain with NJCEP for implementation, there would still need to be a practical discussion about how that decision relates to the Clean Energy Act energy saving targets. The Clean Energy Act did not set a statewide energy saving target. It intended to set utility specific energy saving targets which is fundamentally at odds with the current NJCEP structure that allows program funding to switch between fuels and across service territories. For example, a dollar collected from a residential gas customer in Cape May County could be spent on commercial electric measures in Sussex County. This critical point would need significant consideration to ensure that any structure would not lead to unintended consequences in the pursuit of the energy savings targets by territory as established by the law.

As stated in the NJUA comments, NJNG believes that there should not be any significant expansion or redesign of NJCEP programs until the Board has addressed the fundamental issues of program administration needed to meet compliance with the Clean Energy Act.

**LACK OF STAKEHOLDER INPUT:**

NJNG recognizes that the Clean Energy Act left Board staff with many significant deliverables that had to be performed within a one-year period. NJNG appreciates the amount of time and effort that staff has invested to meet those deliverables. However, the proposed NJCEP programs for FY20 would have been considerably stronger if there had been an opportunity for stakeholders input. The lack of input and insight from the marketplace is reflected in the plan. Formats like the NJCEP Energy Efficiency (“EE”) Committee meeting, which has not had a formal in-person meeting since September, provide an avenue to help refine ideas and confirm assumptions.

Further open and participatory meetings, like the NJCEP EE Committee meetings, provide an opportunity to consider how potential program changes may impact their business. The lack of input, coupled with the lack of adequate advance notice of changes, severely hampers the ability of trade allies to maximize their promotion of and participation in energy efficiency programs. The state has set a mandate with very ambitious clean energy goals. If we want to get there in an effective, efficient way, there must be a priority on establishing forums for stakeholders to be educated and invested in the outcomes. A cooperative and collaborative structure is critical to properly serve customers and to grow the clean energy economy.

**NJCEP EXPANSION LIKELY TO LEAD TO LESS EFFECTIVE PROGRAMS:**

Further the NJCEP compliance plans only make passing references to working with utilities despite the fact that the TRC Compliance filing specifically states “Collaboration with the state’s utilities is critical to providing customers with a clear and understandable path to undertaking energy efficiency projects and obtaining financial incentives to help mitigate the associated

costs.”<sup>1</sup> NJNG is in complete agreement with the recognition of the critical role that utilities can play in helping customers understand and invest in energy efficiency projects. Expansion of NJCEP programs could lead to a weakening of opportunities to support customers if the ability to track customer participation and enhance personalized messaging and feedback is compromised. Leading utilities across the country are partnering with innovative new clean energy companies to make energy efficiency programs more cost effective with this new layer of personalized messaging and target marketing. Given the Murphy administration’s interest in ensuring all customers have the opportunity to participate in the clean energy economy, this pursuit of targeted communication and outreach should be a higher priority than ever.

Given the aggressive nature of the Clean Energy Act targets, New Jersey can’t afford to lose any opportunity to maximize energy savings. Specific examples of the potential lost opportunities are described further in this submission.

#### **LACK OF SUBSTANCE ON NEW NJCEP PROPOSALS:**

We appreciate the Office of Clean Energy’s (“OCE”) interest in identifying new initiatives that are important to growing a clean energy economy and meeting our climate goals. We agree that New Jersey must increase its focus on workforce development, emerging technologies and curriculum and more. However, several of the proposals only consist of two or three sentences. In the most extreme case, there is only one sentence describing the new Smart Tech initiative despite seeking a budget of more than \$8.1 million for FY20. NJNG is hopeful that the intention within this compliance filing is merely to reserve funding for now with an intention to return with a robust process that includes early stakeholder input and the opportunity to provide formal comments on a more detailed proposal prior to implementation.

#### **LACK OF EVIDENCE TO SUPPORT ANY BENEFIT FROM PROPOSED CHANGE IN TREATMENT FOR NATURAL GAS CONVERSION CUSTOMERS:**

Many stakeholders were surprised to hear on the May 24<sup>th</sup> NJCEP webinar providing an overview of changes included the intention to limit the ability of customers converting to natural gas to participate in NJCEP programs. It was shocking to see that the materials released on May 29<sup>th</sup> included such a limitation but did not provide any supporting analysis. The filing did not include any analysis of affordability, any analysis of emissions impacts, any analysis of reliability impacts or even general characterizations of likely market reactions. Leading clean energy states, like Massachusetts, have done significant research and evaluation and have aggressive electrification strategies in place. But they haven’t taken this step and the economics for natural gas are even stronger here in New Jersey. Further in this submission, we provide clear evidence that changing the incentive structure to put energy efficient gas appliances out of reach for many customers will not help NJ residents and businesses with energy affordability or make any gains in emissions reduction.

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<sup>1</sup> From page 193 of the TRC Compliance Filing.

## ***SPECIFIC COMMENTS***

### **COMFORT PARTNERS PROGRAM**

NJNG appreciates the intention of the proposal to increase the income eligibility from 225% of Federal Poverty Guidelines to 250%. We recognize this will help energy efficiency upgrades be more accessible to customers who would most likely be unable to afford participating in traditional energy efficiency offerings. It would have been helpful for this proposal to include an analysis of the expected increase in the number of customers eligible to participate in this program.

NJNG further notes that this will shrink the eligibility pool for customers that can take advantage of the new Low to Moderate Income (“LMI”) customer path that the BPU recently approved for our SAVEGREEN Project. Qualified LMI customers can receive both the NJNG and NJCEP equipment rebates and can pair it with an extended term for our On-Bill Repayment Program. We are pleased to note that there has been a strong customer response to that program feature already -accounting for more than 20% of the activity customers in our HVAC program path since the rollout earlier this year.

We are happy to update the eligibility for our program when this change may take effect to ensure eligible customers take advantage of the most generous incentives available. However, we note this is another example where longer lead time for proposed changes will assist the marketplace. Our LMI program incentives can be offered by any of the thousands of contractors participating in our HVAC program. We have been working hard to ensure our contractors knew about our LMI feature and will now need to conduct additional outreach to reflect the tighter income ranges for our program. In turn, they will need to educate their staff about the change and potentially update marketing materials they could have developed.

Additionally, NJNG provided an extensive discussion of broader concerns about barriers to customer participation in Comfort Partners as part of our comments in the Market Potential Study proceeding. We noted extensive health and safety issues (e.g. mold, lead paint, roof leaks) can prevent a significant number of eligible and interested customers from participating in this program. We are hopeful that as part of the Energy Master Plan proceeding, there can be a focused effort to develop a new funding sources or a new approach to allow for these health and safety issues to be remedied so energy efficiency upgrades can be completed.

### **NJCEP ENERGY EFFICIENT PRODUCTS PROGRAM – FOODBANK INITIATIVE**

NJNG appreciates NJCEP’s interest in helping the most vulnerable customers in New Jersey. In fact, we share that interest and we were pleased to receive BPU approval for a new effort to help these customers through the Efficient Products portion of our SAVEGREEN programs. In

partnership with food banks in our service territory, we are starting to distribute free energy conservation kits to food pantry clients. These kits can provide immediate energy savings through LED light bulbs, weatherization items and energy saving tips.

More importantly, they provide critical information about the broad range of energy assistance programs that New Jersey offers and the NJCEP Comfort Partners programs. Participation in these programs will make energy bills more affordable for our most vulnerable customers. We designed our program to record the account number of participating customers so we will be able to assess their participation in these other programs and pursue continued outreach to these customers to ensure they avail themselves of the strong safety net that NJ has established.

We recognize NJCEP's interest in helping meet the needs of these customers but respectfully suggest that the utilities are strategically suited to pursue this with a sophisticated program that can monitor participation in other safety net programs, provide more customized recommendations in behavioral programs, and leverage our local community contacts to reach more people in need. If NJCEP implements their foodbank initiative program during FY20, it should not limit the potential for utilities to continue to propose working with local entities like foodbanks to reach these customers in need.

### **SMART TECH INITIATIVE**

Both the Summary of Changes and the OCE Compliance filing, only provide a single sentence describing the Smart Tech initiative with a requested budget of more than \$8.1 million. That sentence references smart thermostats but does not describe the planned incentive or the proposed program approach. NJNG believes that any Smart Tech Initiative should start with the fundamental question of whether offering such a program could lead to greater customer interaction and enhanced personalized messaging and feedback through a utility offer instead of NJCEP.

NJNG was pleased to get BPU approval to launch a program that offers a significant discount on smart thermostats to our customers. Customer response has been strong and, similar to our conservation kit story, it links to our deeper energy saving programs. Each thermostat shipped includes information about our other energy efficiency programs. Many customers are pairing these thermostat purchases with our \$49 Home Energy Assessments that identifies the best energy savings opportunity in each home. And we also share information about incentives available from NJNG and NJCEP that make those recommendations affordable and accessible.

We use the information about purchases to refine messaging in our behavioral program. The Home Energy Reports for customers who buy a thermostat will get tips about maximizing energy savings using their thermostat, instead of messages encouraging them to buy one. We leverage our knowledge of customers to provide them a personalized experience that can also maximize energy

savings. If NJCEP were to launch a similar smart thermostat offer as part of their Smart Tech program, it would most likely create confusion in the marketplace and would eliminate the opportunities to customize our messaging and gain greater energy savings opportunities. This example perfectly circles back to NJUA's point that we collectively need to address the role of utilities in providing EE programs to meet the Clean Energy Act mandates and effectively meeting the needs of customers.

#### **ELIMINATION OF SIZNG REQUIREMENTS FOR HVAC PROGRAMS**

NJNG supports the elimination of the requirement to submit the equipment sizing requirement for the HVAC programs. In fact, as part of the preliminary Energy Master Plan hearings last September, NJNG referenced this as an example and an opportunity. From experience working directly with contractors and customers as part of our SAVEGREEN program, we know that many contractors perceive the calculation as a burden to participating in the energy efficiency programs and many customers are frustrated when a contractor has not performed the calculation or wants to charge them for performing this task. Even though it is a code requirement, we recognize that there is still considerable work to be done to ensure that the calculation is being performed properly on all installations. Accordingly, shifting to an outreach and education strategy ensuring compliance with all installations, could alleviate some of the perceived burden for participating in energy efficiency programs and ensure greater energy savings even when customers install standard efficiency equipment. To be successful, the elimination of this requirement should be paired with a stronger partnership with the Department of Community Affairs and trade ally associations to advance compliance.

#### **TREATMENT OF NATURAL GAS CONVERSION CUSTOMERS.**

One would assume that the efforts to build a clean energy economy should keep a focus on improving emissions and affordability. However, that would not be the case if the proposal to eliminate equipment incentives for many customers converting to natural gas is approved. As noted in our general comments, it is critical to note that this proposal did not provide any factual support for stakeholder review.

Under this proposal, the majority of the customers seeking to convert to natural gas will no longer have access to incentives to make the extra investment in high efficiency equipment. The upfront cost of efficient equipment would be a significant barrier for low-to-moderate income customers if they don't have access to our financing. Instead, that customer is much more likely to stay with oil or propane heat, or move to standard efficiency equipment – a purchase they won't make again for decades. These outcomes are not in the best interest of that customer in the long run or for our common policy goals. It negatively impacts our environment any time a heating oil customer chooses to stay on the dirtier system.

In regard to affordability, air source heat pumps cost more to install and operate than natural gas furnaces. Consider these relevant facts:

- According to the Energy Information Administration, the installation of an air source heat pump currently costs \$3,000 more than the installation of a high-efficiency natural gas furnace.<sup>2</sup>
- Based on New Jersey's current energy costs, the annual cost of operating of an electric air source heat pump is 66 percent higher than a high-efficiency natural gas furnace. This comparison assumes a 95 percent AFUE, 60 MMBtu furnace with natural gas costs of \$0.98 per therm, and an five ton air source heat pump, with a seasonal coefficient of performance of 2.5 and electric costs of \$0.16 per kilowatt hour<sup>3</sup>.
- "Based on our analysis, we find that electric heat pumps have higher equipment and installation costs than gas furnaces and that electricity is generally more expensive per Btu than natural gas."<sup>4</sup>
- Customers may be expected to maintain multiple heating systems. The highly respected MassSave program warns customers that they do not recommend eliminating their central heating system when installing heat pump technologies. The excerpt below is taken from the MassSave rebate form and is repeated throughout the website.

I have elected to remove my oil or propane central heating system.  Yes  No  
Note: The Sponsors of Mass Save do not recommend fully displacing existing central heating system with heat pump equipment.  
Type of equipment removed  Forced hot water or steam system  Forced hot air system

Clearly, there is no evidence to show that this proposal would improve energy affordability in New Jersey. In fact, just the opposite is true, when customers convert from deliverable fuels to natural gas, they begin to pay a full share of societal benefits costs. As deliverable fuel customers, they were not contributing anything from the value of their heating burden to help assist low income customers through the Universal Service Fund Program or to improve air quality through the reduced emissions created by the NJCEP Program.

NJNG is highly supportive of the language which indicated that customers would be allowed to convert to natural gas through the Comfort Partners program. That practice has not historically been allowed within the program. Given the fact that customers approved to participate in Comfort Partners have a demonstrated financial need and natural gas is by far the most affordable fuel source, it would be a sound policy decision to allow conversions within that program.

In regard to performance and reliability, the experience in Massachusetts as noted in the language above clearly indicates that the heat pump technology is not ready to be a full replacement for a

<sup>2</sup> Assumptions to the Annual Energy Outlook 2019: Residential Demand Module

<sup>3</sup> Dispatching Direct Use: Achieving Greenhouse Gas Reductions with Natural Gas in Homes and Businesses, American Gas Association, Table A-1.

<sup>4</sup> American Council for an Energy-Efficient Economy, Comparative Energy Use of Residential Gas Furnaces and Electric Heat Pumps, 2016

traditional heating system, especially when given consideration of efficiency and affordability. However, we don't need to head north for examples, since we have experienced them in our own backyard. Over the past five years, several schools in our service territory that had made substantial investments in electric or geothermal heating systems switched to or added natural gas heating to their facilities. They did this because the other systems weren't meeting their needs. Consider the following independent voices that confirm this.

- Air source heat pumps, even those designed for cold climates, produce less heat with less efficiency at colder temperatures. A sample of manufacturer specifications shows output decreases about 30 percent with a temperature decrease from 47 to 17 degrees, compromising customer comfort and causing the heat pump to work harder to provide the desired space heat<sup>5</sup>.
- “While the specification provides far greater information and transparency around ASHP performance, there are weaknesses as well. The most glaring - and one that the working group is most keen on addressing - is that there are no industry standard test procedures for ASHPs below 17°F, including the performance at 5°F. The performance data collected in the specification at 5°F is self-reported.”<sup>6</sup>
- “...the efficiency or performance of ASHPs declines with outdoor temperature, and the decline can substantially impact the cost of operating the heat pump, particularly if electric resistance is used as a backup heating source. Thus, future adoption of ASHPs will depend not only on their cost (and the cost of electricity) but also their performance, particularly in colder regions.”<sup>7</sup>
- “The modeling projects a potentially economically efficient role for natural gas as a backup fuel for heat pumps systems. In all but the mildest climates, heat pumps are paired with a back-up heat source because their performance drops at lower temperatures. While today the predominant back-up source is electric resistance heat (especially in warmer climates), as heat pump technology improves it expands into colder regions, where natural gas back-up is more cost effective.”<sup>8</sup>
- “Our analysis finds that electric heat pumps generally use less energy in warm states and have moderately positive economics in these states if a heat pump can replace both the furnace and a central air conditioner. Moderately cold states (as far north as Pennsylvania and Massachusetts) can save energy if electricity comes from the highest-efficiency power plants, but from an economic point of view, life cycle costs for gas furnaces in existing homes will be lower than for heat pumps in these states.”<sup>9</sup>

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<sup>5</sup> *Northeast Energy-Efficiency Partnership, Cold Climate Heat Pump Product List*

<sup>6</sup> *Northeast Energy Efficiency Partnership, Northeast/Mid-Atlantic Air-Source Heat Pump Market Strategies Report 2016 Update*

<sup>7</sup> *NREL Electrification Futures Study*

<sup>8</sup> *EPRI, 2018 U.S. National Electrification Assessment*

<sup>9</sup> *American Council for an Energy-Efficient Economy, Comparative Energy Use of Residential Gas Furnaces and Electric Heat Pumps, 2016*

While there have been recent advancements in heat pump technologies, this compilation of findings clearly shows the state of electric heat pump technology today in cold climates like the northeast raises significant questions about reliability. Taking the bad economics and the reality of challenges of the technology in meeting customer needs on colder days, it seems startling and ill-informed to try to limit customer access to high-efficiency natural gas equipment today.

Beyond the concerns about affordability and reliability, there isn't any indication of an analysis showing an emissions benefit. In fact, air source heat pumps produce more greenhouse gas emissions than natural gas furnaces. Based on PJM East power generation mix and the comparison of the units referenced above, an electric air source heat pump emits 17 percent more CO<sub>2</sub>e annually than a high-efficiency natural gas furnace<sup>10</sup>. An electric air source heat pump uses 7 percent more energy annually than a high-efficiency natural gas furnace. This reflects thermodynamic losses from central station generators and line losses in delivering electricity to homes<sup>11</sup>.

### **SUSTAINABLE JERSEY**

The OCE compliance filing notes that the BPU's Sustainable Jersey contract supports NJCEP's goals through a robust program that builds a base of local support for clean energy initiatives, implements targeted programs to increase energy efficiency and renewables, and researches new programs and strategies to leverage local capacity to advance clean energy goals. Yet the FY20 budget proposes to cut the funding for Sustainable Jersey in half. Given the fact that 450 municipalities (80 percent of the state's municipalities) and 867 schools representing 331 districts (nearly 50 percent of the state's school districts) are participating in Sustainable Jersey and Sustainable Jersey for Schools, this proposed reduction in support is unwarranted. Given the vast educational and outreach elements, as well as the added motivation of earning Sustainable Jersey points, Sustainable Jersey is uniquely positioned to continue to help advance the BPU's interests in advancing energy efficiency, renewable energy, and electric vehicles. Accordingly, their funding should not be reduced.

### **CURRICULUM**

NJNG fully supports efforts to develop curricula related to saving energy for students of all age ranges. We have been running small scale outreach and education programs and contests for students for more than a decade. Over the past five years, we have been involved on a deeper level as sponsors of the Alliance to Save Energy's PowerSave School program, which provides grade

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<sup>10</sup> Dispatching Direct Use: Achieving Greenhouse Gas Reductions with Natural Gas in Homes and Businesses, American Gas Association, Table A-1.

<sup>11</sup> Dispatching Direct Use: Achieving Greenhouse Gas Reductions with Natural Gas in Homes and Businesses, American Gas Association, Table A-1.

level adjusted instruction for students and extensive resources for teachers. Beyond that, PowerSave empowers students to help their school communities focus on saving energy from behavioral and operations changes. It generates behavioral energy savings in schools through student led teams. NJNG is happy to share our experience, which was implemented through a partnership with Sustainable Jersey for Schools, as this initiative is further developed.

### **TRANSITION FOR CUSTOMERS IN PROGRESS**

The proposal did not address plans for transitioning customers that may currently be in the midst of participating in a program. For example, a customer participating in the NJCEP Direct Install program and is located in an Urban Enterprise Zone (UEZ) may now qualify for a higher percentage incentive. Given our role providing the companion financing for Direct Install projects, it is critical to understand how customers will be treated during the transition.

### **CLEAN ENERGY CONFERENCE**

As noted in our comments on the FY19 True Up Budget, NJNG is extremely supportive of the BPU's proposal to host a Clean Energy conference. Prior to the NJCEP conferences being eliminated in 2010, NJNG actively participated in the Planning Committees for the conference and also played a role as a sponsor and exhibitor. We believe it is an excellent way to showcase the range of opportunities and engage customers, trade allies and other key stakeholders. We would be happy to support this effort again.

In closing, NJNG remains committed to partnering with the State to help achieve its energy-efficiency goals. Thank you, again, for the opportunity to provide these comments and allow us to be a part of the State's energy future.

Respectfully submitted,



Anne-Marie Peracchio

VIA ELECTRONIC MAIL ([publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com))

June 6, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

IN THE MATTER OF THE OFFICE OF CLEAN  
ENERGY DRAFT COMPLIANCE FILING

Dear Secretary Camacho-Welch:

We have reviewed the Fiscal Year 2020 (FY20) Straw Proposal for New Jersey's Clean Energy Program (NJCEP) and the proposed FY20 Staff Straw Proposal for NJCEP. The proposed funding for Sustainable Jersey has been reduced from \$500,000 to \$250,000. We are concerned about the negative impact the proposed reduction in financial support for Sustainable Jersey will have on its programs, which has a proven track record of local results, public education and engagement, and advancing the goals of NJCEP. We urge funding to be restored to \$500,000.

We appreciate the Board of Public Utilities' (Board) significant level of support and commitment to Sustainable Jersey to date. The New Jersey League of Municipalities, New Jersey School Boards Association, and New Jersey Education Association were key partners, along with the Board, in launching Sustainable Jersey to help municipalities and schools make progress on a range of issues critical to New Jersey's future. With the Board's financial support and technical assistance, Sustainable Jersey and Sustainable Jersey for Schools have revolutionized how local government addresses sustainability, particularly in relation to energy.

Since initiating this partnership, NJLM, NJSBA and NJEA have all made significant commitments in terms of time, resources and organizational strategy to utilize the Sustainable Jersey program as a key conduit for guiding and supporting the activities of municipalities and schools on critical sustainability issues. The integration of state programs and priorities with Sustainable Jersey makes it easier for us to engage our constituents in support for your efforts. This partnership among our organizations, local government and state agencies has resulted in unprecedented cooperation and progress, and we request that the partnership continue and be strengthened.

There are now active Sustainable Jersey green teams in hundreds of municipalities and schools, acting as force multipliers for statewide objectives and programs. Sustainable Jersey has been critical to building local passion and capacity and harnessing that capacity in partnership with the state to make measurable progress. Collectively, they are implementing over 2,500 discrete actions per year that support New Jersey's sustainability goals across numerous agencies, as well as hundreds of actions directly related to greenhouse gas emissions reduction and sustainable energy.

Currently, 450 municipalities participate in Sustainable Jersey, representing 80% of the communities within the state. Despite being a much newer program, Sustainable Jersey for Schools has already engaged 331 school districts, over 50% of the state's total, and 864 individual schools. The number of participating municipalities and schools continues to rise each year, increasing demand on the program. Working together, we have developed a national model for linking state and local action that has been emulated in nearly a dozen other states.

As you may know, clean energy is among the most popular areas for municipalities and school districts working with Sustainable Jersey. Sustainable Jersey develops these actions in partnership with NJBPU specifically to incentivize municipalities and schools to utilize NJCEP. There is a tremendous amount of outreach and administrative work behind the scenes at Sustainable Jersey to develop and refine these energy actions, to provide support to the entities trying to earn points in the energy category, and to work with the communities on their submissions.

The funding that NJCEP has historically provided is critical to maintaining the quality of the content and the strong customer service that participants expect. It has also provided an opportunity to develop innovative approaches as a partnership. In particular, Sustainable Jersey continues to work with a growing cohort of more than 30 municipalities to implement our core slate of actions to lower greenhouse gas emissions. Called the Gold Star Standard for Energy and created through research and stakeholder engagement funded by NJBPU, this slate of actions details the specific high-impact strategies that municipalities could and should implement immediately to help New Jersey reach our climate goals. It includes the management of fleets and municipal facilities, as well as ordinances, programs, plans and policies designed to move the community toward increased energy efficiency, the use of renewables, and lower emissions from mobile sources. They are well positioned to help the state with its core interest in expanding access to these clean energy strategies across all types of communities, through both the promotion of community solar and the review of all actions through an equity lens. On the school side, Sustainable Jersey has helped dozens of schools integrate education and action on climate change by promoting programs such as Power Save Schools, which links schools to the Clean Energy Program.

In the future, Sustainable Jersey would like to be able to support municipalities in taking advantage of all the work that has already been done by engaging and supporting the municipal energy planning grants that the NJBPU is currently promoting.

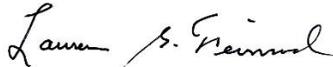
As NJCEP moves to establish new programs for local governments, continued Sustainable Jersey funding will play a critical role in engaging local communities and the public, and we strongly urge funding be restored to \$500,000 for the fiscal year. This program is a great example of state leadership and local policy implementation working together. Level funding will ensure that the Board and Sustainable Jersey can continue to innovate and provide the proper level of service to Sustainable Jersey members in towns and schools across the state.

We appreciate the opportunity to comment on the draft and are grateful for your consideration of restoring funding for the critical Sustainable Jersey programs. Please feel free to contact us if you need additional information.

Signed:



Michael J. Darcy, Executive Director, New Jersey State League of Municipalities



Larry S. Feinsod, Ed.D., Executive Director, New Jersey School Boards Association



Sean M. Spiller, Vice President, New Jersey Education Association

June 11, 2019

Honorable Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 S. Clinton Ave., 9<sup>th</sup> Floor  
P.O. Box 350  
Trenton, NJ 08625-0350

Re: IN THE MATTER OF THE COMPREHENSIVE ENERGY EFFICIENCY AND RENEWABLE ENERGY RESOURCE ANALYSIS FOR FISCAL YEAR 2020 CLEAN ENERGY PROGRAM - Docket No. QO19050644; AND IN THE MATTER OF THE CLEAN ENERGY PROGRAMS AND BUDGET FOR THE FISCAL YEAR 2020 - Docket No. QO19050645

Dear Secretary Camacho-Welch:

Thank you for the opportunity to provide comments regarding the Board of Public Utilities' ("Board" or "BPU") in the above captioned matter. The electric and natural gas companies that are members of the New Jersey Utilities Association ("NJUA")<sup>1</sup> jointly provide these comments. NJUA members may also submit comments on an individual basis. NJUA is the New Jersey statewide trade association for investor-owned utilities that provide essential electric, natural gas, water, wastewater and telecommunications services 24 hours a day, 7 days a week, 365 days a year. An electronic copy of these comments has also been provided to [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com).

Our members appreciate the broad scope of work that the Board and Board Staff has initiated over the course of the past year to fulfill the requirements of the Clean Energy Act and to advance the Governor's clean energy priorities. We have reviewed the current package of proposals regarding CRA funding and NJCEP budgets for FY20 and would like to share the following comments with the intentions of the Clean Energy Act's role for the utilities in mind.

The Clean Energy Act is clear that the utilities are ultimately responsible for ensuring that the mandated energy reductions are met. *See* N.J.S.A. 48:3-87.9. The utilities cannot be faced with a mandated responsibility to deliver energy savings and then effectively be restricted from participating in market segments where the most cost-effective opportunities exist. Niche programs alone will not position the utilities to meet the targets. If this statement sounds familiar, it is because we expressed it last year regarding the proposed FY19-22 NJCEP Plans, as part of the Energy Master Plan Process last fall, and in response to the questions posed for the February 2019 stakeholder hearing for the establishment of energy efficiency and demand reduction programs.

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<sup>1</sup> The NJUA member companies participating in this submission include: Atlantic City Electric Company, Elizabethtown Gas, Jersey Central Power & Light Company, Public Service Electric & Gas Company, Rockland Electric Company, South Jersey Gas Company, and New Jersey Natural Gas.

Aqua New Jersey, Inc. • Atlantic City Electric Company • Atlantic City Sewerage Company • Elizabethtown Gas  
Gordon's Corner Water Company • Jersey Central Power & Light, A FirstEnergy Company • Middlesex Water Company  
New Jersey American Water • New Jersey Natural Gas. • Public Service Electric & Gas Company • Rockland Electric Company  
• South Jersey Gas • SUEZ • Verizon New Jersey

Our member companies are not alone in seeking clarity on the issue of program administration. Many stakeholders who participated in that February hearing, or subsequently filed written comments, expressed a strong desire to see a greater role for utility involvement in the administration of the program. Those stakeholders cited their experience in other states and the historical performance of the NJCEP as part of their rationale for supporting utility-run programs.

Yet these NJCEP documents clearly reflect an interest in expanding the offerings available throughout NJCEP with only passing references to utility programs or utility support. Also, this is the first time that utilities and other stakeholders had no opportunity to provide input regarding the development of the proposed NJCEP plans for the next fiscal year. Many have been active members of the NJCEP Energy Efficiency committee for years and in prior years they have shared their suggestions and concerns with BPU staff, as well as the NJCEP Administrator staff, to help inform the development of the programs and to help with outreach after approval. The utilities have significant insights from their relationships with their customers as a lifeline service provider, both from running energy efficiency programs in New Jersey that complement NJCEP and from running programs in other states. Our input is valuable, as are the insights that other stakeholders can provide.

Returning to the NJCEP filings, it is not possible to provide constructive input regarding some of the new proposed programs since the proposal only offers a few sentences of description for some multi-million-dollar proposals. We recommend that if these new programs are included as part of the NJCEP for FY20 that the new programs referenced within the Office of Clean Energy Program return with more robust and comprehensive program descriptions and an opportunity for stakeholder input prior to BPU approval and program launch.

Respectfully, we note that there are elements of these NJCEP proposals that are inconsistent with the new State policy seeking utility leadership on clean energy that was established when the Clean Energy Act was implemented. There is still considerable uncertainty regarding the preliminary Market Potential Study and the initial recommendations regarding the quantitative performance indicators. As such, we respectfully ask that our members not be faced with a mandated responsibility to deliver energy savings and then effectively be told that they cannot participate in nearly every market segment. Accordingly, we suggest that NJCEP should not undergo any significant redesign or expansion, until after there is clarity regarding the role for utilities in the administration of energy efficiency programs under the Clean Energy Act, in particular clarity regarding the territory specific targets, and clarity regarding how utility performance will be judged.

Thank you again for the opportunity to provide comments.

Respectfully submitted,



Thomas R. Churchelow, Esq.  
Senior Director, Government and Public Affairs  
New Jersey Utilities Association

June 11, 2019

***Submitted Via Email***

State of New Jersey  
Board of Public Utilities  
44 South Clinton Ave, 3<sup>rd</sup> Floor, Suite 312  
P.O. Box 350  
Trenton, New Jersey 08625-0350

**RE: NJ CLEAN ENERGY PROGRAM, FISCAL YEAR 2020 SUMMARY OF  
PROPOSED NEW INITIATIVES AND PROGRAM CHANGES**

Secretary Camacho-Welch:

Please find enclosed the comments of the undersigned organizations in the above captioned proceeding. Thank you for your consideration of these comments.

Respectfully submitted,

Eric Miller  
New Jersey Energy Policy Director  
Climate and Clean Energy Program  
Natural Resources Defense Council

Ed Potosnak  
Executive Director  
New Jersey League of Conservation Voters

Ada Statler  
Schneider Fellow  
Climate and Clean Energy Program  
Natural Resources Defense Council

Pari Kasotia  
Mid-Atlantic Director  
Vote Solar

Mary Barber  
Director, New Jersey Clean Energy  
Environmental Defense Fund

Trina Mallik  
Climate Change and Energy Policy Manager  
The Nature Conservancy

Richard Lawton  
Executive Director  
New Jersey Sustainable Business Council

Tom Gilbert  
Campaign Director  
New Jersey Conservation Foundation

## **I. INTRODUCTION**

Natural Resources Defense Council, Environmental Defense Fund, NJ Sustainable Business Council, NJ League of Conservation Voters, Vote Solar, The Nature Conservancy, and NJ Conservation Foundation, (collectively “Clean Energy Advocates”) are pleased to provide these comments to the New Jersey Board of Public Utilities (“Board”) on the Proposed Fiscal Year 2020 (“FY20”) Straw Proposal for the NJ’s Clean Energy Program (“NJCEP”) Comprehensive Resource Analysis (“CRA”), as well as the proposed FY20 budgets, and Compliance Filings of TRC and the Office of Clean Energy (“OCE”).

The FY20 NJCEP filing comes at a critical time for New Jersey’s clean energy future. For the past twelve months, the Board, utilities, and various stakeholders have been working tirelessly to implement the requirements of the Clean Energy Act (“CEA”) and the Energy Master Plan (“EMP”). These include numerous rounds of comments and stakeholder meetings concerning important topics such as Energy Efficiency and Peak Load Reductions, the Community Solar Energy Pilot Program, NJ Solar Transition, Offshore Wind Procurement and The Draft Energy Efficiency Market Potential Study, among others. Together, these efforts represent the foundation of programs that have the potential to make New Jersey a national leader in clean energy and greenhouse gas reduction strategies.

At this critical juncture, the Clean Energy Advocates applaud the Board and the Governor’s Office commitment to phase-out the diversion of clean energy funds collected through the Societal Benefits Charge (“SBC”). As a result of this phase-out, this year the NJCEPs budget will include millions of dollars of additional funding to support new and expanded initiatives. With the expanded budget and CEA in mind, we are pleased to submit these comments as the Board finalizes its NJCEP for the 2020 Fiscal Year.

## II. COMMENTS

- a. The Board Should Clarify the Desired Role of NJCEP Programs in the Greater Context of the CEA and Provide Expanded Opportunities for Stakeholder Engagement Moving Forward

While the Clean Energy Advocates strongly support the numerous activities undertaken by the Board to meet the requirements of the CEA and the newly-updated Global Warming Response Act (“GWRA”), we are deeply concerned by lack of clarity regarding the relationship between the existing NJCEP and the new energy efficiency savings programs utilities are required to implement under the CEA. Given the significant expansion of energy efficiency targets under the CEA, clearly defining the role of the Board, OCE, utilities, and stakeholders in the design, implementation, and evaluation of energy efficiency programs is critical for New Jersey to capture its clean energy future. Therefore, we respectfully request that the Board: (1) Provide additional venues and time for stakeholder engagement related to the NJCEP and CEA Programs; (2) clarify how the new Proposed FY20 NJCEP relates to the energy efficiency savings targets, incentives, and penalties the Board adopted at its May 28th Public Meeting; and, (3) provide a proposed timeline for revisiting the FY20 NJCEP in response to determinations made during the ongoing CEA stakeholder process slated to conclude this winter. The Clean Energy Advocates believe that by resolving these concerns, the Board will successfully lay the groundwork for New Jersey to achieve the important goals established in the CEA and GRWA.

First, the Clean Energy Advocates urge the Board to provide additional venues and time for stakeholders to engage in the decision-making process surrounding the FY20 NJCEP programs, as well as the new utility-run programs required by the CEA. Thus far, there has been insufficient time and few venues for stakeholders to provide meaningful input on foundational elements of the CEA and NJCEP. Additionally, the Clean Energy Advocates are concerned there has been insufficient time for the Board to consider and respond to the comments of stakeholders before taking final action on several docketed items. The FY20 Draft CRA provides a recap for many of those formal Board actions.

In the FY20 Draft CRA, the Board acknowledges that the CEA requires both the Board and the State’s investor-owned electric and gas utilities “to take action regarding energy efficiency.”<sup>1</sup> To that end, in January 2019, the Board contracted with Optimal Energy to conduct the Energy Efficiency Market Potential Study. Then, in February 2019, the Board held a public meeting to solicit responses to twelve questions “that would help guide the process and advance the design of the energy efficiency programs under the requirements of the Act.”<sup>2</sup> Finally, on May 28, 2019, the Board accepted the final Energy Efficiency Market Potential Study, adopted the preliminary Quantitative Performance Indicators (“QPIs”) related to reduction targets, and outlined the structure of the Advisory Group, “whose members will provide insight on key elements of program implementation and evaluation. . .”<sup>3</sup>

Each of these actions taken by the Board has advanced foundational elements of the new energy efficiency programs required by the CEA and should inform any NJCEP activities – new and existing – proposed in the FY20 CRA. However, during this process, stakeholders had little notice to respond to Requests for Comment on these foundational elements, or the Board provided limited response to questions and concerns raised by stakeholders. Further, some opportunities considered as stakeholder engagements were, in effect, primarily updates without opportunity for robust discussion. For example, the Board held four presentations to stakeholders over nearly three months for the Draft Energy Efficiency Market Potential Study; but interested parties had only three days to respond to the Draft Study before the Board approved its acceptance at its May 28th Board Agenda Meeting. At that same meeting, the Board established an Advisory Group of only five members, despite a chorus of oral and written comments at the February 1, 2019 public hearing asking the Board to establish an Advisory Group that included many more interested parties, as well as technical experts.

With these past experiences in mind, the Clean Energy Advocates respectfully request that, moving forward, the Board carefully consider the time frames in which it requests comments on CEA implementation actions. The Clean Energy Advocates, while fully engaged in these

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<sup>1</sup> NJ Clean Energy Program, DRAFT COMPREHENSIVE ENERGY EFFICIENCY & RENEWABLE ENERGY RESOURCE ANALYSIS, at 6 (May 29, 2019).

<sup>2</sup> *Id.* at 7.

<sup>3</sup> *Id.*

proceedings, would appreciate an enhanced opportunity to meaningfully respond to Board Notices in a more collaborative environment. In various settings, other stakeholders have shared the same sentiment. By increasing the level of transparency, information sharing, and opportunity for engagement around the CEA and FY20 CRA, the quality of the policy and implementation work product would be significantly enhanced.

Second, the Clean Energy Advocates respectfully request that the Board indicate what portion of the CEA energy efficiency goals will be satisfied by the State's NJCEP activities, and what portion will be satisfied by the utilities' own programs required by the CEA. The CEA requires utilities to achieve annual energy savings targets of 2.0 percent and 0.75 percent for electric and gas utilities, respectively. Moreover, the CEA allows for utilities to count NJCEP program performance in its service territory towards its attainment of energy reduction goals set pursuant to the CEA. However, it is not yet settled whether utilities would be subject to financial penalties were NJCEP programs to underperform in their service territories. This set-up, of utilities being held accountable for savings not under their control, would likely not provide an effective strategy for achieving the large scale of savings needed. Indeed, in the event that NJCEP continues to expand its programs, there is no clear accountability mechanism in place to integrate the savings – and verification of the savings – in accordance with the mandates of the CEA.

Finally, the Clean Energy Advocates respectfully request that the Board provide a concrete timeline for reviewing the FY20 CRA in response to decisions made concerning the design, implementation, and evaluation of utility-run programs required by the CEA. The Draft CRA indicates that the Board will “consider changes to the clean energy programs in the fall of 2019,” due to the additional discussions slated to take place “related to utility-specific energy usage and peak demand reduction targets, the program structure, cost recovery, utility filing requirements, program timeframes, evaluation, and reporting requirements.”<sup>4</sup> Given the host of design elements to-be-determined, the Clean Energy Advocates believe there should be a specific docketed action to review the FY20 CRA in light of the CEA.

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<sup>4</sup> *Id.*

b. The Board Should Provide Additional Information Regarding New Programs Contained in the OCE Compliance Filing

The Clean Energy Advocates respectfully request that the Board provide additional information, education, and opportunity for stakeholder input for the new programs outlined in the FY20 OCE Draft Compliance Filing.<sup>5</sup> In sum, the OCE is proposing eight new initiatives, totaling more than \$41 million in expenditures.<sup>6</sup> These initiatives include:

- Community Energy Grants
- Storage
- NJ WIND
- Clean Energy Innovation
- R&D Energy Tech Hub
- Workforce Development
- Curriculum
- Smart Tech<sup>7</sup>

The Clean Energy Advocates largely support the intention and concept behind these new program areas and believe many of them are critical for the State to meet its obligations under the CEA and GWRA. In particular, the Clean Energy Advocates support increased and new funding for Community Energy Grants, as well as technical analysis and workforce development. However, many of the proposed new and expanded initiatives lack adequate information for stakeholders to provide meaningful comment, or even fully understand their purpose.

For example, the Smart Tech program, which proposed more than \$8.1 million in incentives, contains only a one sentence description. It reads “The FY20 budget will include incentives for smart technology devices that allow ratepayers to reduce their energy consumption with items

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<sup>5</sup> NJ Clean Energy Program, FY20 DRAFT COMPLIANCE FILING, at 13 (May 29, 2019) *available at*, <http://www.njcleanenergy.com/files/file/OCE%20FY20%20Compliance%20Filing%20-%20Draft%20for%20Public%20Comment.pdf>

<sup>6</sup> *Id.* at 15.

<sup>7</sup> *Id.*

like smart thermostats.”<sup>8</sup> In addition to providing no information on program structure, the description does not discuss how the program would operate alongside existing “smart tech” programs, such as the PSE&G Smart Thermostat Rebate Program, that provided instant rebates for ratepayers at the point of sale.

Thus, the Clean Energy Advocates feel the Board should provide additional information, and then allow for additional stakeholder input on both OCE and TRC’s new programs. Increased transparency and opportunity for input is especially important for those programs that would compete with existing or proposed utility offerings.

c. The Board Should Continue Funding Sustainable Jersey at the Current \$500,000 Level

The Clean Energy Advocates urge the Board to continue funding Sustainable Jersey at its current \$500,000 level. To reach the State’s climate and clean energy goals, every level of New Jersey government must aggressively pursue energy efficiency and renewable energy. For the last decade, Sustainable Jersey supported this effort by empowering school districts and municipalities to undertake clean energy “actions” through close partnership with the Board’s CEP program offerings. If Sustainable Jersey’s funding is reduced, schools and municipalities will face increased barriers to leveraging NJCEP programs.

By all accounts, Sustainable Jersey is a successful program that serves as a rallying point for municipalities and schools to decrease GHG emissions, reduce energy usage, and improve environmental equity. Currently, 450 municipalities and 331 school districts participate in Sustainable Jersey. As a result, hundreds of municipalities across the state have formed “Green Teams” that engage in energy actions that utilize funds and programs available in the NJCEP program.

Additionally, Sustainable Jersey provides the critical role of education, certification, and administrative support. No matter how well-constructed a utility or NJCEP clean energy incentive is, municipalities and schools districts will not be able to avail themselves of programs

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<sup>8</sup> *Id.* at 14.

if they do not understand the program offerings, or how to navigate the program process. In its 2019 Compliance filing, OCE included eight items in its scope of work:

*(1) Building a Base: Utilizing SJ's established certification program to implement clean energy initiatives within municipalities and schools; (2) Coordination and Targeted Marketing Support for NJCEP Programing; (3) Create Gold Star Energy Communities; (4) Grow and Leverage SJ Regional Hubs; (5) Community Microgrid Planning; (6) Support Utility Residential and Commercial Energy Efficiency Programs; (7) Develop Community Shared Solar Guidance; and (8) Upgrade/Update SJ Energy Actions and Guidance.*<sup>9</sup>

The FY20 Compliance filing omits this scope of work, offering only one sentence explaining its activities in this program area.<sup>10</sup> For the above-stated reasons, the Clean Energy Advocates urge the Board to retain the FY19 funding level and amend its FY20 Compliance Filing to include the scope of work contained in the FY19 Compliance Filing.

### **III. CONCLUSION**

The Clean Energy Advocates thanks the Board for accepting these comments and believes that by establishing a more robust stakeholder process that allows for the transparent exchange of information between parties, New Jersey will be well positioned to meet the ambitious clean energy goals contained in the CEA and GWRA.

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<sup>9</sup> NJ Clean Energy Program, FY19 DRAFT COMPLIANCE FILING, at 12 (May 11, 2018)(*emphasis added*).

<sup>10</sup> NJ Clean Energy Program, FY20 DRAFT COMPLIANCE FILING, at 13 (May 29, 2019).

**From:** [Chris Astrella](#)  
**To:** [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)  
**Subject:** FY20 Prescriptive Updates  
**Date:** Monday, June 3, 2019 10:31:52 AM

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Hello,

Pearl Street has done work through the Smart Start program, mostly Prescriptive and Lighting Controls, for the past few years. I have a few questions about the FY20 updates.

- For the bullet about not needing pre-approval for projects smaller than \$100,000, does that dollar amount mean the rebate total or the project total?
- Will there be any sort of contractor certification like ConEd's ILIP program, or as long as the right boxes are checked, that rebate will be available to anyone?

Thank you.

Chris Astrella  
Pearl Street LED Lighting Systems  
Mobile: (908) 210-6715  
Office: (908) 923-4150 x105



Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

June 11, 2019

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Pileiro Heating & Cooling Inc., a New Jersey based company which employs 8 New Jersey residents with a decent wage and benefits to provide for their families. My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARMAdvantage and COOLAdvantage for 3 years. We have also participated in South Jersey Gas Participating Contractor fuel conversion financing program for 1 year.

This program in only one year has helped tremendously with the growth of my company as well as helping my customers afford converting to energy efficient natural gas appliances. Removal of this incentive not only will hurt the businesses which participate in these programs but ultimately will impact the lives of the customers which need the financing. The conversion program directly helps the NJ economy by helping its residents save on their utility bills which allows them to spend the extra income in the local and state economies. Please reconsider the elimination of the conversion program to continue the growth of the local contractors, their families and the residents of NJ.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.

Sincerely,



Christopher Pileiro, Owner  
NJ Master HVACR License #19HC00513800



HIC# 13VH08228400  
HVACR# 19HC00513800

(609) 602-7796  
CHRIS@PHCCOMFORT.COM  
WWW.PHCCOMFORT.COM  
P.O. BOX 450  
OCEAN CITY, NJ 08226



**Justin B. Incardone**  
Associate General Regulatory Counsel

**Law Department**  
80 Park Plaza, T-5G, Newark, New Jersey 07102-4194  
Tel: 973.430.6163 fax: 973.430.5983  
Email: Justin.Incardone@pseg.com



June 11, 2019

**Via E-mail (publiccomments@njcleanenergy.com)**

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 3<sup>rd</sup> Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

**IN THE MATTER OF THE COMPREHENSIVE ENERGY EFFICIENCY AND  
RENEWABLE ENERGY RESOURCE ANALYSIS FOR FISCAL YEAR 2020 CLEAN  
ENERGY PROGRAM - Docket No. QO19050644**

**-and-**

**IN THE MATTER OF THE CLEAN ENERGY PROGRAMS AND BUDGET  
FOR THE FISCAL YEAR 2020 - Docket No. QO19050645**

Dear Secretary Camacho-Welch:

Please accept this correspondence on behalf of Public Service Electric and Gas Company ("PSE&G" or the "Company") in connection with the above-referenced matters. PSE&G thanks the Board of Public Utilities ("BPU" or "Board") for its initiation of these proceedings, as well as the opportunity to provide comments at the June 7, 2019 public hearing and in this submission. While PSE&G joins in the New Jersey Utilities Association submission, it provides these comments to separately emphasize that the Clean Energy Act of 2018 ("CEA" or the "Act") puts the responsibility on the State's gas and electric utilities to reduce customers' energy usage, with penalties for the utilities failing to achieve the targeted savings. For that reason, PSE&G recommends that the Office of Clean Energy ("OCE") sunset its existing energy efficiency programs, and work collaboratively with the utilities to develop a transition plan establishing the utilities as the primary providers of regulated energy efficiency programs.

PSE&G has a long history of partnering with the State and the BPU, and aligning its energy goals with those of New Jersey. This partnership has been critical to New Jersey's and PSE&G's development and implementation of several energy efficiency initiatives and of clean and renewable power in the State. Over the past decade, PSE&G has invested approximately \$400 million in award-winning, BPU-approved energy efficiency programs for underserved customers, including small businesses, hospitals, multifamily buildings, government facilities, and non-profit entities.

PSE&G's review of the OCE's plans for fiscal year 2020 reveals some new initiatives that the Company believes to be appropriate and will advance the State's clean energy goals. More specifically, the Community Energy Grants will establish small grants for communities to identify needs and develop energy plans. PSE&G applauds the OCE's approach to inform and educate communities, and believes this initiative could help spur participation in energy efficiency programs, such as those the Company included in its Clean Energy Future – Energy Efficiency (“CEF-EE”) proposal. In addition, the Clean Energy Conference will educate customers and allow for interaction with industry stakeholders to support clean energy goals in New Jersey. PSE&G welcomes the opportunity to partner with the OCE to collaboratively execute this initiative and achieve our mutual goals.

While the OCE's proposed budget recommends reducing funding to Sustainable Jersey, PSE&G recommends maintaining the current level of funding to support Sustainable Jersey's mission of “a better tomorrow, one community at a time” through its municipal and school certification programs. Sustainable Jersey has made significant progress over its first 10 years, helping over 200 communities become more energy efficient, reduce waste, and stimulate their local economies. This level of local engagement will be important to achieving the State's clean energy goals, and could also complement the aforementioned Community Energy Grants initiative.

These are examples of clean energy initiatives that are best implemented by the OCE on a statewide level. However, the OCE also proposes wide-ranging and new energy efficiency initiatives and programs, as well as major redesigns to several of its existing energy efficiency programs. The OCE plans to commence some of these initiatives and programs as early as July 1, 2019.

The OCE's plan to expand its energy efficiency offerings at this time directly conflicts with BPU Staff's position in the CEF-EE filing; specifically, that PSE&G's proposal to significantly expand *its* energy efficiency programs is “premature” in light of the Board's ongoing efforts to implement the CEA. Moreover, the OCE's plan is inconsistent with the CEA's requirement that utilities implement energy efficiency programs to reduce their customers' energy usage. As noted above, rather than increase its energy efficiency efforts, PSE&G recommends that the OCE sunset its existing energy efficiency programs and shift its focus to development of a transition plan to establish utilities as the primary providers of regulated energy efficiency programs.

PSE&G in its CEF-EE filing proposed a transition plan in which the Company would work collaboratively with the OCE over the course of a 12-month period to effectuate the transition of energy efficiency programs. PSE&G's plan will ensure continuity for both customers and trade allies. The Company will build off the foundation created by the OCE with both customers and trade allies to deliver programs and services to best meet the State's energy efficiency goals.

The utility as program administrator model that PSE&G proposes is optimal because utilities have unique advantages in delivering energy efficiency. For example, utilities enjoy:

- Established customer relationships: Utilities have access to all potential energy efficiency program participants through various channels, including monthly billing relationships. For PSE&G,

this means approximately 2.2 electric customers and 1.8 million gas customers in the State. Regular interactions between the customer and the utility will help to encourage customer participation in energy efficiency programs.

- The ability to provide on-bill repayments: The utilities' possess the ability to efficiently support and administer on-bill repayments over an extended period of time at zero percent interest rates, in a manner that is accessible and easy for customers. This ability will reduce customers' upfront cost burden of energy efficiency improvements.
- Access to usage data: Utilities have access to customer usage data to identify energy savings opportunities and monitor the impact of completed energy efficiency projects.
- Program expertise and experience: In partnership with its existing network of third-party service providers, utilities, including PSE&G, have been implementing Board-approved, award-winning energy efficiency programs since the late 2000s. For example, PSE&G's Hospital and Multi-Family energy efficiency programs have both been the recipients of multiple awards over the past decade including, most recently, a 2019 Innovation Award from Smart Energy Decisions for PSE&G's Hospital Program, and the Multi-Family Program's 2019 "Exemplary Program" designation from the ACEEE.

In addition, utilities' multi-year energy efficiency programs have funding certainty, which gives the private energy efficiency marketplace the confidence to invest resources in the State. As Lime Energy stated at the public hearings for the CEF-EE Program: "Making a six-year commitment of the magnitude proposed by PSE&G will signal to the market that energy efficiency is here to stay in New Jersey."

Utilities are also subject to numerous energy efficiency program filing requirements, including cost-benefit analysis and measurement and verification. Utility-led program funds can only be used for energy efficiency and, providing even greater transparency, utility expenditures are annually reviewed for prudence by the BPU and Rate Counsel. Contrarily, a potential conflict of interest exists when a government agency is both the regulator and administrator of energy efficiency programs.

The utilities can also issue rebates to customers with alacrity. For example, customers who purchased a smart thermostat from PSE&G's marketplace as part of its successful, Energy Efficiency 2017 smart thermostat program received an instant rebate at the time of purchase.

Lastly, the utilities have the ability to amortize costs of energy efficiency programs over the useful life of the energy efficiency assets, limiting the maximum bill impact of these programs. On the other hand, given the inherent cost structure of state-run programs, customers pay for those programs in the year of the expenditures, leading to rate shock and the inequitable

situation of customers paying for programs without seeing the benefits and vice versa. To put this difference in perspective, the cost recovery mechanism used for state-run programs is akin to a person paying the entire purchase price for a house upfront using cash, rather than having a mortgage.

Given the inherent advantages of utility-administered energy efficiency programs, it is no surprise that utility program administration is the most common model for states leading in energy efficiency. Eight of the top 10 states in 2017 electric savings operate primarily or entirely on a utility-run model. Contrarily, New Jersey ranked 29<sup>th</sup> in electric savings achieved according to the ACEEE's 2018 EE scorecard. No other state utilizes the New Jersey model, where the regulator is both the administrator and the evaluator.

The utility as program administrator model enjoys broad public stakeholder support. For example, during the public hearings for PSE&G's CEF-EE Program, Lime Energy, an OCE vendor, stated the following: "The most successful programs Lime operates are the ones in which we can white label our offerings, presenting the utility brand on our marketing material, on our ID badges, and even the clothing we wear." Enel X commented at the evidentiary hearings for the CEF-EE Program: "A constant theme Enel X has experienced is that states where the energy efficiency programs are utility-administered, rather than state or state-commissioned administered, achieve[] superior results."

In conclusion, the utilities are the only entities that have the responsibility (and incentive) to meet the savings targets under the CEA. With that responsibility must come full control over their ability to meet those targets, free from conflicting programs or customer confusion caused by the OCE's programs. The utilities' success, and the achievement of the State's policy goals, cannot be dependent upon entities that do not bear the same responsibility for achieving the CEA's reduction targets. PSE&G recommends that the OCE sunset its energy efficiency programs, and work with the utilities and other stakeholders on a plan that will promptly transition program administration to the utilities consistent with the CEA's objectives. PSE&G welcomes the opportunity to begin working collaboratively with the OCE, along with the State's other utilities, in the OCE's critical role of providing oversight, standard setting, and policymaking supporting the goals of the State and utilities in the delivery of energy efficiency.

Respectfully submitted,

By: s/ Justin B. Incardone

Justin B. Incardone  
PSEG Services Corporation  
80 Park Plaza, T-5G  
Newark, NJ 07102  
(973) 430-6163  
Justin.Incardone@pseg.com

January 05, 2015

Account Number: 100 106 979 568

**Amount Due: \$303.06**

**Due Date: January 20, 2015**

Billing Period: Oct 30 to Dec 29, 2014 for 61 days  
Bill For: JOHN MAINES  
CRESTWOOD VILLAGE  
88 CHELSEA DR  
WHITING NJ 08759

To report an emergency or an outage, call 24 hours a day 1-888-544-4877. For Customer Service, call 1-800-662-3115. For Payment Options, call 1-800-962-0383. Pay your bill online at [www.firstenergycorp.com](http://www.firstenergycorp.com)  
Bill issued by: JCP&L, PO Box 16001, Reading PA 19612-6001

Messages	Account Summary	Amount Due
<p>Se dispone de avisos de terminación en español Mensaje de cuenta. Los usuarios que poseen un balance de cuenta vencido reciben un aviso por correo indicando que se les puede suspender el suministro de electricidad. Si usted necesita recibir esos avisos en español, haga el favor de llamarnos al 1-800-662-3115.</p> <p>The Basic Generation Service price per KWH listed in the charges box is the price to compare. In order to save money, you must buy your electricity from a supplier at a price THAT IS LESS than your JCP&amp;L price to compare.</p> <p>Your next meter reading is scheduled to occur on or about Jan 28, 2015.</p> <p style="text-align: center;">Arrangement Message</p> <p>This bill exceeds a normal monthly billing period. Do you need time to pay? If you do call 1-800-662-3115.</p> <p>Thank you for your good payment record. We are applying your deposit plus any accrued interest to your account.</p> <p>Avoid the seasonal highs and lows in your electric bills by signing up for the Equal Payment Plan (EPP). While in this plan, each month you are billed one-twelfth of your estimated annual usage. Your account is reviewed periodically and adjusted, if necessary, to ensure your payment amount reflects your actual usage. To participate in EPP, call our toll-free Customer Service Number, or go online to <a href="http://www.firstenergycorp.com">www.firstenergycorp.com</a>.</p>	<p>Previous Balance 88.97 Payments/Adjustments -564.94 <b>Balance at Billing on Jan 05, 2015 -475.97</b></p> <p>JCP&amp;L - Consumption 358.16 JCP&amp;L - Payment Plan Balance 420.92 JCP&amp;L - Misc. Charges -0.05 <b>Total Current Charges 779.03</b></p> <p><b>Amount Due by Jan 20, 2015 \$303.06</b></p> <p style="text-align: center;"><b>Usage Information for Meter Number S311974252</b></p> <p>Dec 01, 2014 KWH Reading (Estimate) 1,831 Oct 30, 2014 KWH Reading (Actual) 339 Kilowatt Hours Metered 1,492 KILOWATT HOURS BILLED 1,157 Dec 01, 2014 KWH Reading (Estimate) 610 Oct 30, 2014 KWH Reading (Actual) 275 Kilowatt Hours Out 335 Dec 01, 2014 Banked KWH Credit 0 Oct 30, 2014 Banked KWH Credit 0 Dec 29, 2014 KWH Reading (Actual) 3,395 Dec 02, 2014 KWH Reading (Estimate) 1,831 Kilowatt Hours Metered 1,564 KILOWATT HOURS BILLED 1,396 Dec 29, 2014 KWH Reading (Actual) 778 Dec 02, 2014 KWH Reading (Estimate) 610 Kilowatt Hours Out 168 Dec 29, 2014 Banked KWH Credit 0 Dec 02, 2014 Banked KWH Credit 0</p> <p style="text-align: center;"><b>Charges From JCP&amp;L</b></p> <p><b>Billing Period: Oct 30, 2014 to Dec 01, 2014</b> When contacting an Electric Generation Supplier, please provide the following. Customer Number: 0800050135 0000534130 Rate: Residential All Electric Service JC_RS_05D</p> <p>Customer Charge 2.20 Basic Generation Service 35 KWH x 0.000286 0.01 1,122 KWH x -0.003333 -3.74 1,157 KWH x 0.102610 118.72 Delivery Service Charges 1,157 KWH x 0.037191 43.03 <b>Current Consumption Bill Charges 160.22</b></p> <p><b>Billing Period: Dec 02, 2014 to Dec 29, 2014</b> When contacting an Electric Generation Supplier, please provide the following. Customer Number: 0800050135 0000534130 Rate: Residential All Electric Service JC_RS_05D</p> <p>Customer Charge 2.20 Basic Generation Service 1,396 KWH x 0.103023 143.82 Delivery Service Charges 1,396 KWH x 0.037192 51.92 <b>Current Consumption Bill Charges 197.94</b> Security Deposit Interest -0.05</p> <p><b>Total Charges - All Billing Periods \$ 358.11</b></p> <p style="text-align: center;"><b>Detail Payment and Adjustment Information</b></p> <p>11/04/14 Payment -88.97 12/05/14 Payment -171.97 01/05/15 Security Deposit Refund -304.00 <b>Total Payments and Adjustments -\$564.94</b></p>	
Additional messages, if any, can be found on back.		
<b>Usage History</b>		
<p style="text-align: center;">A-Actual      E-Estimate      C-Customer</p>		
<p><b>This Year</b></p> <p>Average Daily Use (KWH) 50 Average Daily Temperature 41 Days in Billing Period 61 Last 12 Months Use (KWH) 18,366 Average Monthly Use (KWH) 1,531</p>		

Billing Period: May 28 to Jun 28, 2016 for 32 days  
Bill For: JOHN MAINES  
88 CHELSEA DR  
WHITING NJ 08759

June 29, 2016  
Account Number: 100 106 979 568

**Amount Due: \$0.00**

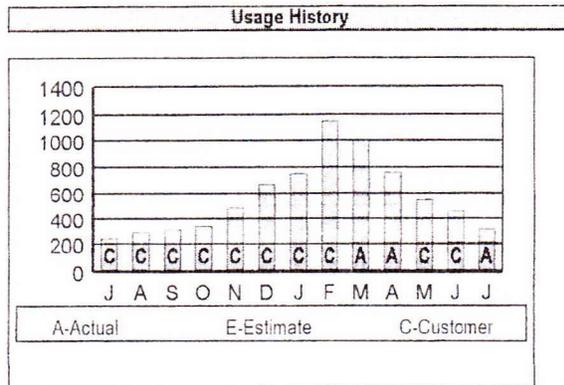
To report an emergency or an outage, call 24 hours a day 1-888-544-4877. For Customer Service, call 1-800-662-3115. For Payment Options, call 1-800-962-0383. Pay your bill online at [www.firstenergycorp.com](http://www.firstenergycorp.com)  
Bill issued by: JCP&L, PO Box 16001, Reading PA 19612-6001

Messages	Account Summary	Amount Due
Se dispone de avisos de terminación en español Mensaje de cuenta. Los usuarios que poseen un balance de cuenta vencido reciben un aviso por correo indicando que se les puede suspender el suministro de electricidad. Si usted necesita recibir esos avisos en español, haga el favor de llamarnos al 1-800-662-3115.	Previous Balance	-41.16
Your next meter reading is scheduled to occur on or about Jul 28, 2016.	Payments/Adjustments	0.00
For your safety and the safety of our crews, when using a generator follow the manufacturer's installation and operation instructions. Never connect a generator directly to your electrical system without an isolation device installed by an electrician. Otherwise, a fire could start or an employee restoring your power could be seriously injured. We suggest plugging lights/appliances in the outlets on the generator unit.	<b>Balance at Billing on Jun 29, 2016</b>	<b>-41.16</b>
Tree branches and shrubs -- and insects that nest in vegetation -- can make it difficult and, at times, unsafe for our employees to read your meter. Please be sure your meter is easily accessible by clearing the path to it and the area around it.	JCP&L - Consumption	1.92
	<b>You have a credit balance of</b>	<b>-\$39.24</b>
	<b>Usage Information for Meter Number S311974252</b>	
	Jun 28, 2016 KWH Reading (Actual)	18,736
	May 28, 2016 KWH Reading (Actual)	18,423
	Kilowatt Hours Metered	313
	Jun 28, 2016 KWH Reading (Actual)	12,653
	May 28, 2016 KWH Reading (Actual)	11,411
	Kilowatt Hours Out	1,242
	Jun 28, 2016 Banked KWH Credit	1,571
	May 28, 2016 Banked KWH Credit	642
	<b>Charges From JCP&amp;L</b>	
	When contacting an Electric Generation Supplier, please provide the following. Customer Number: 0800050135 0000534130 Rate: Residential All Electric Service JC_RS__05D Customer Charge 1.92	
	<b>Current Consumption Bill Charges</b>	<b>1.92</b>

**ASTONISHING SAVINGS IF YOU SPEND A LOT ON HEAT (>10,000)**

**11,000 kWhrs here**

Additional messages, if any, can be found on back.



Comparisons	Last Year	This Year
Average Daily Use (KWH)	8	10
Average Daily Temperature	72	72
Days in Billing Period	32	32
Last 12 Months Use (KWH)		7,047

# Net Zero Energy Homes Initiative

*Crestwood Villages & Manchester Township*

**Now you can have a home that produces as much energy as it uses.**

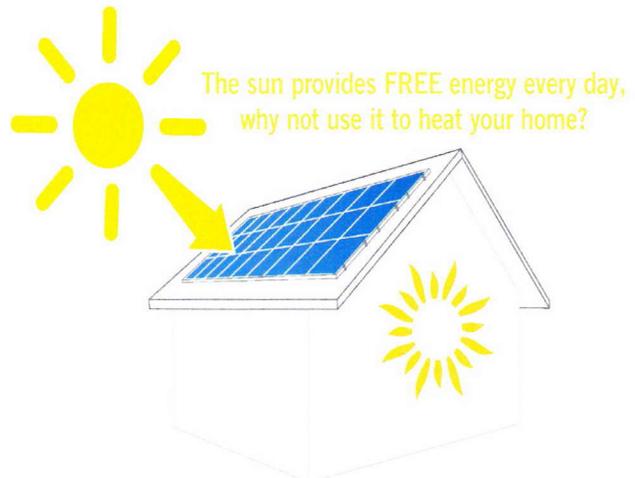
Reduce energy use in our all-electric homes by 40% and provide balance of power needed with clean renewable solar. RGS Energy, Rayjon Energy and Alek Air Management are pooling resources to make this possible for your home!



**A comprehensive home energy makeover: reduce your energy cost, increase the value of your home and live more comfortably.**

## Services included in our program:

- ✓ **Energy Audit + Air Sealing & Insulation**  
Discover how your home is wasting energy. Sealing and insulating can make a big difference in your homes efficiency by preventing heat loss in winter and hot air infiltration in summer.
- ✓ **Installation of Air-conditioning Heat Pumps**  
Heat pumps will save you 60% on heating bills versus inefficient baseboard heaters, and also save you money on air-conditioning costs.
- ✓ **Installation of Solar**  
You will drastically reduce your remaining electric bills after efficiency savings by going solar, protect yourself from rising utility rates, and reduce your CO<sub>2</sub> footprint.



Our inefficient homes lose heat mostly through the attic due to lack of air sealing and poor insulation, this wastes a lot of energy and increases utility costs. A well-sealed and insulated home matched with air conditioning heat pumps and efficient solar panels can almost eliminate your utility costs. Imagine the savings!

**For more information on the program incentives, contact:**

**Rayjon Energy at 732.849.5177 or rayjonenergy.com**

**RGS Energy at 888.56.SOLAR or rgsenergy.com**

Eligible homes include: Crestwood Villages 5,6, & 7, Leisure Village West, & Leisure Knoll.



BPI GoldStar  
CONTRACTOR

## rayjon energy

20 Hudson Parkway  
Whiting, NJ 08759  
Tel: 732-849-5177  
Fax: 973-996-7444  
www.rayjonenergy.com



### Comments on Proposed 2020 HP Benefits

Ray Sheenan and Jonathan Wolf of Rayjon Energy, an Ocean County energy Efficiency Consulting Partnership, working together with BPI Goldstar Contractors Alek Air Management, Inc. of Feasterville, PA and Energy Services Group, a Delaware based supplier of air-sealing and insulation services to our NJ communities, are pleased to comment on behalf of our constituents and partners to the proposed Fiscal year 2020 New Jersey Clean Energy Program changes. Please note that the text lines in **RED** are replicated for reference from the various Proposal documents

Please allow us to take just a moment to tell you a little bit about our involvement in the Program and the communities we serve. We became involved with the NJCE Program nearly five years ago after a visit to Ray's home in Whiting, Manchester Twp., NJ from a close long-time friend of his, Dick Riseling. Dick and his life partner Sonja Hedlund founded and developed **Apple Pond Farm and Renewable Energy Education Center** in Calacon Center, Sullivan County, NY. Over the years Dick co-founded SASD, the Sullivan Alliance for Sustainable Development, promoting and facilitating energy efficiency, renewable energy and sustainable economic policies and practices. He's served as consultant to the legislature of Sullivan County as well to municipalities, businesses and homeowners. In 2010, SASD was awarded top honors by the Federal Environmental Protection Agency. Dick also served on the Board of the Federal Renewable Energy for America Program, and he's received many Congressional and State legislature commendations. (Reference: <https://www.applepondfarm.com>.)

During his short visit back in 2014, in a matter of hours we visited about a half dozen homes, Dick got onto Ray's computer and mapped out our service area, and performed some calculations based on his knowledge of the then existing energy efficiency alternatives for these homes. He returned to us and announced that we were sitting on an "iconic" opportunity to save energy and improve the quality of life for residents here. Per his calculations, based on 10,000 all-electric poorly insulated homes built over dirt crawlspaces and a quick analysis of a half-dozen or so electric bills Dick determined that if just half of these homes were to simply apply attic air sealing, add attic insulation, and replace the electric baseboards with existing air-sourced heat pumps they could reduce their energy use by 28,000,000 kWhrs. Quite frankly we were stunned, and had no idea what he was talking about.

Since that day we have been learning more and more about the real possibilities for energy efficiency and renewable here in Manchester, and by extension in other communities like ours. We've been into hundreds of homes and completed about 50 homes through HPwES and COOLAdvantage with our various partners. Over the years we've become very close to the Program, built some very positive relationships with many of the Program's technical and business leaders and we enjoy great support now from these people. We have also learned the NJCE software and systems and processes, and gratefully become a real member of the NJCE team. Despite our lack of certifications and credentials, our knowledge and experience is great. And we want to thank the many members of the Program for their training and support. This provision of training & support is an essential element for participating

contractors' and the Program's success and we welcome its being an expanded proposed element of the Program in 2020. This of course needs to be better defined. **We would particularly welcome this support in terms of AV presentations on the whole range of Home Performance elements and benefits that we could deliver to our communities. We need effective tools to reach out to these people and inform them of today's energy efficiency opportunities.**

**About the Communities we serve:** It should be noted that most of our communities fall within the **Manchester Twp./Whiting/Crestwood** Opportunity Zone and include **Ocean County Census Tract 7201.01**. These communities include the 7 Crestwood Villages, Crestwood Villages 1 through 7 (7520 homes), and Cedar Glen Lakes (1236 homes). 62% of these homes (5453) are Co-op, the balance are titled properties. (Interestingly, Villages 7, Cedar Glen Lakes and about half of Crestwood Village 6 fall outside the mapped zone.). There are likely other similar zones in our state.

**These communities share the same profile.** They are all 55+ communities. They were built in the 70's and 80's over dirt crawlspaces. Their wall and attic insulation is poor (R7 – R15.) None of these homes has access to natural gas, and they all have electric baseboard heat. Home prices average in the \$75-\$80,000 range. Reported median age is in mid-to upper 70's. Median annual family income is in the high \$20,000 range. A significant majority of residents are living on fixed incomes/Social Security and qualify for some form of energy assistance. **Many of them cannot afford to spend an additional dollar in monthly expenses.** Their monthly winter heating bills vary from \$150 to as high as \$400+, depending of course on their thermostat settings and preferences. Because of such high bills in winter many of these people bundle up and shut off rooms and still "live in the cold" in winter, with thermostats set to low to mid 60's. **These are our constituents. LMI folks living in an established Opportunity Zone. In our opinion the Proposed 2020 proposals speak in generalities and fall short of truly addressing this issue.**

Making matters worse for us in serving these residents is their lack of knowledge or misconceptions regarding heat pumps, and their general distrust and skepticism that "comes with age". Maybe 1 in 10 of the folks we meet has the slightest idea of what air-sealing is. They are often sold inappropriate or overpriced systems by unscrupulous contractors who are not participants in the Program. One of the great thrills in our business is rescuing people who've been led down the wrong path to properly retrofit their homes. This is all too common. We believe NJHP should be aware that contractors including BPI Gold Star Program Contractors do in fact ditz the Program as being overly complex and not delivering on its promises. We believe there should be some rules, oversight and perhaps even penalties with regard to this behavior from participating contractors.

**Summary of our comments and issues.** First let us say that the directions the Program appears to be taking in 2020 are spot-on for the vast majority of homes, especially with the improved incentives for air sourced heat pumps including the Cold Climate Mini-Split Heat Pumps. (We and our partners have installed 50 or more of these in the past several years, and their actual performance in our communities has in fact exceeded their promise. We've seen savings of up to 75% on heating bills which have translated into TES of 45% and more.

### **Program Changes**

♣ Increase participation with measure bundling (i.e. HVAC + Envelope); offer a **bonus for such efforts**

♣ Offer bonus incentives for homes located in a UEZ and/or occupied by Low and Moderate Income (LMI) residents

#### **Home Performance with ENERGY STAR**

♣ Currently there is a loan program in which customers are eligible for a \$10,001-\$15,000 loan at 4.99%. Decrease the interest rate for a \$10,001 - \$15,000 Program-subsidized loan from 4.99% to 0.99% (0% financing up to \$10,000 will remain).

**RESIDENTIAL PROJECTS (IN UEZS OR OCCUPIED BY THOSE OF LMI) RNC • Single/Multi-Single Homes \$500 HPwES \$500 - \$1,000 80% (v50%) of cost**

**We agree with all of these but most of the elements, except for the 0.99% \$10,001-\$15,000 loan are not defined: e.g. 80% of cost up to what?**

**Our efforts are geared to the comprehensive benefits of HPwES. We defer to COOLAdvantage benefits when a home is not eligible due to the rare proper air sealing by Comfort Partners.**

#### **From the Comfort Partners Draft**

With that, this program is also designed to improve energy affordability for **low-income households** through energy **education**, efficiency, and conservation. To achieve this objective, **several market barriers** must be overcome. Key among these are: (1) **lack of information** on either how to improve efficiency or the benefits of efficiency; (2) low income customers **do not have the capital necessary to upgrade efficiency or even, in many cases, keep up with regular bills**; (3) low income customers are the least likely target of market-based residential service providers due to perceptions of less capital, credit risk and/or high transaction costs...**For Rayjon these homes are our only target.**

One problem we see is that the Comfort Partners Program is not well-defined or regulated. Its greatest shortfall is that it does not include new heat pump equipment that offers the vast majority of savings in our community's homes. Its relative budget seems disproportionate to the results it actually achieves, and these results are not monitored or reported, especially relative to the diligent oversight of HPwES homes. *We believe the no cost benefits of Comfort Partners should be merged with a comprehensive program i.e. HPwES to make that program more affordable for LMI homes in our communities.*

**Customer knowledge and education** – and marketing/presentation support to further that we have discussed. **Let's do this** – with a knock your socks off presentation about the many elements of the HPwES Program that people can relate to – and get it out there. *The biggest obstacle to our and the Program's success in communities like ours is the lack of understanding about and belief in the many energy efficiency, health and safety and comfort benefits the Program truly offers.*

**Low income affordability** and provisions for low-income/fixed income seniors, perhaps related to Opportunity Zones, or simply income levels and USF eligibility, must be defined. Going back to the old \$5000 grant – or escalating the % grant to 70-80% of the \$8000 limit seems like a constructive idea that that will allow us to implement solutions through the new Existing Homes Program with little to **no out-of-pocket incremental expense** to residents. **That's what we need to be able to promise people.** We do it now and deliver when we see homes with the highest relative heating kWhrs usage (>67%).

**Incentives for combining energy efficiency with renewable solar in a single project.**

**This concept is referenced somewhat in the excerpt from HP 2020 new Proposals below. .**

#### **3.9 High Performance Building Competition Component Proposed Action**

- **This component would consist of an annual competition that would award lucrative incentives to especially high-performing buildings (including possibly residential buildings), such as those achieving net-zero energy usage and/or exceeding the ASHRAE 90.1-2016 energy code by 5% or more. More detailed criteria would be developed during FY20**

When we started our consulting business in 2014 as per our opening paragraph we were instilled with a vision from Dick Riseling that energy efficiency was only the first of two potential steps in our business. We registered the “Crestwood Renewable Energy Initiative” as our Trade Name. We envisioned that some # of homes would go on to install solar once their homes were much more energy efficient. We understood out of the gate that energy efficiency precludes renewable.

But in our communities nothing could further from the truth. Some 300 homes in our communities have installed solar with no regard for their inefficiencies. And quite frankly the solar companies could not care less. We even met with three of them, including the Executive Board and CEO of Momentum, and officers of Trinity Solar. Momentum felt our ideas were disruptive to their business model, which was based, as so many of these programs are, on PPAs. We did find just one solar company, RGS Energy, which acknowledged the propriety of our approach. In fact we formed a partnership dubbed the “Net Zero Energy Homes Initiative” for the Crestwood Villages and Manchester Township (flyer is included here). This was to be, and still hopefully remains the perfect energy efficiency and renewable energy solution for up to a thousand or more homes in our communities. The savings/cost structures proposed were astonishing, and excluded the PPA approach.

We must present to you one Case study in point which will we think will be an eye-opener even for you folks that are so knowledgeable about all this. (please refer to the embedded JCP&L bills for John and Patricia Maines at 88 Chelsea Drive Crestwood Village 7.) Early in 2015 soon after we got started with the Program we met with Mr. and Mrs. Maines with Alek Air Management our Participating Contractor. The Maines’ live in a 1000 SqFt stand-alone home. They had recently installed an 11kW Solar System with a PPA provided by Solar City. They started paying about \$125/month on a PPA with an escalation clause of 2.7% for 20 years. Their panels are on both the south and north sides of the home to get the most generation of solar, albeit being partly inefficient. Their home was using a total of **18,366** kWhrs a year, which is higher than most homes of that model, but the Maines’ like to keep indoor temperatures in winter at 72 and 75 in summer 24 hrs a day. They do not change their temperature settings at night.

We put them through the HPwES Program including air sealing, insulation and two very efficient mini-split systems, including a 2-zone Fujitsu HSPF 9 in their den and bedroom and a single zone HSPF 12 in their living room (today’s RLS3 and 18RLXFZH units from Fujitsu are even more efficient). John and Patricia said they loved the systems and felt more comfortable in their home. They said they left them on 24hrs a day at the same temperatures as before. (They also referred a number of customers to us.) We spoke with them often and a year and a half later we went back to see how they did on their electric bill. We were astonished at what we saw – we had estimated I think a 47% TES because of their high use of heating and associated savings. But in fact their 12 months usage dropped to 7047 kWhrs, a whopping 61.6% savings! (Other homes that model achieved similar but not quite as much savings, and savings of 45 to even 50% among homes we’ve completed in our villages are common.)

At today’s JCP&L say \$0.15/kWhr rate they are saving \$1693 a year or \$141 a month. Meanwhile they are paying just \$1057 a year or \$88 a month (well we know they’re not paying anything for their electric bill but my goodness **today** they’re paying nearly \$50 more for their PPA than they’d be paying for their

electricity! And that amount is going to go up every year.) A 5 or 6k solar system for this home would have been just fine AND more efficient. Need we say anything more about this travesty?

The solution related to this subject is we MUST be able to reach people and make them understand that putting solar panels on energy inefficient homes is foolish and costly. Most people here actually think that solar energy makes their homes more energy efficient. So again we need education that leads to correct **knowledge** and understanding of our industry. In our view we also need to stop the spread of **mis-information** and the misrepresentation of savings solar companies too often present. All people, but especially the seniors in our communities deserve that.

**There must be some very clear and meaningful incentives for people that pursue this combined approach as is suggested in red Par. above. Incentives could be in the form of grants or low interest lease/loans.** We believe with these incentives and a superb knowledge presentation we can complete at least several hundred net zero energy home projects in our titled property Villages alone.

**Eligibility of Co-ops for Loans through EFS.**

This is a subject not referenced in your Draft, but a very very important one to us and our constituents. When we started working in 2015 we corresponded with Robin Sherwood of EFS regarding the large # of co-op homes in our villages (nearly half or 5500 homes). We submitted paperwork and details about our buildings and our co-ops and were approved by EFS and Spruce Lending. Today there is rumor of a change in that policy by a new lender which we cannot confirm. This must not happen.

In closing, Rayjon and our Partners KNOW that if we can tweak the Program to make it more affordable for our more than 15,000+ senior residents and 10000+ poorly insulated all-electric homes, and truly educate people about the realities of these benefits, then we can even exceed the vision of 28,000,000 kWhr savings, quality of life and environmental benefits that Dick Riseling startled us with in 2014. We offer our advice, services, participation in the process and commitment to make this all happen for our constituents and all those living in energy inefficient homes in our State.

Respectfully submitted,

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Ray Sheenan General Partner

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Jonathan Wolf Partner

Rayjon Energy Efficiency Consultants  
20 Hudson Parkway  
Whiting, NJ 08759  
732-847-5177



**The creation and dissemination of complete and understandable information that leads to knowledge and understanding of energy efficiency and renewables by all homeowners in our state is key to our success.**

### **Addendum for Greater Understanding**

When we talk about the NJ Clean energy Program to residents of Crestwood Village they either understand the benefits right away or, in most cases, they stumble on the concern of affordability. They don't **see**/understand heat pumps or believe in the bottom-line savings and upside comfort benefits. We believe it is the notion of taking on additional debt in their senior years that scares them most. As an example, and this happened to us again just yesterday, they'd rather take \$4500 out of savings and pay for a new central air-conditioner (which they understand) when an old one fails than step up to a central heat pump that they perceive may cost them maybe three thousand\$ more (even though we know that it will cost them thousands less as a result of their enormous savings on their heating bills.). They are all but horrified by the word "loan" and notion of paying it off over 7 years. The only way we see to get past this is AGAIN through a persistent Education program, and a persuasive presentation that clearly spells out the savings, health and comfort benefits – one that includes customer testimonials. The fact is many of our low income clients would rather live in a cold house wearing sweaters and jackets than assume a debt with all their fears of owing any more money. **We must find a way to address this.**



State of New Jersey  
DIVISION OF RATE COUNSEL  
140 EAST FRONT STREET, 4<sup>TH</sup> FL  
P.O. Box 003  
TRENTON, NEW JERSEY 08625

PHIL MURPHY  
Governor

SHEILA OLIVER  
Lt. Governor

STEFANIE A. BRAND  
Director

June 11, 2019

**By Hand Delivery and Electronic Mail**

Honorable Aida Camacho-Welch, Secretary  
NJ Board of Public Utilities  
44 South Clinton Avenue, 3rd Floor,  
Suite 314, P.O. Box 350  
Trenton, New Jersey 08625-0350

**Re: NJCEP - FY20 Proposed CRA, Budgets and Program Plans  
BPU Docket No. Pending**

Dear Secretary Camacho-Welch:

Please accept these comments of the New Jersey Division of Rate Counsel ("Rate Counsel") on the *Draft Report on Energy Efficiency Potential in New Jersey* ("Draft Report" or "Optimal study") prepared by Optimal Energy ("Optimal") for the New Jersey Board of Public Utilities ("BPU" or "Board").

Honorable Aida Camacho-Welch, Secretary  
June 11, 2019  
Page 2

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.

Respectfully submitted,

STEFANIE A. BRAND  
Director, Division of Rate Counsel

By:



Kurt S. Lewandowski, Esq.  
Assistant Deputy Rate Counsel

KSL  
Enclosure

c: [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)  
Paul Flanagan  
Sara Bluhm, BPU  
Sherri Jones, BPU  
B. Scott Hunter, BPU  
Anne Marie McShea, BPU  
Abe Silverman, Esq. BPU  
Rachel Boylan, Esq. BPU  
Caroline Vachier, DAG

**NJCEP – FY20 Proposed CRA, Budgets and Program Plans  
BPU Docket No. Pending**

**Comments of the New Jersey Division of Rate Counsel**

**June 11, 2019**

**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 proposed Fiscal Year 2020 (“FY20”) programs and budgets for the New Jersey Clean Energy Program (“NJCEP” or “CEP”) and associated compliance filings. Rate Counsel’s comments on Energy Efficiency programs are found below, followed by comments on the Distributed Energy Resources and Renewable Energy programs.

**I. Energy Efficiency**

The within comments presents Rate Counsel’s review of the energy efficiency (“EE”) programs and budgets found in the draft Comprehensive Resource Analysis (“CRA”) by the Office of Clean Energy (“OCE”) and the draft Fiscal Year 2020 (“FY20”, “FY2020”) compliance filings by OCE, TRC Companies (“TRC”), and utilities.<sup>1</sup> The primary documents concerning the CRA and FY20 filings are:

- OCE’s “Comprehensive Energy Efficiency & Renewable Energy Resource Analysis” (“Draft CRA”);
- TRC’s FY20 compliance filing, “Energy Efficiency and Renewable Energy Program Plan Filing” (“TRC FY20 Compliance Filing” or “TRC FY20 Filing”);

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<sup>1</sup> All referenced documents are available for download at the NJCEP Policy Updates website, <http://www.njcleanenergy.com/main/njcep-policy-updates-request-comments/policy-updates-and-request-comments>.

- TRC and Board Staff's "Fiscal Year 2020 Summary of Proposed New Initiatives and Program Changes" and "NJCEP Draft FY20 Budget;"
- OCE's FY20 compliance filing, "Renewable Energy Programs, Energy Efficiency Programs, Distributed Energy Resources and NJCEP Administration Activities" (referred to as OCE FY20 Compliance Filing or OCE FY20 Filing), along with its Attachment A: "Fiscal Year 2020 Program Budgets" ("OCE FY20 Filing Attachment A"); and
- The state utilities' FY20 compliance filing, "Utility Residential Low Income Comfort Partners Program" ("Utilities FY20 Compliance Filing" or "Utilities FY20 Filing").

The within comments addressing EE items consist of two main sections. First, overall comments on the Draft CRA are presented, followed by comments on specific CRA issues. Then, overall comments on the FY20 Compliance Filings are presented, followed by comments on specific aspects of the FY20 filings.

## **A. Comprehensive Resource Analysis ("CRA")**

### **1. Overall CRA Comments**

The Draft CRA presents OCE's proposed budget for NJCEP's operations for FY20. Prior CRAs provided program and budget proposals for multi-year program plans. However, this CRA filing's focus on only one year, FY20, appears appropriate given that the state is currently in the process of developing a new Energy Master Plan ("EMP") in 2019. CRA filing, p. 5. The Draft CRA also highlights several key program developments associated with the Clean Energy Act ("CEA"). For example, the Draft CRA states that the Board will consider changes to the clean energy programs in the fall of 2019 in lieu of utility-specific energy efficiency program targets and filings in compliance with the CEA. CRA filing, p. 7. The Draft CRA also notes that the CEA requires a process of establishing an Independent Advisory Group to study the evaluation, measurement, and verification ("EM&V") process for the CEA's energy efficiency

and peak demand reduction programs. The Draft CRA indicates that OCE anticipates finalizing the establishment of the Advisory Board Group and initiating the development of the evaluation plans in FY20. CRA filing, p. 11. These developments are welcome, and Rate Counsel's supports these processes.

On the other hand, Rate Counsel identified a few areas within the Draft CRA that could be improved, including:

- NJCEP funding sources;
- Savings targets and funding levels;
- Rate and bill impacts; and
- State energy initiatives.

Rate Counsel's comments on each follow below.

## **2. Comments on Specific Issues in the CRA**

### **a. NJCEP Funding Sources**

In its comment on the FY19 compliance filing, Rate Counsel recommended that NJCEP should consider seeking other revenue sources to fund EE programs, in particular PJM's Reliability Pricing Model ("RPM") capacity market and proceeds from the Regional Greenhouse Gas Initiative ("RGGI"). New Jersey released its draft RGGI rule proposals on December 17, 2018 for public comments, which were due on February 15, 2019. Thus, it is possible that the state will implement RGGI during FY20.<sup>2</sup> Rate Counsel reiterates its support for seeking alternate funding sources. Further, Rate Counsel recommends that the Board direct the OCE and its Program Administrator to take steps to fully explore potential revenue sources that can offset the costs of the NJCEP programs.

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<sup>2</sup> New Jersey RGGI rulemaking materials, available at <https://www.state.nj.us/dep/aqes/rggi.html#/>.

**b. Savings Targets and Funding Levels**

The proposed FY20 funding level for energy efficiency programs is approximately \$360 million, which represents an increase of approximately 18 percent over the funding for FY19 as shown in Table 1 below. On the other hand, the savings projections for FY20 are substantially different from the savings projections for FY19. Projected annual electric savings for FY20 are as much as three times larger than the savings levels proposed for FY19. This increase is significantly above the savings levels achieved by NJCEP in any historical year from FY14 to FY18. Meanwhile, the projected annual gas savings are about 35 percent lower than the savings proposed for FY19.

**Table 1. Savings and budget proposals for FY19 and FY20 compliance filings<sup>3</sup>**

	FY2019	FY2020	% Change
Annual electric savings (MWh)	331,459	1,007,757	204%
Lifetime electric savings (MWh)	4,917,817	12,996,815	164%
Annual gas savings (MMBtu)	1,105,156	754,220	-32%
Lifetime gas savings (MMBtu)	20,600,681	14,211,200	-31%
Total EE budget (\$million)	302	358	18%

A substantial increase in NJCEP’s electric savings is necessary to support the objectives of the state’s clean energy policies, including the Clean Energy Act’s aggressive energy targets and the Global Warming Solutions Act. However, Rate Counsel has serious concerns about the

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<sup>3</sup> Source: TRC FY20 Compliance Filing, Appendix F and G; NJCEP Draft FY20 Budget; Board Order Docket No. QO18040393, June 22, 2018; TRC FY19 compliance filing, Appendix F. Note: NJCEP’s administration costs are allocated to the energy efficiency programs based on the ratio of the budget for the energy efficiency programs in the total NJCEP program budget.

projected electric savings amounts. The compliance filings, especially the filing submitted by the TRC, provide no information and analysis to support the proposed increases in savings. As discussed below under the sub-section for the Efficient Products program, while the majority of the savings increase (67 percent of FY20 Portfolio total) comes from the Residential Products program, the TRC filing does not explain how the proposed savings levels will be achieved. Nor does TRC provide any detail on the program (e.g., breakdown of savings by measure type). Further, Rate Counsel has an equally serious concern about the projected decrease in natural gas savings. Again, no explanation was provided for the roughly 34 percent decrease in gas savings. Rate Counsel strongly recommends that TRC provide an explanation, including substantive information, and analysis to support these significant changes in the gas and electric savings projections from FY19 to FY20.

**c. Rate and Bill Impact**

The FY20 CRA does not provide any information about rate and bill impacts from the proposed NJCEP programs. Rate Counsel recommends that OCE provide rate and bill impact information in the FY20 compliance filing, more specifically: rate impacts in cents per kWh or therm; monthly dollar bill impacts; and percent increases or decreases relative to the current rates and monthly bills.

**d. State Energy Initiatives**

OCE proposes to allocate a portion of its budget to the “State Energy Initiatives” for FY20, about \$87 million or 16 percent of the combined budget for NJCEP and State Initiatives. CRA filing, p. 6. Rate Counsel notes that this represents a smaller allocation compared to past budgets and Rate Counsel encourages the OCE to reduce it further.

## **B. FY20 Compliance Filings**

### **1. Overall Comments**

As discussed above, TRC, OCE, and the utilities have all submitted their FY20 Compliance Filings. The TRC FY20 Filing focuses on program designs for all of NJCEP programs except the state's low-income "Comfort Partners" program, for which TRC is not the program administrator. The utilities' FY20 Filing focused on the Comfort Partners program. The OCE FY20 Filing covered some state energy programs, along with NJCEP's administrative activities and the associated budget.

Below, Rate Counsel's findings on a number of overarching issues are presented, which include program savings, cost-effectiveness, fuel switching, program evaluation budget, and marketing budget. Rate Counsel's comments on specific programs are presented in the next section.

#### **a. Program Savings and Cost-Effectiveness**

Rate Counsel pointed out in its comments on FY19 compliance filings ("Rate Counsel FY19 Comments") that the FY19 compliance filings lacked savings and cost-effectiveness estimates for the Comfort Partners program and OCE-administered State Facilities Initiative program. Rate Counsel FY19 Comments, p. 20. In the FY20 filing, the utilities included their savings estimates for Comfort Partners but did not provide cost-effectiveness results. Utilities FY20 Filing, p. 5. Further, OCE did not provide savings estimates or cost-effectiveness for the State Facilities Initiative program. The proposed budget for this program is about \$37 million or 11 percent of the overall energy efficiency program budget of \$344 million (NJCEP Draft FY20 Budget). Further, this represents a substantial increase by about \$22 million relative to the FY19

budget.<sup>4</sup> Given the sheer magnitude of the budget increase and share, Rate Counsel reiterates its previous recommendation that OCE provide a savings estimate for the State Facilities Initiative program. Further, Rate Counsel also reiterates its recommendation that cost-effectiveness should be assessed for these two programs.

#### **b. Fuel Switching**

As noted in the section on the Comfort Partners program below, the FY20 filing proposes to promote fuel conversions from fuel oil to natural gas (Utilities FY20 Filing, p. 1 to 2). This essentially locks consumers into using another fossil fuel for space heating for many years to come. This proposal may not align with the state's long-term goal of reducing greenhouse gas emissions by 80 percent by 2050 relative to the level in 2006, per the Global Warming Response Act of 2007. The Comfort Partners program should consider evaluating the merits of conversions to electric heat pumps as well, consistent with the TRC FY20 Compliance filing which proposes to promote cold climate heat pumps as a conversion from fuel oil or electric resistance heating under the Existing Homes program. TRC FY20 filing, p. 25. NJCEP programs should take a consistent approach regarding fuel switching across all of its programs, and the approach should reflect the state's climate mitigation goals.

#### **c. Program Evaluation Budget**

For the FY19 compliance filing, Rate Counsel expressed two concerns about the program evaluation plan and budget: (a) the evaluation budget is too small; and (b) the FY19 OCE filing does not provide a breakdown of the evaluation budget by program. Rate Counsel FY19 Comments, p. 23. As a result, Rate Counsel recommended a budget increase for program evaluation and requested a more detailed budget breakdown. The FY20 OCE filing proposes a

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<sup>4</sup> Board Order Docket No. QO18040393, June 22, 2018.

slightly higher amount of budget (\$4.2 million for FY20, versus \$3.5 million for FY19). However, this amount is still insufficient for conducting robust evaluation studies and accounts for only about 1 percent of the overall NJCEP budget. As discussed in Rate Counsel's FY19 Comments (on page 9), high performing programs in the industry are spending closer to 3 percent to 5 percent of their total program budgets on program evaluation. Further, the FY20 OCE filing does not provide a budget breakdown for proposed evaluation studies. FY20 OCE filing, p. 12. Rate Counsel reiterates its concern on these areas. Rate Counsel further recommends that: (a) OCE allocate between 2 to 5 percent of the budget for program evaluation and (b) OCE provide an evaluation budget breakdown by program or by study

#### **d. Marketing Budget**

OCE proposes to allocate \$4 million for program marketing, the same amount as for the FY19 budget or just about 1 percent of the overall NJCEP budget. This is another area of Rate Counsel's FY19 recommendations that OCE did not adopt for the FY20 Compliance filing. For the FY19 compliance filing, Rate Counsel expressed a concern that the marketing budget was too low to attract enough program participants. Rate Counsel also provided information to support that conclusion, as follows:

- "Programs of similar scope and size around the country typically dedicate four to seven percent (4%-7%) of their overall program budget to marketing. Increasing the level of marketing investment by the NJCEP can increase program participation levels and lower overall costs, especially in residential programs like Home Performance with ENERGY STAR and Appliance Recycling" (Draft Strategic Plan, p. 57).
- "Programs are consistently undersubscribed as compared to available budgets and potential study findings. Marketing budgets have been dramatically cut in past years to less than 1% of total budget, which is well below the industry average of 3%-5%" (ERS 2016, p. 5).<sup>5</sup>

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<sup>5</sup> ERS 2016, "Review and Benchmarking of the New Jersey Clean Energy Program." Available at

Despite these findings and recommendations in the 2016 ERS study and the Draft Strategic Plan, OCE did not address Rate Counsel’s concern in the FY19 filing or in the FY20 filing. Rate Counsel strongly recommends that NJCEP increase the budget for marketing to reach roughly 3 percent of the total budget. This still would be at the low end of the marketing budget spending range found in the ERS 2016 study, yet would still represent an increase over current levels.

## **2. Comments on Specific Program Issues in FY19 Compliance Filings**

This section provides Rate Counsel’s comments on specific programs and consists of the following sub-sections:

- Residential program;
- Low-income program;
- Multi-family program;
- Commercial and industrial program;
- State Facilities Initiative; and
- New Initiatives.

### **a. Residential**

#### **(1) Residential New Construction (“RNC”)**

In the FY19 compliance filing, TRC proposed a simplified incentive structure, which consisted of a base incentive for each type of residence plus the same level of additional incentive based on \$/MMBtu saved (i.e., \$30/MMbtu saved). In the FY20 filing, TRC maintains this incentive structure. Rate Counsel supported this incentive structure in its comments on the FY19 compliance filings. However, Rate Counsel raised an issue that the FY19 filing did not clarify the range of typical incentive amounts per building using a \$30 per MMBtu incentive. Accordingly, Rate Counsel recommended that TRC provide a rough, illustrative savings range

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<http://www.njcleanenergy.com/files/file/Library/NJCEP%20Process%20Evaluation%20Final%20Report%20and%20Memo%2002152017.pdf>

for each construction type for EnergyStar new home, Zero Energy Ready Home (“ZERH”), and ZERH + PV. Rate Counsel also recommended that TRC clarify whether the standard kWh to MMBtu conversion ratio of 3.142 is used to convert electricity savings to MMBtu. The TRC FY20 filing does not address any of these concerns or recommendations. Thus, Rate Counsel reiterates its previous recommendations.

In the FY20 filing, TRC has proposed to expand the New Construction program to include incentives for ZERH rated residences. The proposed incentive is \$1,200/unit. Rate Counsel supports TRC’s initiative to include these incentives. Rate Counsel agrees with the rationale that market barriers exist that discourage constructing ZERHs, and that financial incentives will help to overcome these barriers.

Rate Counsel recommends that TRC provide an explanation regarding how the chosen incentive level of \$1,200/unit was selected. The New Construction section lacks data and analysis to support the proposed incentive level. If TRC has developed this new incentive based on a program from another efficiency provider’s jurisdiction, Rate Counsel asks that TRC provide any findings related to these programs.

Savings targets for electric and gas have decreased by 54 percent and 50 percent, respectively, from FY2019. This change may be a result of the shift of multifamily new construction projects from the RNC to multifamily program, but no explanation has been provided. Rate Counsel recommends that TRC address this decrease in projected savings by providing the change in measure mix and forecasted participation.

(2) Energy Efficient Products

TRC's proposed FY2020 Energy Efficient Products program shows a substantial shift in savings targets from the FY2019 plan. For both annual and lifetime electric savings, targets increase by a factor of approximately 10. The annual electric savings increase from approximately 66 GWh in FY19 to 740 GWh in FY20, and the lifetime electric savings increase from 742 GWh in FY19 to 8,700 GWh in FY20.<sup>6</sup>

Despite this considerable increase in energy savings targets, TRC does not provide any explanation as to how it plans to attain the savings targets. TRC provides no information about what specific measures are going to provide additional savings, whether and what additional incentives are provided, whether new customer outreach or program delivery approach is going to be implemented, and how many additional participants are expected from the increased incentives or delivery mechanism. Rate Counsel recommends that TRC provide an explanation for the shift in savings goals in the FY2020 plan. The increase in electric savings attributed to the Products program between FY2020 and FY2019 accounts for 67 percent of FY2020 Portfolio total. Without an explanation from TRC, Rate Counsel cannot determine whether this increase in savings targets is justified. In particular, Rate Counsel recommend that TRC provide a breakout for savings and costs between lighting and non-lighting savings for FY2019 and FY2020 to further investigate the change, and also provide the types of specific non-lighting measures if there are any certain new non-lighting measures that have a large contribution to the proposed savings increase.

In 2020, the U.S. Department of Energy's EISA lighting standards are set to take effect, which may severely impact the level of savings TRC can claim from lighting measures. The

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<sup>6</sup> TRC FY20 Compliance Filing, Appendix G; TRC FY19 compliance filing, Appendix F: FY19 Program Goals and Performance Metrics.

new standard will disallow the sales of lightbulbs with an efficiency of less than 45 Watts/Lumen, raising the baseline for efficiency providers. Some uncertainty still remains as to whether the federal standards will be enforced and how claimable savings will be impacted when they are. Nevertheless, leading energy efficiency providers in the United States are assuming lighting savings, particularly from the residential sector, will decline sharply in 2020. For example, Rhode Island's sole investor-owned utility, National Grid, has estimated that only 65 percent of the lighting savings that were claimable in 2017 will be claimable in 2020.<sup>7</sup>

In FY2020, electric savings from the Energy Efficient Products programs comprise 73 percent of the total portfolio electric savings. Although not stated by TRC, the low cost of saved energy for the Products program as estimated by Synapse (0.2 cents/kWh) suggests the majority of savings are from lighting measures, which are typically the lowest cost electric measures. However, this low cost is considerably lower than the cost of typical lighting programs. More measure-specific information would help stakeholders properly assess the cost of saved energy for this program.

Rate Counsel is concerned that if EISA standards take effect in 2020, the CEP may not be able to reach its portfolio-wide savings goals, assuming that the majority of the increase came from lighting measures. While Rate Counsel supports TRC's ambitious savings targets set forth in the FY2020 plan, TRC should clarify whether it examined a scenario in which the EISA standards are enforced. If TRC finds the savings target cannot be reached without an expansion of non-lighting measures, a revised plan should include an approach to explore such measures.

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<sup>7</sup> For more information, see this 2017 Synapse Blog Post "Energy Efficiency Programs Plan for Post LED Success" available at <https://www.synapse-energy.com/about-us/blog/energy-efficiency-programs-plan-post-led-success>.

Meanwhile, TRC's proposed FY2020 gas saving decrease substantially from FY2019. For both annual and lifetime gas savings, FY2020 targets are just 8 percent of FY2019's targets. The annual gas savings decreases from approximately 102,000 MMBtu in FY19 to 8,100 MMBtu in FY20, and the lifetime gas savings decrease from 1,140,000 MMBtu FY19 to 91,000 MMBtu in FY20.<sup>8</sup> Rate Counsel recommends that TRC provide an explanation for the cutbacks in gas savings. The magnitude of the change implies a bigger shift in program design than modest adjustments to the measure mix.

(3) Existing Homes Program

TRC proposes to merge the HPwES program and accompanying pilots with the Residential HVAC program, forming the Existing Homes program. Rate Counsel agrees with TRC that combining these two programs will allow for greater flexibility and reduce barriers to customer inclusion. The single-entry point approach allows homeowners to access a wider range of efficient technologies. Further, combining two programs has the potential to reduce administrative burdens. Rate Counsel supports this move to simplify program delivery.

Home energy assessments are required as a first step for the comprehensive pathway, but it is not clear whether home energy assessments are required or encouraged for the single measure pathway and the multi-measures pathway. For any retrofit measures, it is beneficial to conduct a home energy assessment to identify any health and safety issues (e.g., CO leak or proper venting of equipment). While Rate Counsel does not recommend that TRC mandate a home energy assessment for the single and multi-measure pathways because this may create participation barriers, Rate Counsel recommends that all customers in the Existing Homes Program be provided with sufficient educational material to understand the benefits of an

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<sup>8</sup> TRC FY20 Compliance Filing, Appendix G; TRC FY19 Compliance Filing, Appendix F: FY19 Program Goals and Performance Metrics.

assessment. The assessment can identify synergetic energy and cost-savings opportunities by treating the building envelope first, potentially reducing the building energy requirement and the HVAC size requirement. Thus, Rate Counsel recommends that all customers accessing efficiency measures through the Existing Homes program be informed about the benefits of an energy assessment and given the opportunities to conduct an energy audit.

Rate Counsel also recommends that TRC provide more information concerning the proposed increase in incentives for heat pumps. Between FY19 and FY20, TRC increased incentives for four heat pumps: (1) the Central Air Source Heat Pump Tier 1; (2) the Central Air Source Heat Pump Tier 2; (3) the Cold Climate Mini-Split Heat pump; and (3) the Cold Climate Mini-Split Heat Pump (Multi- and ducted indoor units). TRC did not provide an explanation for this increase in incentive. Rate Counsel recommends that TRC provide data showing that the FY19 incentive levels were insufficient motivators for customers, and that the FY20 levels are better designed.

Every year, the Northeast Energy Efficiency Partnerships (“NEEP”) releases an Air-Source Heat Pump Program Incentive summary.<sup>9</sup> CEP’s FY19 incentives are mid-range as compared to programs in other states, while the FY20 incentives would shift them definitively to the higher end. The programs with incentives of \$1,000 (per ton or unit) or higher all have requirements that the customer have electric, oil, or propane existing fuel. It is unclear whether CEP’s programs have an existing fuel requirement associated with an increase in incentive, which should be clarified by TRC.

TRC also proposes to remove the requirement that cold climate mini-split heat pumps are approved by NEEP. NEEP’s standards for approval have had the benefit of widespread

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<sup>9</sup> <https://neep.org/sites/default/files/resources/2019ASHPPProgramSummaryUpdatedFeb2019.pdf>.

stakeholder collaboration and comprehensive analysis. NEEP's standards are now widely accepted and trusted. Rate Counsel recommends that if TRC removes this requirement and establish a new set of the standards, any deviations from NEEP's standards should be thoroughly explained and justified with substantive explanations and analysis.

Lastly, Rate Counsel has a concern about the cost-effectiveness of the Existing Homes program. The TRC FY20 filing clearly shows that the HPwES program (that will be part of the Existing Homes program) is substantially uneconomic with a benefit-cost ratio of just 0.2. In its comments on the FY19 compliance filing by TRC, Rate Counsel expressed the same concern and proposed recommendations as follows:

Rate Counsel recommends that TRC investigate in detail how NJCEP could improve its cost-effectiveness on the HPwES program. Rate Counsel further recommends that NJCEP conduct a detailed process evaluation and benchmarking study with a focus on HPwES to identify areas for further improvements beyond what were found in the 2016 ERS process evaluation study and a 2015 benchmarking study by ERS for NJCEP (Rate Counsel FY19 Comments, p. 21).

The TRC FY20 filing does not directly address the cost-effectiveness issue with the HPwES portion of the Existing Homes program or mention anything about the need for a process evaluation. However, OCE has a plan to conduct an impact and process evaluation during FY20. The OCE's new process evaluation plan should review the Existing Homes program in detail.

**b. Low Income**

As noted in Rate Counsel's FY19 comments, the Utilities FY20 Filing does not clearly articulate any proposed changes to the program. One change is noted in the FY20 Summary of Changes, which is an increase in the eligibility threshold from households with income levels at

or below 225 percent of the federal poverty guidelines to 250 percent. However, no rationale is provided for this change. Additional information should be provided to support this change.

Also, while not identified as a change, it appears that the following sentence from the FY19 filing does not appear in the FY20 filing: “The program is also requesting that customers who receive [Universal Service Fund or] USF rate payer funded subsidies automatically be enrolled into the Comfort Partners Program or a WAP program for an audit” (FY19 Comfort Partners Program, page 2). Rate Counsel requests clarification on whether this represents a change to the program. If so, Rate Counsel requests that the rationale for this change should be provided.

The proposed program budget represents an increase of 26 percent from \$36 million in FY19 to \$45 million in FY20. Rate Counsel supports this increase in funding for the Comfort Partners program.

Comfort Partners also provides ancillary repairs—repairs needed safely and effectively implement energy efficiency measures—which drive up the cost of the program. Rate Counsel requests (1) further explanation be provided on the rationale for this change and (2) further detail be provided on the measures the additional funding will support. Also, the cost of ancillary repairs should be broken out separately in the budgets to facilitate a more direct comparison of the cost of saved energy and cost-effectiveness of this program relative to other programs in New Jersey and around the country.

As pointed out in Rate Counsel’s FY19 comments, the Comfort Partners program suffers from a high cost of saved energy. The lifetime cost of saved kWhs decreased 9 percent from \$0.39 in FY19 to \$0.36 in FY20. However, the median cost of saved electricity for low-income

programs nationally according to LBNL is roughly \$0.08, inflated to 2017 dollars.<sup>10</sup> The cost of saved electricity for the Comfort Partners program is upwards of four times the LBNL estimate.<sup>11</sup> The lifetime cost of saved therms increased 20 percent from \$0.37 in FY19 to \$0.45 in FY20. The LBNL study also found that the levelized cost of saved gas for low-income programs is \$0.39 per therm (2017\$) lower than the Comfort Partners cost of saved gas in FY20. A further explanation of the increase in the cost of saved gas in FY20 should be provided.

Further, while the Comfort Partners program offers benefits beyond energy savings, the OCE and the Utilities operating this program should examine ways to increase the cost-effectiveness of the Comfort Partners program. Lastly, page 4 of the FY20 Comfort Partners Program filing states, “As per the December 2014 APPRISE evaluation recommendations, the Program is transitioning from serving as many homes as the budget would allow, to striving to install deeper cost effective energy savings measures, per project.” The Utilities’ FY20 Filing should provide an explanation of this statement including information on: (1) changes to the measure mix; (2) changes to funding allocation for ancillary repairs versus efficiency measures; (3) change to investments in gas versus electric efficiency; (4) changes to the cost of saved energy; and (5) changes to cost-effectiveness.

Rate Counsel also has a concern that the Comfort Partners is promoting fuel switching to natural gas heating. The FY20 Comfort Partners Program filing state, “Customers, who heat with fuel oil where WAP cannot reasonably provide critical services, such as repairing or replacing oil

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<sup>10</sup> See LBNL 2014, “The Program Administrator Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs,” p. E-1, inflated to 2017 dollars using the U.S. Bureau of Economic Analysis Implicit Price Deflators for Gross Domestic Product, Table 1.1.9, available at <https://bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&1921=survey&1903=13#reqid=19&step=3&isuri=1&1921=survey&1903=13>.

<sup>11</sup> Based on the Comfort Partners cost of saved electricity of \$0.62, divided by the LBNL cost of saved electricity of \$0.08.

fired heating systems, will be considered for conversion to natural gas by Comfort Partners.” Utilities FY20 Filing, pp. 1 and 2. Rate Counsel recommends that any customers who heat with fuel oil where WAP cannot reasonably provide critical services be evaluated for electric heat pumps as well as conversion to natural gas.

Rate Counsel also reiterates its FY19 requests for additional data and evaluation of this program:

1. One of the benefits of the Comfort Partners program is reducing the need for USF funding. The utilities should collect data and document the extent to which such benefits are realized.
2. The previous Comfort Partners evaluation, from 2014, is outdated at this point. Rate Counsel suggests that a new process evaluation should be initiated now.

Lastly, Rate Counsel found an issue in the way the Comfort Partners program budget is allocated among the utility territories. For example, the FY20 Comfort Partners Program filing states as follows:

Allocation of costs in different cost categories may appear to be inconsistent among utilities. As an example, PSE&G covers the cost of statewide printing of Comfort Partners materials and JCP&L covers the cost of administering and maintenance of the LEEN System administration, program evaluation, etc.<sup>12</sup>

Rate Counsel suggests that these costs be allocated to each service territory using eligible customers or sales to eliminate this inconsistency. Additional information is needed to show how the budget was allocated by service territory. It is important for stakeholders to understand the breakout of the opportunity by service territory and how program budgets are allocated to address this opportunity. Therefore, Rate Counsel recommends that the following data by service territory should be included as a separate table in Appendix A:

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<sup>12</sup> Comfort Partners FY20 filing, p. 4.

1. Number of eligible customers;
2. Number of eligible customers kWh sales;
3. Number of eligible customers who participated previously;
4. Number of participating customers in FY20; and
5. kWh and/or therm savings for participating customers in FY20.

**c. Multifamily**

The Multifamily program targets buildings with five or more independent residential housing units and a single owner or management entity. TRC FY20 Filing, p. 55.<sup>13</sup> The program features three paths: single-measure (Path A); bundled and custom measures (Path B); and whole building/comprehensive (Path C).

Path A provides fixed rebates per unit of equipment for customers seeking to make efficiency improvements to a small number of energy end uses. TRC FY20 Filing, p. 56. To encourage participants to take a more comprehensive approach, Path B couples a 10 percent bonus with fixed rebates for multiple prescriptive measures. Alternately, through Path B participants can get performance-based incentives for custom projects that fall outside of the prescriptive measure list. TRC FY20 Filing, p. 57. Path C provides performance-based incentives for comprehensive energy retrofits and new construction. TRC FY20 Filing, p. 60 and 142. There is also an optional savings-verification bonus for Path C, which provides additional incentives for demonstrated performance. TRC FY20 Filing, p. 144.

Affordable multi-family housing properties face numerous, substantial barriers to implementing energy efficiency. Accordingly, TRC proposes to increase incentives for Path A and Path C for existing buildings by 100 percent for multi-family housing that is in a designated Urban Enterprise Zone (“UEZ”), is occupied or to be occupied by low- and moderate-income

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<sup>13</sup> This is a change from the conceptual design included in the FY19 compliance filing, which indicated that eligible properties would include multi-family buildings with three or more residential units.

residents (“LMI”), or is owned by a municipal entity. TRC FY20 Filing, p. 121 and 142.<sup>14</sup> Incentives for Path B and Path C for new construction do not appear to scale up for UEZ/LMI multi-family properties. TRC should clarify whether Path B and Path C for new construction do not have additional incentives for UEZ/LMI properties, and if not, explain why. In addition, while it is clear that affordable housing will require additional incentives in order to participate, TRC has not explained the basis for its specific proposed increase in incentives (i.e., 100 percent above other multi-family properties).

In general, the multi-family sector is an underserved market segment in New Jersey and nationwide. However, Public Service Electric and Gas Company (“PSE&G”) has operated a multi-family program for years, and proposes to continue to offer, a multi-family program in its service territory. TRC’s compliance filing includes little discussion of how the statewide program would operate alongside utility programs (TRC FY20 Filing, p. 25), and no discussion specific to the Multifamily program. Just some of the questions this raises include: Would building owners/operators in PSE&G’s service territory be eligible to participate in both programs, and if so, would free ridership and savings attribution be an issue? Would the statewide program compete with the PSE&G’s multi-family program? Would having two programs create customer confusion?

The projected cost of saved energy for the Multifamily program is high. Assuming a cost allocation of 60 percent electric and 40 percent gas, the cost of saved electricity for the program is \$244 per lifetime MWh saved (equivalent to \$0.24 per lifetime kWh saved). The cost of saved

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<sup>14</sup> Low income means 250% of the Federal Poverty Level, per the U.S. Federal Poverty Guidelines as published by the U.S. Department of Health & Human Services Office of the Assistant Secretary for Planning and Evaluation; moderate-income means 80% of median income, per the HUD Income Limits Documentation System (TRC FY20 Filing, p. 8).

gas is \$14 per lifetime MMBtu saved (equivalent to \$1.40 per therm).<sup>15</sup> For comparison, Lawrence Berkeley National Laboratory's (LBNL) 2014 report on cost of saved energy through the United States found a median levelized cost of saved electricity of \$0.04 per lifetime kWh saved for multi-family programs, which is one-sixth of the cost of the CEP program.<sup>16</sup> Although the LBNL study did not break out the cost of saved gas for multi-family programs, the low-income sector's average cost of saved gas is likely a good comparison point for multi-family programs. The LBNL study found a national average lifetime cost of saved gas of \$0.36 per therm for the low-income sector.<sup>17</sup> Notably, shifting the cost allocation split between electric and gas does not change our finding that the cost of saved energy for the proposed Multifamily program is high relative to the LBNL results.

Consistent with the high projected cost of saved energy, cost-effectiveness of the proposed Multifamily program is low. Appendix H indicates that the proposed program is expected to have a 0.4 Total Resource Cost test ratio and a 0.5 PACT ratio (TRC FY20 Filing, Appendix H). TRC should investigate whether there are best practices from other jurisdictions that can be adopted to improve cost-effectiveness of the proposed program. Further, Rate Counsel recommends laying the foundation for program and process evaluation as soon as possible, to investigate opportunities for cost savings. TRC is generally silent on this issue. However, given concerns about cost-effectiveness and the fact that this is a new program for the CEP, it will be critical to have timely feedback mechanisms. Rate Counsel recommends that

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<sup>15</sup> This calculation is based on savings provided in TRC FY20 Filing Appendix H, and the budget provided in TRC FY20 Filing Appendix F.

<sup>16</sup> LBNL 2014. The Program Administrator Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs, p. E-3.

<sup>17</sup> *Id.*, p. 29.

TRC develop plans for process evaluation now, so that lessons can be learned and adjustments made early on.

**d. Commercial and Industrial**

**(1.) Direct Install**

The description of the Direct Install program indicates that compact fluorescent lamps (“CFL”) constitute an eligible equipment type. TRC FY20 Filing, p. 40. Rate Counsel has concerns with this, given the transformation of the lighting sector. Energy use by CFLs is widely considered to represent the baseline, i.e., the standard equipment against which energy efficiency savings are measured. As such, it is not appropriate to spend ratepayer dollars on equipment that does not provide any savings. Rate Counsel recommends that TRC remove CFLs from the list of eligible equipment types.

**(2.) C&I Building Program**

Last year, TRC merged a number of programs into the C&I Buildings program. The C&I Buildings program supersedes the C&I Retrofit and New Construction programs, Pay for Performance and Pay for Performance New Construction, Large Energy Users, and the new Customer Tailored Energy Efficient Pilot. The new C&I Buildings program consists of (1) Building and Systems Evaluation (“BASE”), which offers a 50/50 percent cost share for building-specific technical assistance; (2) a fixed rebate prescriptive single-measure path (Path A); (3) a multi-measure prescriptive and custom measure path (Path B); (4) whole building performance incentives to assess all energy savings measures at a site; and (5) an optional savings verification add-on to Path C. TRC FY20 Filing, p. 47-50. Generally, incentives increase from Path A to Path C to encourage customers to undertake more comprehensive

measures. For Path A and Path C, enhanced incentives are available for facilities located in a UEZ or Opportunity Zone (“OZ”), or owned by a public K-12 school or municipal entity. TRC FY20 Filing, p. 89 and 116. Large energy users receive much higher incentives for Path B and Path C than do other participants. TRC FY20 Filing p. 114 and 116.

Incentives for Path B and Path C for new construction do not appear to scale up for UEZ/OZ or municipal/school properties. TRC should clarify whether Path B and Path C for new construction do not have additional incentives for these properties, and if not, explain why. In addition, TRC has not explained the basis for its specific proposed increase in incentives for UEZ/OZ and municipal/school properties (i.e., 100 percent above other properties) or for large energy users.

Under this framework, where all sizes of customers and all types of industries are funneled into a single program, it is more difficult to assess whether customers are being served well. Rate Counsel reiterates its recommendation from previous comments that TRC should track a number of data types for each incentive path, including participation, electricity and gas savings, capacity savings, spending, and commitments. Ideally, data will be broken out by customer size, industry, location/service area, and project type, to assist with assessing the effectiveness and reach of the program.

Rate Counsel notes that neither savings estimates nor cost-effectiveness information were provided for any of the components of the C&I Buildings program. This is a significant oversight, as each path is likely to have dramatically different savings and cost results.<sup>18</sup>

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<sup>18</sup> Because the BASE and savings verification components may not directly result in savings opportunities, these components could be folded into the larger C&I Buildings Program for the purpose of assessing cost-effectiveness.

Further, Rate Counsel notes that program evaluation should be designed early in the development and launch of the program. The TRC Compliance Filing is generally silent on this issue. Since this is a relatively new program for the CEP, it will be critical to have timely feedback mechanisms. Rate Counsel recommends that TRC develop plans for process evaluation now to allow for early adjustments as necessary.

**e. State Facilities Initiative**

OCE proposed to allocate about \$38 million or 9 percent of the total energy efficiency program budget to this initiative. OCE FY20 Filing Attachment A, p. 15. This initiative implements energy efficiency projects in State-owned facilities or State-sponsored projects with the objective of producing energy and cost savings, according to OCE. OCE FY20 Filing, p. 5. Rate Counsel raised a concern about this program in its comments on the FY19 compliance filing by OCE last year because the FY19 compliance filing did not provide any information about savings and cost-effectiveness for this program. Rate Counsel FY19 Comments, p. 40. The FY20 filing still does not provide such key pieces of program information despite Rate Counsel's request last year. This omission becomes even more egregious given OCE increases its budget on this program substantially by \$22 million (or 44 percent) over the FY19 budget.

However, the OCE FY20 filing notes that the State Energy Office "has initiated a work plan to obtain historical energy savings metrics from past projects and start tracking these metrics on current and future projects to inform future funding decisions." OCE FY20 Filing, p. 6. Rate Counsel recommends that OCE accelerate its process to obtain not just energy savings, but also to assess the cost-effectiveness for this program.

## **f. New Initiative**

OCE proposes to develop eight new initiatives, some of which warrant more explanation as to why such initiatives are needed. For example, both the Clean Energy Innovation initiative and the R&D Energy Tech Hub initiative support the development of new clean energy technologies. Each initiative has a \$4.5 million budget. OCE should explain why these two different initiatives are needed to support new technology development, and how it determined the \$4.5 million budget for each initiative (e.g., OCE's expectation about the number of new technologies per year).

As another example, OCE allocates about \$8 million for the Smart Tech initiative, but lacks detailed information about this program. Per OCE, the initiative provides incentives to smart technology devices that allow ratepayers to reduce their energy consumption but only provides smart thermostats as an example. OCE FY20 compliance filing, p. 14. Such technology does not need to be promoted under a new initiative and could be included in any of the existing programs. OCE should provide more information about this initiative and explain why this initiative is needed and the rationale for the \$8 million budget.

## **II. Distributed Energy Resources**

### **A. Combined Heat and Power and Fuel Cells**

OCE currently offers incentives for combined heat and power ("CHP") and fuel cell ("FC") projects. To qualify for incentives, program applicants must meet a number of eligibility criteria. Incentives vary by technology, fuel source, type, the presence or absence of heat recovery, project size and total project cost. OCE is proposing a budget of approximately \$21.2

million for CHP (consisting of \$5 million in new funding and \$16.2 million in committed funds carried forward from FY19) and \$5 million for FC (consisting of \$5 million in new funding and no funding carried forward).<sup>19</sup>

Rate Counsel has previously expressed concerns about providing subsidies for CHP and FC. These are mature technologies with established markets. Rate Counsel continues to recommend that the Board carefully evaluate the need for ratepayer funding of these technologies. Based on the materials circulated by OCE, there is no indication that such an evaluation has been done to date. Further, OCE has not provided any analyses of the costs and benefits of the program as proposed. It is unclear how OCE expects this program to contribute to the State's energy goals, and at what cost. Rate Counsel understands that CHP and FC facilities can provide efficient generation and contribute to system resiliency and reliability. However, this program, like all of the State's clean energy programs, should be based on a careful analysis of costs and benefits. The materials circulated for review also contain no analysis of the costs and benefits of the program as proposed.

Furthermore, OCE's proposal includes changes to the program rules that would undermine the program's fundamental purpose of incentivizing more efficient electric generation. Rate Counsel opposes these changes.

The first change is to the criteria that CHP and FC projects must meet to receive incentives. The CHP and FC program is structured to provide incentives in three stages: (1) upon proof of purchase of equipment; (2) upon project installation, operating and successful inspection; and (3) upon acceptance and confirmation that the project is achieving the required

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<sup>19</sup> OCE FY20 Compliance Filing, Attachment A; NJCEP Draft FY20 Budget.

performance thresholds. The third incentive currently requires a minimum system efficiency of 80 percent or more of that specified in the program-approved application. OCE is proposing to make two changes to the criteria for receiving the third incentive. First, the performance requirement would be changed from one based on system efficiency to one based on the number of kilowatt hours generated.<sup>20</sup> Second, instead of a strict threshold, OCE is proposing a sliding scale that would allow less-efficient projects to receive the third incentives. The actual kWh produced would have to be greater than or equal to 80 percent of that set forth in the project's approved application to receive the full incentive. However, projects with actual kWh production as low as 50 percent of that reflected in the application would receive partial incentives.<sup>21</sup>

According to OCE's Summary of Program Changes the criteria for receiving the third incentive is being changed because of up to 20% of applicants have failed to meet the criteria for the third incentives in past fiscal years. The changed criteria are being proposed in order to increase participation, and the resulting energy savings, by "reducing the risk of not receiving incentive #3 ...."<sup>22</sup> Rate Counsel disagrees with this rationale. While the proposed change might increase participation, it would do so by making incentives more easily available for less efficient projects.

The other proposed program change is to the criteria for incentives for FC projects. The current program is limited to FCs with heat recovery—in other words, FC's that are also CHPs because they produce both electricity and useful thermal energy.<sup>23</sup> OCE is proposing to expand the program to allow incentives for FCs without heat recovery. Further, instead of being subject

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<sup>20</sup> OCE FY20 Summary of Program Changes, p. 10; June 6, 2019 Clarification.

<sup>21</sup> Id.

<sup>22</sup> OCE FY20 Summary of Program Changes. p. 10.

<sup>23</sup> TRC FY19 Energy Efficiency and Renewable Energy Program Plan Filing, p. 76-77.

to the same 60% efficiency threshold as CHPs, fuel cells both with and without heat recovery, would need to be only 40% efficient. According to OCE, the changed criteria are intended to “encourage participation by, and competition among, various manufacturers.”<sup>24</sup> Rate Counsel opposes these changes, which would require ratepayer funding of subsidies for less efficient FC projects.

## **B. Energy Storage**

The Board’s current Renewable Electric Storage Program is closed to new applicants, and the FY20 budget includes only \$140,000 to cover existing commitments.

Development of a new program to meet the CEA’s goals for energy storage is ongoing. In FY19 Rutgers University was retained to conduct an analysis of energy storage in New Jersey and submit a report to the New Jersey legislature by May 23, 2019. According to OCE’s Compliance Filing, in FY20 “the BPU will initiate a proceeding to establish a process and mechanism for achieving the State’s goals of 600 MW of energy storage by 2021 and 200 MW of energy storage by 2030.” The details of the new Energy Storage program would be considered and approved by the Board in this proceeding.<sup>25</sup>

OCE is proposing a budget of \$7.565 million for this program.<sup>26</sup> OCE states that this amount “includes funding for grants and administration” of the program.<sup>27</sup> In the absence of details on how these funds would be spent, Rate Counsel is not able to comment on the proposed budget allocation.

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<sup>24</sup> OCE FY20 Summary of Program Changes. p. 10.

<sup>25</sup> OCE FY20 Compliance Filing, p. 7.

<sup>26</sup> NJCEP Draft FY20 Budget.

<sup>27</sup> OCE FY20 Compliance Filing, p. 7.

### C. Microgrid Development

In its Clean Energy Program budget Order for Fiscal Year 2017, the Board established a Microgrids program to fund feasibility studies for Town Center microgrid programs.<sup>28</sup>

According to the OCE's FY20 Compliance Filing, these studies will be complete in FY20.

Staff will identify projects for Phase 2, which will provide funding for design and engineering.

Selection will be based on the feasibility of the project, the involvement of the applicable EDC, and an acknowledgement that the applicant will be responsible to share in the total cost of Phase

2. Phase 3, construction, is to be funded through various financing mechanisms outside of the NJCEP.<sup>29</sup>

OCE is proposing a budget of \$4 million for to provide funding for the Phase 2 incentives.<sup>30</sup> Rate Counsel has no specific comment on the proposed budget amount, but is generally supportive of OCE's approach of providing funding for design and engineering based on review of the feasibility studies.

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<sup>28</sup> I/M/O the Clean Energy Programs and Budget for Fiscal Year 2017 and I/M/O Revision to New Jersey's Fiscal Year 2017 Protocols to Measure Resource Savings, BPU Dkt. Nos. QO16040353 & QO16060525, Order at 16 (June 29, 2016).

<sup>29</sup> OCE FY20 Compliance Filing, p. 8.

<sup>30</sup> OCE FY20 Compliance Filing, Attachment A; NJCEP Draft FY20 Budget.

### **III. Renewable Energy**

#### **A. Solar Renewable Energy Certificate Registration Program**

According to TRC's Compliance Filing, no program changes are planned for the Solar Renewable Energy Certificate ("SREC") Registration Program except as needed to comply with the CEA and other legal requirements. The Board and Staff have undertaken efforts implement the transition of the solar market that is mandated by the CEA. Consistent with the CEA, the SREC Registration Program will close to new applicants when solar generation equals 5.1 percent of retail electric sales, which could occur in FY20.<sup>31</sup>

The proposed SREC Registration Program budget is \$2.0 million. Rate Counsel has no objection to this proposed budget allocation to fund the operation of the program.

#### **B. Community Solar**

The New Jersey Community Solar Energy Pilot Program was launched on February 19, 2019. The program aims to increase access to solar energy by enabling electric utility customers to participate in a solar generating facility that may be remotely located. The program includes targets for low- and moderate-income participation.<sup>32</sup>

OCE is proposing a budget of \$3.0 million for new programs to support the development of low- and moderate-income community solar projects. All of this funding would be for "Rebates, Grants and Other Direct Incentives."<sup>33</sup> In the absence of details on how the budgeted funds would be spent, Rate Counsel is not able to comment on the proposed budget allocation.

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<sup>31</sup> TRC FY20 Compliance Filing, p. 73.

<sup>32</sup> OCE FY20 Compliance Filing, p. 4.

<sup>33</sup> Id., p. 4 & Attachment A; NJCEP Draft FY20 Budget.

### C. Offshore Wind

OCE is proposing a budget of \$3.28 million for the Board's offshore wind ("OSW") program. Based on OCE's Compliance Filing, it appears that this budget will be used primarily to retain consultants to perform various studies and analyses, and to provide technical support in developing and evaluating responses to additional OSW solicitations retained by the Board.<sup>34</sup> This budget appears reasonable given the scope of the efforts required to implement the OSW program.

In addition, the proposed budget includes an allocation of \$4.5 million to the "NJ Wind Innovation and New Development (WIND) Institute."<sup>35</sup> According to OCE, the institute "will leverage educational institutions, corporate partners, utilities, labor unions and government to create a 'state clearinghouse for education, research, innovation and workforce training for the future of wind energy.'"<sup>36</sup> The materials circulated for review indicated that these funds will be used for "Rebates, Grants, and Other Direct Incentives"<sup>37</sup> but provide no further details on how the funds will be spent. Rate Counsel is familiar with Governor Murphy's OSW policies and the BPU's role in advancing OSW development in coordination with other state agencies. Rate Counsel was not aware, however, before the issuance of OCE's Request for Comments on May 29, 2019, that OCE would be proposing the use of ratepayer funds versus other possible funding sources for this initiative. For these reasons, Rate Counsel has insufficient information to comment on this proposed budget allocation.

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<sup>34</sup> Id., p. 5-6 & Attachment A; NJCEP Draft FY20 Budget.

<sup>35</sup> OCE FY20 Summary of Program Changes, p. 2; OCE FY20 Compliance Filing, p. 4-5 & Attachment A.

<sup>36</sup> Id., p. 5, quoting Governor's State of Innovation 2018 report, available at:

<https://www.njeda.com/pdfs/StrongerAndFairerNewJerseyEconomyReport.aspx>

<sup>37</sup> OCE FY20 Compliance Filing, Attachment A.

In the Matter of the Comprehensive Energy Efficiency and Renewable Energy Resource Analysis for Fiscal Year 2020 Clean Energy Program; and In the Matter of the Clean Energy Programs and Budget for the Fiscal Year 2020

BPU Docket Nos. QO19050645 and QO18060646

Comments of Rockland Electric Company

June 11, 2019

I. Introduction

Rockland Electric Company (“RECO” or “Company”) recognizes the significant undertaking by the New Jersey Board of Public Utilities (“Board”) with respect to developing the foundation for the energy efficiency programs in New Jersey that includes the development of utility energy efficiency programs as part of the state’s overall clean energy and greenhouse gas (“GHG”) reduction goals. The Company appreciates the opportunity to submit comments for the Board’s consideration on the New Jersey Clean Energy Program (NJCEP) Comprehensive Energy Efficiency and Renewable Energy Resource Analysis (CRA) for Fiscal Year 2020 and associated proposed programs and budgets (collectively “the OCE Proposals”).

The Company agrees with the testimony of NJUA at the public hearing on June 7 and the written comments submitted by NJUA, which the Company is a signatory to. As NJUA explained, the OCE Proposals restrict the utilities from participating in market segments where cost-effective opportunities exist, while the New Jersey Clean Energy Act (the Act”) gives utilities the responsibility for achieving mandated energy reductions. As NJUA noted, there is still uncertainty regarding the preliminary Market Potential Study<sup>1</sup> and its initial recommendations for utility energy efficiency programs in New Jersey. The OCE programs should not be re-designed until the Board completes this analysis and provides the framework for utility energy efficiency programs.

II. Utility Energy Efficiency Programs Benefit Customers

Utilities have a strong understanding of their service territory and the customer groups. This knowledge, along with the utility name recognition and relationship with customers, is necessary to implement a successful energy efficiency program that reaches all customer segments.

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<sup>1</sup> The Board selected Optimal Energy to complete a study to “determine the energy savings targets for full economic, cost-effective potential for electricity usage reduction and natural gas usage reduction as well as the potential for peak demand reduction by the customers of each electric public utility and gas public utility and the timeframe for achieving the reductions” as directed by the Clean Energy Act. As discussed below in Section IV, there still remains concerns regarding the preliminary findings of this study and future stakeholder process.

This is demonstrated by the ongoing success of the RECO's Low-Income Direct Install Program. RECO's customers responded to RECO's Low Income Audit and Install programs more favorably than to the Comfort Partners Program run by OCE. As noted in the Company's filing for its Low Income Audit and Install III program,<sup>2</sup> from 2010-2016, RECO's program served 519 low income customers, as compared to 33 customers per year when RECO participated in the Comfort Partners Program.<sup>3</sup> This combined total accounted for approximately 80 percent of RECO's USF customers.

Further, the Low Income & Direct Install program is an example of how effectively utilities run energy efficiency programs. RECO's Low-Income Direct Install Program reduced usage by approximately 1,523 kWh per participant in 2016 as compared to an average of 1,161 kWh per participant, or 30 percent more, than the State-run Comfort Partners program over the 2009-2014 period.<sup>4</sup> RECO's Low-Income Direct Install Program also operates at a lower \$/MWh than the State-run Comfort Partners program.<sup>5</sup> The cost-benefit analysis of RECO's Low Income Audit and Direct Install programs, conducted by Rutgers Center for Energy, Economic and Environmental Policy ("CEEPP") concluded that the Company's Low Income Audit and Direct Install programs were 30 percent to 70 percent lower than the NJCEP Comfort Partners program.<sup>6</sup>

Utility energy efficiency programs also benefit from the ability to drive down costs as a result of experience in other jurisdictions and the ability to leverage that experience and resources to deploy energy efficiency programs in New Jersey. Orange & Rockland Utilities, Inc., RECO's parent company, is implementing a number of energy efficiency programs in New York State. RECO will have the advantage of (knowledge, experience, etc. to deploy a range of EE program of which RECO is a subsidiary, has been implementing a number of energy efficiency programs in New York State including a C&I program that rebates both prescriptive and custom projects and incorporates software data analytics to target deep savings, a turnkey direct install business program that targets efficient lighting upgrades, a residential rebate program that targets lighting, HVAC equipment upgrades, Energy Star products, appliance recycling, a residential upstream lighting program, a residential behavioral program, and a marketplace that drives the purchase of energy efficiency equipment through education and instant rebates. Lessons learned and synergy savings can be realized as O&R expands similar program offerings in its RECO service territory. RECO will have the advantage of (knowledge, experience, etc. to deploy a range of EE programs.

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<sup>2</sup> See the Company's August 9, 2017 filing In *IMO Verified Petition of Rockland Electric Company for Approval of an Energy Efficiency Stimulus Program and Associated Rate Recovery*, BPU Docket No. ER17080869 ("RECO 2017 Low Income program filing")

<sup>3</sup> See RECO 2017 Low Income program filing (Testimony of Donald Kennedy at p. 5).

<sup>4</sup> See RECO 2017 Low Income program filing, *supra*, at Exhibit H, Cost-Benefit Study Rutgers Center for Energy Efficiency ("CEEPP") Program Cost-Benefits January 17, 2017 at p. 4.

<sup>5</sup> See RECO 2017 Low Income program filing, *supra*, at Exhibit H, Cost-Benefit Study Rutgers Center for Energy Efficiency ("CEEPP") Program Cost-Benefits January 17, 2017 at p. 6.

<sup>6</sup> *Id.*

Finally, New Jersey recognized the benefits of utility energy efficiency programs by including them as a significant part of achieving New Jersey's clean energy future. This is reflected in the Clean Energy Act requirement that New Jersey's electric and gas utilities achieve annual reductions in usage at the rate of two percent and 0.75 percent, respectively, lower than the average of the last three years, within five years of implementation.<sup>7</sup>

### III. The NJCEP Should Complement Utility EE Programs

The OCE Proposals have not been informed by stakeholder input, as was the practice in the past. Although the Board will decide the roles of OCE and the utilities in achieving state energy savings under the Act, utilities and other stakeholders could have provided valuable information on the existing OCE programs and t budget. Instead the OCE Proposals will compete with utility energy efficiency programs and could inhibit the ability of New Jersey to achieve energy efficiency reductions and benefit from a comprehensive energy efficiency construct.

First, the OCE Proposal increases the size and scope of its energy efficiency programs. The proposed budget by OCE for Energy Efficiency programs is \$344,195, 037, as compared to the 2018 approved budget of \$288,545,000, with increases to the state facilities initiative, residential low-income, and C&I energy efficiency programs. Because any proposal by OCE will impact the foundation on which utility energy efficiency programs are built, OCE's energy efficiency program needs to be developed with New Jersey's energy efficiency future in mind, which includes utility run programs, achievement of the state's goals, and coordination between OCE and the utilities.

Second, OCE's Proposals miss the opportunity to develop a strong framework where the state and utility programs complement one another and further energy efficiency technologies and markets in the state. For example, RECO's parent company Orange & Rockland has been working in New York to develop energy efficiency programs alongside development of state energy efficiency programs offered by New York State Energy Research & Development Authority (NYSERDA). Utilities in New York and NYSEDA coordinate program offerings to eliminate the unintended consequence of customer confusion and increased costs that resulted from initial program overlap so that now programs are complementary. For example, NYSEDA's Green Bank provides low cost financing to energy efficiency projects and transforming their role by focusing renewables, research and development, and no longer providing rebates for LED lighting. In addition, next year NY utilities will take over NYSEDA's heat pump program with a five-year goal of achieving 5TBtu of energy savings.

### IV. New Jersey Needs a Strong Energy Efficiency Framework

As noted in these comments and those of NJUA, an additional concern with the OCE Proposals is that there is considerable uncertainty regarding the preliminary Market Potential Study by Optimal Energy ("Study") and its initial recommendations. There has been strong disagreement

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<sup>7</sup> N.J.S.A 48:3-87.9.

by stakeholders with the Study's methodology, recommendations, and conclusions.<sup>8</sup> For example, the recommendations and conclusions of the Study were a departure from three widely accepted principles for utility energy efficiency programs: (1) utilities must be provided the ability to recover direct costs; (2) utilities must be allowed to recover lost revenues; and (3) utilities should be provided earnings opportunities to encourage achievement of performance targets.<sup>9</sup> These three widely accepted principles provide the framework for utility energy efficiency programs in other jurisdictions to the benefit of customers and should also provide the foundation in New Jersey for successful utility energy efficiency programs.<sup>10</sup>

Specifically the Study did not recognize:

- The importance of separating revenues from throughput and creating earnings opportunities for energy efficiency investments.
- That the recovery of lost revenue is an essential component of a robust energy efficiency portfolio and, in conjunction with achievable performance incentives and an allowed rate of return on the investment, will drive the development of successful energy efficiency programs that align with the State's ambitious energy efficiency goals.
- Reasonably achievable performance incentives should be established to provide utilities with the positive incentive for implementing successful energy efficiency programs.

In addition, the Study concluded that a utility must significantly exceed its target to earn an incentive and is penalized for performance of 100% of its target. Further, the Study's recommended ramp rate of 0.75% in 2020 is likely not achievable during the first year of the

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<sup>8</sup> On May 9, 2019, the utilities were only allowed to see the draft of the Study without the Appendices referenced in the Study, and were provided only one week to review and comment on the Study prior to Board action.

<sup>9</sup> Maggie Molina and Marty Kushler, ACEEE, *Policies Matter: Creating a Foundation for an Energy-Efficient Utility of the Future*, at 8 (June 2015) accessed at <https://aceee.org/sites/default/files/policies-matter.pdf>

<sup>10</sup> For example, the NYPSC highlighted the importance of reasonable achievable performance incentives, stating "Aligning financial incentives with policy goals is the best way to assure the furtherance of (New York's energy efficiency) goals. Where possible, markets and positive financial incentives – rather than direct regulatory mandates with negative consequences - should be the primary drivers of the countless implementation actions, decisions, and initiatives needed to transform the industry. We therefore determine that the direction of rate regulation is towards aligning financial incentives with REV objectives by combining discrete reforms to conventional ratemaking with new earning opportunities that better align the utility and consumer economic welfare interests." Case 14-M-0101, Order Adopting a Ratemaking and Utility Revenue Model Policy Framework, issued and effective May 19, 2016, As a result of this policy direction, NY State is well on its way to reducing energy needs by 185 TBtu through 2025, reducing greenhouse gas emissions by 40% below 1990 levels in 2030, and sourcing 50% of the State's electricity from renewable resources by 2030.

program.<sup>11</sup> Finally, the Study included incorrect data and made incorrect assumptions, such as proposing savings measures that are market segment-specific and not applicable to the service territory of each utility as well as not recognizing that low-income customer demographics differ across the state.

The Company is encouraged to see that the Board adopted the Study as preliminary and directed Staff to further engage with, and receive input from, stakeholders before adopting final targets, incentives, and regulatory constructs.<sup>12</sup> Robust stakeholder engagement to provide accurate data and put forth program proposals based on successful implementation of energy efficiency programs in other jurisdictions will result in a framework for successful utility energy efficiency programs.

## V. Energy Efficiency Advisory Group

The Board established an Energy Efficiency Advisory Group (“Advisory Group”) to provide an opportunity for OCE and the Board to receive ongoing input from impacted stakeholders and experts, but included only one utility representative. Each utility should have a seat on the Advisory Group. The utilities, who are running EE programs, can provide valuable input to the Board about utility infrastructure and utility customers across the state.

A single utility seat will not reflect the nuances among the different utilities in EE program development and implementation to best serve their service territories. The utilities in New Jersey represent diverse service territories in which energy efficiency programs may have varying levels of success depending on structure/implementation. By limiting utility representation, the Advisory Group will not be able to provide meaningful recommendations. A larger group will not be unwieldy. For example, the Federal Energy Regulatory Commission (“FERC”) conducts proceedings, settlement conferences, and hearings often with 30 or more parties. In addition, the Massachusetts Energy Efficiency Advisory Council includes a broad set of stakeholders and full utility representation.<sup>13</sup>

## VI. Conclusion

In conclusion, RECO cautions OCE with significantly scaling its energy efficiency programs and offerings at this critical juncture. The Board, utilities, and other stakeholders are continuing to make progress on developing the framework for utility energy efficiency programs in the state. The utilities have demonstrated the ability successfully implement these programs to deliver

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<sup>11</sup> For example, in NY, utilities programs started at 0.5% of sales and did not attain 100% in the first year and so annual goals were combined into a three-year period. Performance was assessed at the end of the three-year period to allow for programs to mature.

<sup>12</sup> Per the Board’s Notice of Availability, it was directed that the targets and QPIs in the Study be adopted as preliminary pending a final comprehensive recommendation from Staff and directed Staff to “initiate a stakeholder proceeding to receive recommendations from interested parties on the proposed methods to the program.” *See* Notice of Availability, BPU Docket Nos. QO19010040/QO18121302 (May 28, 2019).

<sup>13</sup> The Massachusetts Energy Efficiency Advisory Council includes both voting and non-voting members. *See* MA Energy Efficiency Advisory Council, About the Council, accessed at <http://ma-eeac.org/about/>.

cost-effective energy reductions for customers. Any preemptive action by OCE that impedes on the development of a strong framework for utility energy efficiency programs in New Jersey could inhibit the state in reaching its goals.

June 11, 2019

Reference: FY 2020 TRC Draft Compliance Filing Comments

To Whom It May Concern:

I want to offer my praise for the plans outlined in the compliance filing, which I generally support. However, I did want to point out a potential complication in the implementation of the proposed Rater Incentive for DOE ZERH in the RNC program.

I understand that, as stated in the Summary of Proposed New Initiatives and Program Changes, the intent of the Rater Incentive is to "better encourage builders and raters to spend the additional time and money necessary for designing, building, and certifying these highly efficient homes."

I can tell you as the owner of a Rating company that performs DOE ZERH certification work that the majority of that additional time spent by the Rater is in the early design stage of the project to do all the consulting work to ensure all of the requirements are satisfied in the plans. My understanding is that the Rater Incentive would only be paid if a project is ultimately successful through the construction phase (i.e., earns DOE ZERH certification), even though it is meant to offset the cost for such additional time that is primarily spent during the design stage.

I understand why the program might not want to pay out incentives to Consultants for projects in the design phase if those projects end up not successfully completing certification in construction. But I just want to point out that the result of this is that the Rater Incentive is not actually offsetting any initial costs for this work.

As a result, I would imagine most Raters would still require developers/builders to pay full fees for all of this work performed during the design stage, especially since the Rater Incentive is not assured and is tied to the construction risk of the project. That's not even mentioning the fact that even if the project is successful (which Consultant can't control) the Rater Incentive would not be paid until years after the additional consulting work is performed.



Ultimately, I just think this may lead to awkward financial arrangements between Raters and developers/builders in which Raters still require full payment for all work upfront (which does not achieve assumed NJCEP objective of reducing barrier to entry, and increasing participation) but agree to sign away their Rater Incentive to developer/builder if project is successful.

The bottom line is that it isn't really a "Rater Incentive" if it is tied to the construction risk of the project and the whims of the Rater's client to stop the process at any point (not even mentioning that isn't paid until many months (or even years) after additional work by Rater is performed). As a result, while I understand the idea for this in theory, I don't think it works in practice. I think NJCEP would be better served by implying increasing the rebates paid to builders/developers for DOE ZERH.

Please don't hesitate to contact me to discuss further. Thank you for your consideration and the opportunity to provide input throughout this process.

Very Truly Yours,

ReVireo



Matthew Kaplan, MBA, LEED AP BD+C

CEO

Direct: (732) 853-8338

Email: [mkaplan@revireo.com](mailto:mkaplan@revireo.com)





520 Green Lane >  
Union, NJ 07083

T: (908) 662-8448  
F: (908) 662-8496

dfranco@sjindustries.com

Deborah M. Franco, Esq.  
Regulatory Affairs Counsel

June 11, 2019

***VIA FEDERAL EXPRESS & ELECTRONIC MAIL***

Honorable Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 S. Clinton Ave., 9<sup>th</sup> Floor  
P.O. Box 350  
Trenton, NJ 08625-0350

**Re: IN THE MATTER OF THE COMPREHENSIVE ENERGY EFFICIENCY AND RENEWABLE ENERGY RESOURCE ANALYSIS FOR FISCAL YEAR 2020 CLEAN ENERGY PROGRAM - Docket No. QO19050644; AND IN THE MATTER OF THE CLEAN ENERGY PROGRAMS AND BUDGET FOR THE FISCAL YEAR 2020 - Docket No. QO19050645**

Dear Secretary Camacho-Welch:

Please accept these comments on behalf of South Jersey Gas Company ("SJG") and Elizabethtown Gas Company ("ETG") (collectively, the "Companies") regarding the Board of Public Utilities' ("Board") Fiscal Year 2020 ("FY20") Straw Proposal for New Jersey's Clean Energy Program ("CEP") Comprehensive Resource Analysis ("CRA") and the proposed FY20 program budgets. An electronic copy of these comments has also been provided to [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com).

The Companies appreciate the dedication of the Board and Board Staff to fulfill the requirements of the Clean Energy Act of 2018 (the "Act") and to advance the State's clean energy goals. SJG and ETG remain committed to supporting the State's objectives and the Companies fully understand their responsibilities as reflected in the Act to ensure that the mandated energy reductions are met. *See N.J.S.A. 48:3-87.9.* That said, SJG and ETG remain concerned that while the Act assigns the utilities with the critical role of facilitating the delivery of energy savings, the NJCEP proposal appears to limit the utilities' ability to support and participate in the NJCEP in a manner consistent with enabling them to carry out the statutory mandates. These concerns are addressed below.

**Utility Involvement in Program Administration**

We echo and incorporate by reference the concerns raised by the New Jersey Utility Association ("NJUA") regarding the need for a greater role for utility involvement in the administration of the NJCEP and related issues. A similar view was expressed most recently by TRC Companies, Inc. in its May 29, 2019 filing (at page193) where it stressed the importance of coordination with the utilities:

Collaboration with the state's utilities is critical to providing customers with a clear and understandable path to undertaking energy efficiency projects and obtaining financial incentives to help mitigate the associated costs. An Outreach Account Manager has been assigned to each utility territory. The Managers will continue to build on those relationships and identify opportunities to co-promote program offerings and provide customer assistance.

As SJG and ETG have indicated in prior submissions, beginning well before the promulgation of the Act, the Companies' energy efficiency programs have generated jobs and enabled their customers to save money, all while reducing greenhouse gas emissions. We will continue to support programs that encourage energy efficiency and, in return, make energy bills more affordable for our customers. At the same time, we respectfully urge that the utility role in program administration not be limited in a way that undermines our ability to fulfill our statutory responsibilities and which recognizes the many benefits we have provided and will continue to provide toward the State's clean energy goals. We further suggest that NJCEP not undergo any significant redesign or expansion pending clarification of the role of the utilities in program administration under the Act, particularly regarding territory specific targets and utility performance, including penalties and incentives.

### **Undue Limitations on Incentives for Fuel Switching**

SJG and ETG are also concerned that the FY20 plan unduly limits natural gas from participation in the NJCEP. Specifically, Section 8.1 of proposal contains a limitation on incentives for fuel switching that restricts the heating, ventilation, and air conditioning ("HVAC")-related incentives to high-efficiency electric heat pumps as follows:

#### **8.1 Clarification Regarding Eligibility for Incentives for Fuel Switching**

##### Proposed Program Changes

- Any NJCEP applicant, other than one applying through the C&I Buildings Program's Whole Building Path, P4P EB or Comfort Partners Program, switching from oil, propane, or electric-resistance space or water heating will be eligible for HVAC-related incentives only for switching to a high-efficiency electric heat pump that is otherwise eligible for an NJCEP incentive.

SJG and ETG respectfully submit that eliminating natural gas from participation in the NJCEP in the manner proposed by Section 8.1 would have adverse impacts on consumer affordability and is inconsistent with the State's carbon reduction goals. Natural gas offers New Jersey residents and businesses a proposition for low cost, comfort, reliability and reduced environmental impacts. While air source heat pumps may be cost effective in regions with moderate climates, they are unproven to operate cost effectively and provide comfort in colder climates like New Jersey.

With respect to cost-effectiveness, industry sources indicate that air source heat pumps cost more to install and operate than natural gas furnaces. For example, according to the Energy Information Administration, the installation of an air source heat pump currently costs \$3,000 more than the

installation of a high-efficiency natural gas furnace.<sup>1</sup> SJG and ETG respectfully urge that the incentives applicable to fuel conversions not be limited strictly to air source heat pumps to ensure that New Jersey customers continue to have access to incentives that will promote the installation of cost effective energy efficient equipment appropriate for the State's climate. By funding natural gas efficiency programs, natural gas utilities helped customers save 239 trillion Btu of energy and offset 12.5 million metric tons of carbon dioxide emissions in 2016.<sup>2</sup>

Customer comfort is another reason why air source heat pump incentives should not be the sole incentive associated with fuel conversions. Heat pumps operating in cold climates do not maintain adequate heat output as outdoor temperatures drop. Air source heat pumps, even those designed for cold climates, produce less heat with less efficiency at colder temperatures. A sample of manufacturer specifications shows output decreases about 30 percent with a temperature decrease from 47 to 17 degrees, compromising customer comfort and causing the heat pump to work harder to provide the desired space heat.<sup>3</sup> The questionable performance of air source heat pumps in colder regions further demonstrates that limiting fuel conversion incentives to only this type of equipment would be unfair to New Jersey customers.

Thank you again for the opportunity to provide comments.

Respectfully yours,



Deborah M. Franco

DMF/adh  
Enclosure

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<sup>1</sup> U.S. Energy Information Administration Assumptions to the Annual Energy Outlook 2019: Residential Demand Module, page 4 table 2. Similar findings have been expressed by other industry groups: “Based on our analysis, we find that electric heat pumps have higher equipment and installation costs than gas furnaces and that electricity is generally more expensive per Btu than natural gas.” - *American Council for an Energy-Efficient Economy, Comparative Energy Use of Residential Gas Furnaces and Electric Heat Pumps, 2016.*

<sup>2</sup> 2019 Natural Gas: The Facts <https://www.aga.org/globalassets/2019-natural-gas-factsts-updated.pdf> page 2 of 2.

<sup>3</sup> *Northeast Energy-Efficiency Partnership, Cold Climate Heat Pump Product List*, [https://neep.org/sites/default/files/ColdClimateAir-sourceHeatPumpSpecification-Version3.0FINAL\\_0.pdf](https://neep.org/sites/default/files/ColdClimateAir-sourceHeatPumpSpecification-Version3.0FINAL_0.pdf), page 3.



June 11, 2019

New Jersey Clean Energy Program (NJCEP)  
New Jersey Board of Public Utilities  
44 S. Clinton Avenue  
Trenton, NJ 08625  
[publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)

**Re: Sunrun Comments on NJCEP's FY20 Proposed Budget and New Initiatives**

Dear NJCEP Staff:

The following are Sunrun, Inc.'s ("Sunrun") comments on the New Jersey Clean Energy Program's ("NJCEP") FY 2020 Budget and Proposed New Initiatives and Program Changes ("New Initiatives Document"). By way of brief background, Sunrun is the largest residential solar, storage, and energy services company in the country, with more than 233,000 customers in 22 states and Puerto Rico. We pioneered the "solar-as-a-service" model over 12 years ago to make rooftop solar energy more accessible. We have operated in New Jersey for many years. Sunrun believes there is a better, less expensive, and cleaner way for families to power their homes. With Sunrun's residential rooftop solar, storage, and energy services, consumers are saving money, dramatically reducing their greenhouse gas footprint, and becoming energy management partners capable of delivering grid benefits and lowering system costs for all New Jersey ratepayers. As an industry leader in residential solar plus storage deployment, as well as collaboration with environmental justice organizations across the country, Sunrun has great interest in regulatory program initiatives that facilitate equitable customer-sited energy storage for the benefit of individual consumers, all ratepayers and the electricity grid.

**Storage**

NJCEP's New Initiatives Document outlining new initiatives and program changes indicates that "in FY20, the BPU will initiate a proceeding to establish a process and mechanism for achieving the State's goals of 600 MW of energy storage by 2021 and 2,000 MW of energy storage by 2030. Details on program requirements and applications will be subsequently reviewed and approved by the Board."<sup>1</sup> Sunrun notes that the draft FY20 budget includes a \$7,565,000 allocation for this initiative. Sunrun supports and will be actively engaged in the proceeding to establish a mechanism for achieving New Jersey's goal of 600 MW of energy storage by 2021.

Customers should be the central focus of any storage deployment initiative. Customer-sited storage is growing rapidly because consumers are taking control of their energy consumption and expenses to make their homes and neighborhoods more sustainable and resilient. The importance of back-up power for residential customers in New Jersey cannot be overstated. For vulnerable customers such as the sick and elderly, who may have illnesses or disabilities requiring treatment from electric-powered medical devices or refrigerated insulin,

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<sup>1</sup> New Initiatives Document, p. 3.



having a solar-plus-storage system at their residence could mean uninterrupted critical medical treatment.<sup>2</sup> For moderate-income working families living paycheck-to-paycheck, home resiliency during a severe weather event and power outage means increased peace-of-mind, for example, that the food in their refrigerators does not spoil, saving them additional grocery expenses. The importance of deploying battery storage guided by commitment to equity is highlighted in the recently released statement by the Union of Concerned Scientists, “Principles of Equitable Policy Design for Energy Storage.”<sup>3</sup> A copy of the statement is attached hereto. Sunrun participated in the development of these principles and is a signatory to the statement.

New Jersey has a substantial storage deployment target of 600 MW by 2021. This date is fast-approaching. We believe that in order to achieve this goal, New Jersey must establish a residential storage incentive program to facilitate rapid deployment of storage in the near term. Customer-sited storage can be deployed quickly and through private investment. Sunrun looks forward to continuing the conversation in the proceeding on battery storage that will be launched by the NJ Board of Public Utilities (“NJBP”).

### **Low and Moderate Income/Environmental Justice**

Sunrun appreciates the NJCEP’s commitment to addressing the needs of low- and moderate-income and environmental justice communities in New Jersey. In the New Initiatives Document, the NJCEP states that, “TRC and Board Staff intend to work together to identify, analyze, and ultimately implement additional ways to better provide the benefits of clean energy to those of low and moderate income.”<sup>4</sup> New Jersey’s newly launched community solar pilot program is a significant first step in ensuring that clean energy opportunities can be accessed equitably. Sunrun, however, encourages further discussion about establishing an incentive program for low-income solar access. Several states, including Colorado, California, Illinois, Massachusetts and the District of Columbia have established low-income solar incentive programs worthy of consideration in New Jersey.<sup>5</sup> Energy justice and equity are state-wide policies in New Jersey and we support efforts to establish programming that ensures funding for these commitments.

### **Community Energy Grants**

As noted in the New Initiatives Document, “[t]he creation of Community Energy Planning Grant is the first step in having communities, municipalities and counties identify their own needs, benchmark energy usage and emissions and create their own community energy plan to hit goals that are in line with Governor Murphy’s goals to fight climate change.”<sup>6</sup> Sunrun commends

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<sup>2</sup> See generally, Clean Energy Group, et al., *Home Health Care In The Dark*, June 2019, available at: <https://www.cleaneenergy.org/wp-content/uploads/Home-Health-Care-in-the-Dark.pdf>.

<sup>3</sup> See Union of Concerned Scientists, *Principles of Equitable Policy Design for Energy Storage*, May 2019, available at: <https://www.ucsusa.org/sites/default/files/attach/2019/05/equitable-policy-storage-principles.pdf>.

<sup>4</sup> New Initiatives Document, p. 11.

<sup>5</sup> See Vote Solar and Grid Alternatives, *Low-Income Solar Policy Guide*, May 30, 2018, available at: <https://votesolar.org/about-us/news-and-events/news/2018-low-income-solar-policy-guide/>.

<sup>6</sup> New Initiatives Document, p. 1.



NJCEP for moving forward with this initiative that will empower New Jersey citizens to establish community-driven, self-determined energy plans. This program embodies what energy democracy looks like: clean energy for the people, by the people. It aligns squarely with Sunrun’s vision for a customer-centric energy future in New Jersey. As the Community Energy Planning grant program progresses and outcomes are measured and evaluated, Sunrun would encourage assessment of opportunities to expand the program.

### **Clean Energy Conference**

Sunrun is pleased to learn that the NJCEP intends to coordinate a Clean Energy Conference in FY20 that will “help educate the public about the benefits derived from the Clean Energy Program and the opportunities available through the program.”<sup>7</sup> Sunrun supports NJCEP efforts to increase community outreach and education. We believe that, if designed effectively, such an event has the potential to have significant impact on the communities in New Jersey that need information about the NJCEP’s programs the most.

With that in mind, we would recommend that the Clean Energy Conference be held in a location where low-income residents and environmental justice communities can easily access and at a time that would not conflict with work hours. Facilitating greater transparency and equitable access to the NJCEP’s resources cannot be achieved if the conference were to be held in a location and at a time inaccessible to many in environmental justice communities. Sunrun looks forward to attending the Clean Energy Conference whenever it is scheduled.

### **Residential Energy Efficiency**

Regarding the New Initiatives Document’s section on residential energy efficiency, Sunrun recommends that NJCEP and the NJBPU establish a process to explore the potential for expressly redefining energy efficiency to include battery storage. Given the significant benefits that battery storage can provide in terms of peak reduction or peak shifting, we believe it would be prudent to assess whether New Jersey’s energy efficiency funds could be used for a residential battery storage incentive program. Massachusetts has already instituted such a program.

In January 2019, Massachusetts Department of Public Utilities approved a groundbreaking three-year energy efficiency program which includes incentives that can be applied to behind-the-meter battery storage. In April 2019, the Clean Energy Group issued a comprehensive report on the new program, “Energy Storage: The New Efficiency.”<sup>8</sup> We recommend that the investigation of the energy efficiency benefits of battery storage be included in the NJBPU’s anticipated storage program design proceeding.

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<sup>7</sup> New Initiatives Document, p. 1

<sup>8</sup> See Olinsky-Paul, Todd, *Energy Storage: The New Efficiency*, The Clean Energy Group, April 2019, available at: <https://www.cleanegroup.org/ceg-resources/resource/energy-storage-the-new-efficiency/>.



## Conclusion

Thank you for the opportunity to provide input on the NJCEP's FY20 Budget and Proposed New Initiatives and Program Changes. Sunrun will continue to stay engaged in the process and will provide any additional information that may be helpful.

Respectfully submitted,

*Nicole W. Sitaraman*

Nicole W. Sitaraman  
Senior Manager, Public Policy  
Sunrun Inc.  
nicole.sitaraman@sunrun.com

# Principles of Equitable Policy Design for Energy Storage

The Union of Concerned Scientists convened a group of diverse stakeholders, including environmental justice and grassroots organizations, policy experts, industry, labor, consumer advocates, faith groups, and renewable energy advocates, in December 2018 in Chicago, Illinois, focused on the equitable deployment of energy storage. Energy storage is poised to expand dramatically, transforming the way we produce and use electricity. It is critical that this expansion and the transition to a clean energy economy address the needs of vulnerable residents of disadvantaged neighborhoods and frontline communities without inadvertently causing harm.

The participants developed a set of consensus principles for storage deployment that elevate the critical importance of community-led clean energy solutions. Together these principles can help state policymakers focus on solutions that ensure that the growth of energy storage improves all communities, including environmental justice communities, communities of color, low-income residents, tribal communities, and historically disadvantaged communities. Importantly, these principles are not meant to constrain organizations taking stronger positions on particular policies, regulatory proceedings, or project proposals.

## Principles

**Reducing emissions.** Incentivize energy storage in a variety of applications to help replace fossil fuel-fired power plants and pipelines or to substitute generation from those plants, thus improving the health of frontline communities by cutting emissions that harm local air quality and contribute to climate change.

*These principles elevate the importance of community-led clean energy solutions, and help state policymakers ensure that energy storage improves all communities.*

**Improving resilience.** Ensure that energy storage helps make residents and communities more resilient to both human-caused and natural disasters—which will become more frequent and severe due to climate change—by deploying local, onsite power to keep essential services operating during extended power outages and by restoring power after a disaster.

**Promoting local economic development.** Ensure access to federal, state, and local job training and career-oriented apprenticeship programs, including those certified by the Department of Labor, for energy storage installation and commissioning. Include complementary policies that drive local economic development in historically underinvested communities, train residents for long-term career opportunities, and provide economic benefits to disadvantaged communities without increasing costs of living.

**Accelerating greater levels of renewable energy deployment.** Accelerate the development and deployment of energy storage that accommodates higher levels of renewable energy on the grid to reduce heat-trapping emissions and other harmful pollutants, with a special focus on local reductions in environmentally overburdened communities.

**Protecting consumers.** Ensure that energy storage lowers electricity bills for ratepayers and is used maximally to ensure savings from all services it provides, and incentivize ownership models that lead to direct community benefits.

**Ensuring participation.** Engage in a robust and transparent stakeholder process that empowers community self-determination, facilitates collaboration, and responds to community perspectives so that industry can ensure that energy storage projects are successful and adequately elevate the views of most affected parties.

See reverse for information on participants and supporters.



Megan Rising/UCS

Panelists discuss energy storage policies at the state level during the convening.

## Convening Participants

The following organizations participated in the convening and support the principles outlined here.

Blacks in Green  
Center for Earth, Energy and Democracy  
Clean Energy Group  
Clean Grid Alliance  
Clean Power Lake County  
Electrical Training Alliance  
Environmental Law and Policy Center  
Faith in Place  
IBEW Local 134  
Illinois Citizens Utility Board  
Indiana State Conference of the NAACP  
Interfaith Power & Light (DC, MD, NoVA)  
Just Transition Fund  
Little Village Environmental Justice Organization  
Maryland Environmental Health Network  
Minnesota Solar Energy Industry Association  
NAACP Chicago Southside Branch  
New York City Environmental Justice Alliance  
PSE Healthy Energy  
Renewable Energy Partners  
Stem  
Sunrun  
The Greenlining Institute  
The POINT Community Development Corporation  
University of Minnesota Energy Transition Lab  
Vote Solar

*The Union of Concerned Scientists and the participating organizations would like to thank the Great Plains Institute for facilitating the convening.*



Megan Risling/UCS

*A wide range of stakeholders from across the country met in December 2018 to develop a set of principles to ensure equitable deployment of energy storage technologies.*

## **[** Union of Concerned Scientists

FIND THE FULLY REFERENCED VERSION ONLINE: [www.ucsusa.org/storage-equity](http://www.ucsusa.org/storage-equity)

*The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with people across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.*

### **NATIONAL HEADQUARTERS**

Two Brattle Square  
Cambridge, MA 02138-3780  
Phone: (617) 547-5552  
Fax: (617) 864-9405

### **WASHINGTON, DC, OFFICE**

1825 K St. NW, Suite 800  
Washington, DC 20006-1232  
Phone: (202) 223-6133  
Fax: (202) 223-6162

### **WEST COAST OFFICE**

500 12th St., Suite 340  
Oakland, CA 94607-4087  
Phone: (510) 843-1872  
Fax: (510) 451-3785

### **MIDWEST OFFICE**

One N. LaSalle St., Suite 1904  
Chicago, IL 60602-4064  
Phone: (312) 578-1750  
Fax: (312) 578-1751

**From:** [Mark Thomson](#)  
**To:** [publiccomments@njcleanenergy.com](mailto:publiccomments@njcleanenergy.com)  
**Subject:** FY20 CRA, Budgets and Program Plans  
**Date:** Tuesday, June 11, 2019 10:36:33 AM

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ThinkEco appreciates the opportunity to respond with comments to the NJ CEP FY 2020 Budget and Program Plans proposal.

ThinkEco spoke on the record at the June 7th 2019 open session in Trenton in support of this proposal, and we appreciate that opportunity as well. We state our support for the growth of energy efficiency in New Jersey through the CEP FY 2020 budget and programs proposal, to reach more customers and offer more opportunities for savings.

For those unfamiliar with ThinkEco, we are a smart appliance tech firm founded in 2008 based in New York city. We have been managing utility programs for 9 years, focusing on enabling residential customers (single family, multi family and low income) to save wasted energy from their appliances, particularly window AC units, dehumidifiers and PTACs. Our flagship SmartAC program with Con Edison in New York this year has a goal of enrolling 45,000 new window AC customers, assisting them to save energy and money on their monthly bills.

Through our work in many large cities around the country (New York, Chicago, Baltimore, Hartford, New Haven, San Antonio) we have the experience to recruit, engage and enroll multi family customers. The large number of multifamily customers in New Jersey offers a huge untapped potential resource for energy savings. These customers often have no other means to save energy or to join an energy efficiency program, and they tell us in the programs we manage around the country that they like the opportunity to save energy and to have the means to do so.

ThinkEco supports the increased budgets for the multi family program, and the new \$15 rebate for purchase of an energy star window AC unit. Expansion of the program measures should consider the benefits of adding control of window AC units for energy savings (kWh) and peak load reductions (kW).

To get an idea of the size of the window AC resource for savings in New Jersey, we start with the US Census Bureau data from July 2018: population of 9 million people. There are 3.6 million housing units. If roughly 45% have Central AC, and 45% window AC (some have neither), that is 1.62 million households. And households often have more than 1 window AC units in our experience (2 is the average). This yields an estimate of the total number of window AC units statewide at 3.25 million. For comparison, Con Edison estimates that there are 7.5 million window AC units in their territory. With an average kW draw of 900 watts per window AC unit, the 3.25 million units represents a peak load of 2,880 MWs statewide. This is more than the capacity of the Salem nuclear plant's two reactors: 2,275 MWs.

Also, ThinkEco supports the new Smart Tech initiative proposal that will include incentives for smart technology devices that allow ratepayers to reduce their energy consumption.

We look forward to continued participation in the development of the NJ CEP FY 2020 programs and offer our expertise in enrolling multi family customers and enabling control of smart appliances. By designing and implementing cost effective smart appliance programs for the residential and multifamily segments in New Jersey, you will be reaching new customers

and expanding the savings opportunities statewide.

Sincerely,

--

Mark W. Thomson  
Senior Executive, Business Development  
ThinkEco Inc.

[www.thinkecoinc.com](http://www.thinkecoinc.com)

c/o The Hub @ GCT  
335 Madison Avenue, 4th Floor  
New York, NY 10017  
212-684-2959 (o)  
201-600-8091 (c)

# *Thomas Geothermal Engineering, LLC*

*17 Gate Road*

*Tabernacle, NJ 08088*

*(609) 268-2257*

*(609) 923-5424 (cell)*

*Master HVACR Lic # 19HC00284300*

*Home Improvement Lic # 13VH06049000*

*thomasgeothermal@gmail.com*

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June 11, 2019

To: NJ Board of Public Utilities  
44 South Clinton Avenue  
P.O. Box 350  
Trenton, NJ 08625-0350

## **Re: 2020 NJCEP Comments**

Our comments are meant to be high level. Although the overarching goals of the Board of Public Utilities (BPU) is to address the long term Clean Energy Goals promoted by the Governor, the FY-2020 program is positioned only as a modest set of improvements to this continuing program that we see as simply nibbling around the edges. The underlying basis for these improvements appears to come from a Market Potential Study prepared by a Vermont contractor – Optimal Energy. That study offers only modest electric and natural gas reductions annually over the next decade – and does not start immediately. These recommendations are not nearly enough to put NJ on a path to meet even the 2030 40% reduction goal.

What appears to be lacking is a more detailed understanding of what reductions and subsequent actions will be required leading up to 2030. We do know the use of fossil fuel devices – both in the space conditioning and the transportation sectors – will have to be reduced dramatically and starting now. Almost every new fossil fuel heating device or vehicle placed into service today will still be in use 10 years from now and will make no contribution to our goal. Even without detailed analysis it would follow that NJ must aggressively get in front of this. We see the current program as just pushing the ultimate required actions – some of which may be unpopular - down the road.

We would suggest that the NJCEP look to neighboring New York State (NYS) who has perhaps a three to five year head start on this problem. A consequential piece of work being done through the NY-GEO Organization (<https://ny-geo.org/>) and briefed at their annual conference in April by member Jerry Acton has started to characterize the immense changes that will be required. While the empirical findings reported are

specific to NYS we would expect results for our state to be in line and are of value to us to demonstrate the magnitude of actions required.

There were four reported areas of Conversions/Additions needed in NYS annually by 2030:

1. 220,000 battery electric vehicles per year
2. 233,000 housing unit heat pumps per year. This assumes a mix of 20% less efficient air source heat pumps (ASHP) and 80% more efficient ground source units.
3. 27,000 commercial, industrial buildings with heat pumps per year
4. 5.5 TWhrs carbon free electric power per year

We are attaching the presentation, however it can be found here:

[https://cdn.shopify.com/s/files/1/0326/2837/files/Day1\\_Focus\\_Track\\_S5\\_Beneficial Electrification Acton NY-GEO 2019.pdf?474](https://cdn.shopify.com/s/files/1/0326/2837/files/Day1_Focus_Track_S5_Beneficial_Electrification_Acton_NY-GEO_2019.pdf?474)

The 2020 NJCEP as currently conceived does not begin to address a problem of this magnitude.

We see several major hurdles that NJ has to grapple with that a properly designed Clean Energy Program should help address:

1. We have an almost perfect storm in the electric power generation sector. Our nuclear plants are beyond their original 40 year design life and now require expensive rate payer subsidies just to remain in service. The safety considerations of continuing this strategy should not be underestimated as well. Currently nuclear power represents over 40% of our total generating capability and comprises the vast majority of our current carbon free power arsenal.
2. Shifting transportation and heating assets over to electric will only serve to substantially increase electric usage and demand at a time we need to consider retiring nuclear. The answer to tamp down demand on the building space heating and cooling side would point to ground source heat pumps (GSHP) – which can be twice as efficient as their ASHP counterparts in cooling and can meet 100% of the heating load at winter peak in a small electric power footprint. Despite this fact, the program completely ignores this technology. NYS, on the other hand, has made GSHP an important part of their program.
3. The electric power companies will see a shift from daytime summer peak loads associated with space cooling to winter overnight heating loads. Even with an increase in solar generated power, that power will not be available when needed most during nighttime winter hours. This problem will be exacerbated by the probable overnight charging of new electric vehicles. The plan does look towards more energy storage, however the peak demand could be immense if the state continues to look at ASHPs as the dominant electric heating resource;

their Coefficient of Performance can approach 1 during the coldest peaks. This factor cannot be ignored and could put us on a path towards brownouts or even worse, blackouts during peak.

It's not clear at this late date how much the program as currently presented can change to begin putting NJ on a clearer path to 2030. We do believe that major changes in strategy will be required. The program appears to stake the ability in meeting the clean energy goals on generating immense amounts of carbon free electric power. The cost of using that strategy must be assessed versus pursuing energy efficiency on the use side. The plan also seems to highly promote Net Zero Energy buildings which we believe would have limited application if based on rooftop solar panels. Most homes or businesses either do not have enough space, the roof faces a suboptimal direction, or the tilt is too small to make this the best and most cost effective solution. Doing so often requires the cutting of trees that can shade a home and reduce cooling (and therefore electric) loads and help cleanse carbon dioxide from the air. A much better approach would be strategically placed community or industrial size solar arrays that could be placed with a proper tilt and direction. We also have a massive number of old and inefficient buildings in our inventory – particularly in our urban areas – that would have to be totally rebuilt to accomplish such a thing. We need to honestly characterize how much Net Zero can reasonably accomplish and consider better alternatives.

# **New York State Energy Transition 1990 - 2050**

**A Goals-Driven Perspective  
on the Value of Beneficial Electrification**

**Jerry Acton**

**NY-Geo Conference  
April 11, 2019**

# NYS Energy Transition Objectives / Goals

## Objectives

• Reduce GHG Emissions

• Increase Efficiency

• Increase Reliability

• Distributed Electricity Generation

• More Resilient

• Energy Independence

## Transition Goals

- Reduce 1990 Level GHG Emissions  
-40% by 2030, -80% by 2050
- Carbon Free Electricity  
50% by 2030 >>> (70% by 2030)  
80% by 2050 >>> (100% by 2040)
- Improve Energy Efficiency  
-185 TBtu by 2025
- Reduce Buildings Energy Use  
23% by 2030
- Reduce Summer Peak Load
- Minimize Winter Peak Load

Primary Goal

## Conversion Targets

- Solar 6,000 MW by 2025
- Off-shore Wind 2,400 MW by 2030  
9,000 MW by 2035
- On-shore Wind ? MW by 2030
- Short Term Storage 1,500 MW by 2025  
3,000 MW by 2030
- Long Term Storage ?
- Carbon-Free HVAC 83,000+ by 2025
- Carbon-Free Vehicles 1,000,000 by 2025

Are These Sufficient ?

**Difficult to Know How Goals Will Be Achieved Without a Master Plan than Shows All Inter-dependent Timelines**

# Combustion Fuels Approach 1990 - 2015

- **GHG Emissions Goals Cannot Be Achieved**

**By Simply:**

- **Switching Combustion Fuels**
- **Incrementally Improving Vehicle Emissions**

**Conversion to Cleaner Diesel and Natural Gas Saves 100's of Lives per Year**

- **Good CO2 Reduction in 3 of 5 Sectors** **CO2 Down 19%**

- **CO2 Progress Offset by Methane Leakage** **GHG Down 6%**

- **Combustion Energy Use Decreased** **Down 7.8%**

- **Lost Energy Down Very Little** **Down 1.5%**

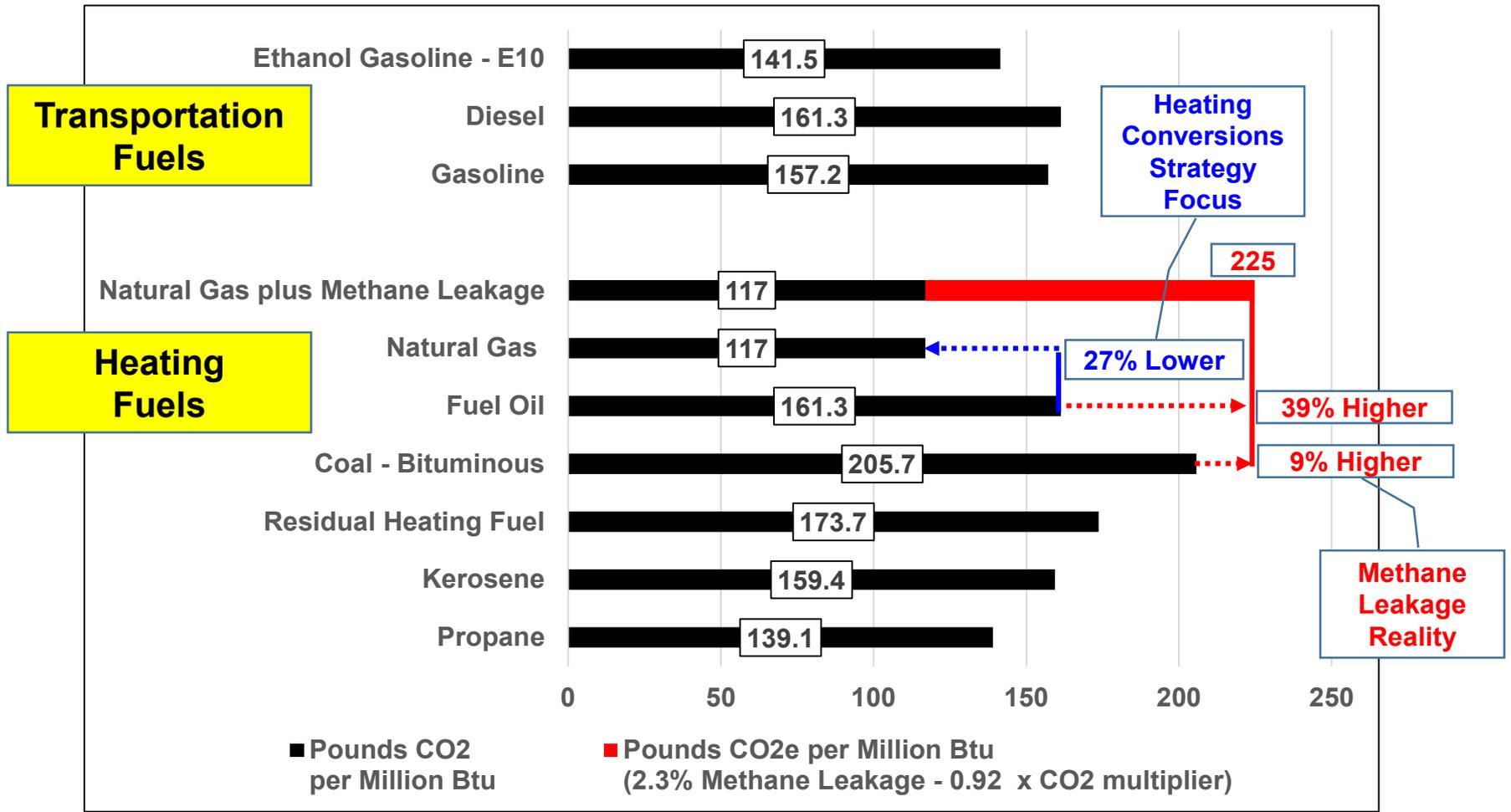
- **Total Energy Use Down Very Little** **Down 0.2%**

- **Energy Efficiency Negligible Improvement** **Up 0.5%**

**Marginal Overall Progress After 25 Years**

# GHG Emissions for Fuels

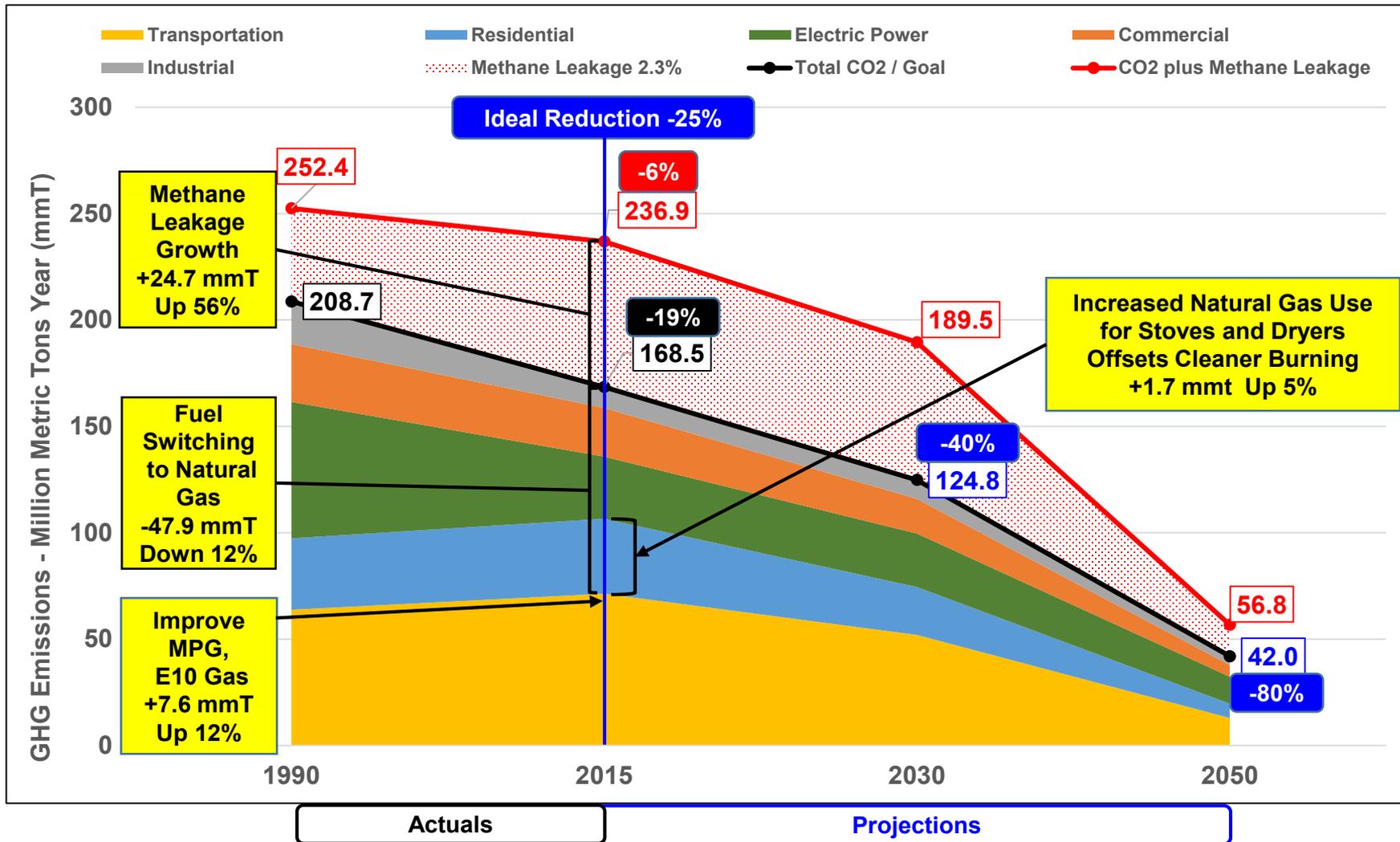
(Pounds CO<sub>2</sub>e / Million Btu) including **2.3% Methane Leakage**



**When Properly Accounting for Methane Leakage, Natural Gas GHG Emissions are Higher than All Other Fuels**

Source: [www.eia.gov/environment/emissions/co2\\_vol\\_mass.php](http://www.eia.gov/environment/emissions/co2_vol_mass.php)

# GHG Emissions Reduction Timeline By Sector 1990 - 2050



**Residential and Transportation Increasing as of 2015  
Electric Power, Commercial, & Industrial Sectors Compensate  
Goal is All Sectors Meet -80% by 2050**

# Non-Combustion Fuels Approach

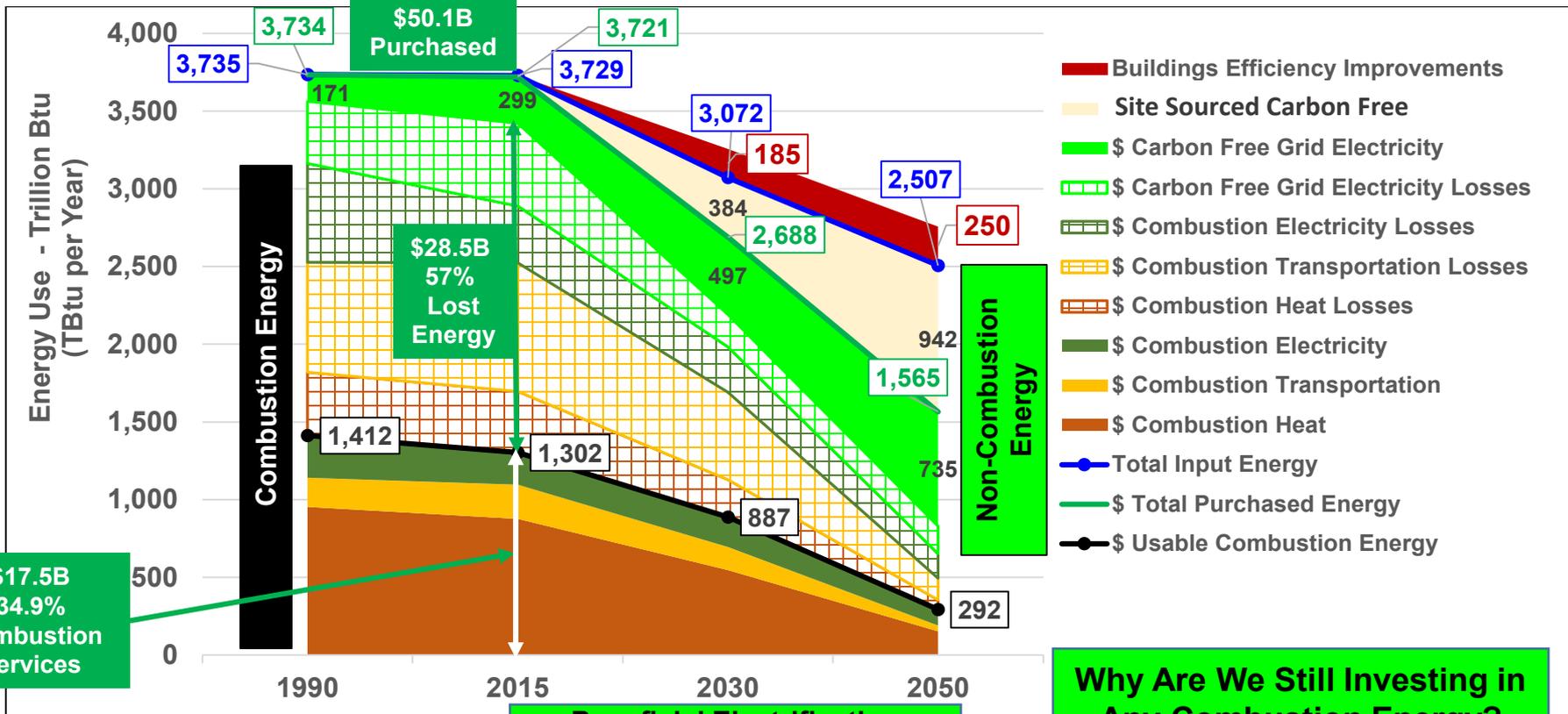
To reduce GHG Emissions **40% by 2030 and 80% by 2050**

Use of 40% and 80% of Combustion Fuels must be replaced with Non-Combustion Fuels

Then All other goals will be Met or Exceeded:

- Reduced Lost Energy
- Increased **Energy Efficiency**
- Reduced **Energy Use**
- Increased Grid **Carbon-Free Electricity**
- Increased On-site **Carbon-Free Electricity** and Heat

# Energy Use Transition 1990 - 2050 (Trillion Btu)



**Why Are We Still Investing in Any Combustion Energy?**

<b>Increased Efficiency</b>	42.4%	43.2%	57.5%	78.5%
<b>CO2 / Methane (mmT)</b>	209/44	168/68	125/65	42/15

**New Yorkers are Captive to Combustion Energy:**  
*emissions intensive, expensive, wasteful, unhealthy*  
**We Can Do Better**

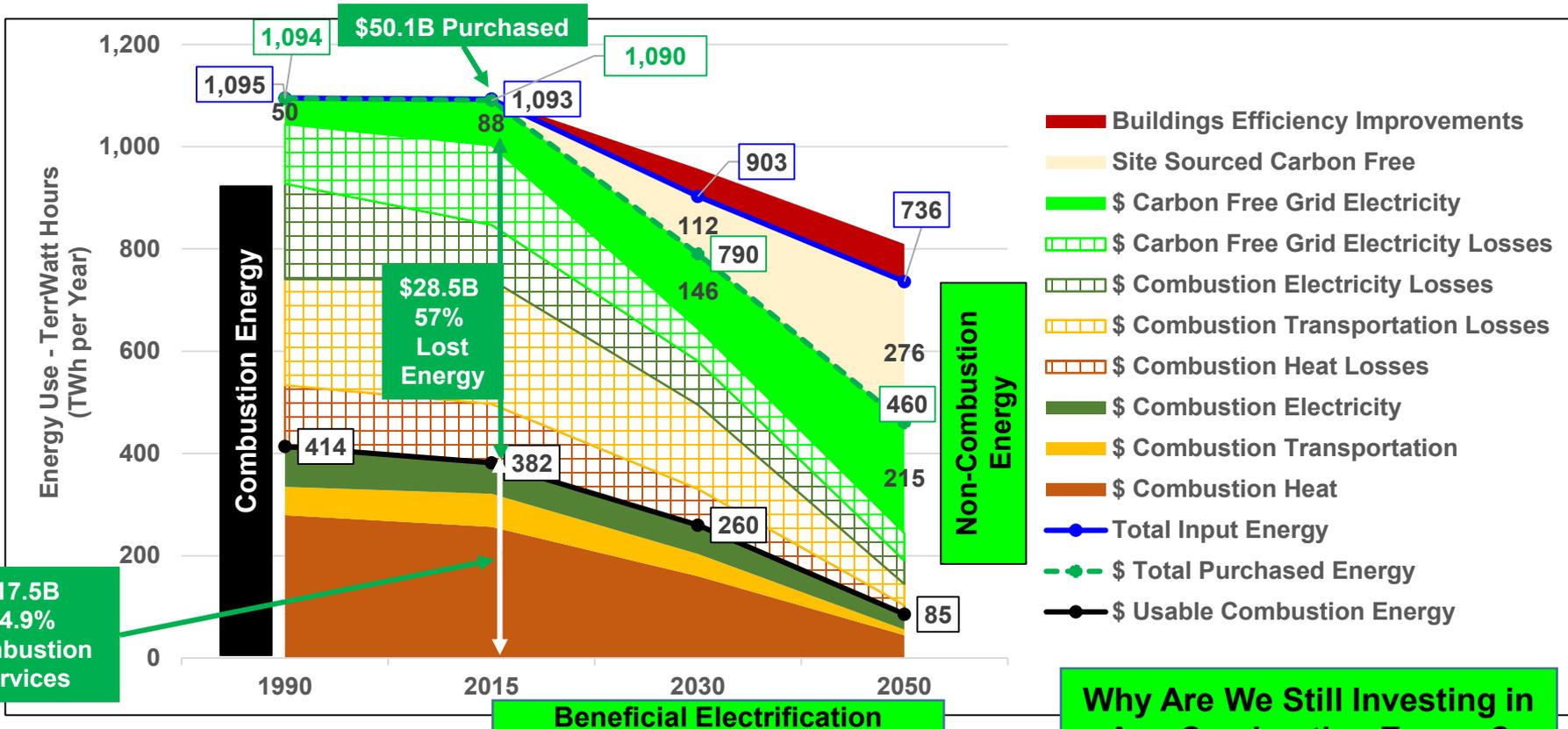
Total Energy Use Reduced 33%	1,228 TBtu
Purchased Energy Reduced 58%	2,169 TBtu
Carbon Free Electricity Increased 329%	564 TBtu
On-site Carbon Free Energy Increased	940 TBtu
Lost Energy Reduced 75%	1,613 TBtu
Combustion Energy Reduced 80%	1,245 TBtu

**Combustion Energy Replaced With Grid and On-site Carbon Free Energy**

- Lower Emissions
- **Higher Efficiency**
- **Lower Energy Use**
- **Lower \$ Cost**

Source: Consumption Data: <https://www.eia.gov/state/seds/seds-data-complete.php?sid=NY>

# Energy Use Transition 1990 to 2050 (Terra-Watt Hours)



**Why Are We Still Investing in Any Combustion Energy?**

**Increased Efficiency**    42.4%    43.2%    57.5%    78.5%

**CO2 / Methane (mmT)**    209/44    168/68    125/65    42/15

**New Yorkers are Captive to Combustion Energy:**  
*emissions intensive, expensive, wasteful, unhealthy*  
**We Can Do Better**

Total Energy Use Reduced 33%	360 TWh
Purchased Energy Reduced 58%	635 TWh
Carbon Free Electricity Increased 329%	165 TWh
On-site Carbon Free Energy Increased	275 TWh
Lost Energy Reduced 75%	473 TWh
Combustion Energy Reduced 80%	329 TWh

**Combustion Energy Replaced With Grid and On-site Carbon Free Energy**

- Lower Emissions
- **Higher Efficiency**
- **Lower Energy Use**
- **Lower \$ Cost**

Source: Consumption Data: <https://www.eia.gov/state/seds/seds-data-complete.php?sid=NY>



# Large Scale Beneficial Electrification Required

- **40% GHG Emissions Reduction by 2030**

Requires Significant Conversions / Additions:

- 3.3 Million Battery Electric Vehicles **220,000 per Year**
- 3.5 Million Housing Unit Heat Pumps **233,000 per Year**
- 40% Commercial, Industrial Buildings with Heat Pumps **27,000 per Year**
- 82.1 Terra-Watt Hours of Carbon Free Electric Power **5.5 TWh per Year**

- **80% GHG Emissions Reduction by 2050**

Requires Additional Conversions / Additions of:

- 5.2 Million Battery Electric Vehicles **260,000 per Year**
- 3 Million Housing Unit Heat Pumps **150,000 per Year**
- 80% Commercial, Industrial Buildings with Heat Pumps **20,250 per Year**
- 86.3 Terra-Watt Hours of Carbon Free Electric Power **4.3 TWh per Year**

**Current Pace of System Conversions  
Must be Increased by 3-6 Times**

June 11, 2019

Aida Camacho-Welch, Secretary of the Board  
Board of Public Utilities  
44 South Clinton Avenue, 9th Floor  
Post Office Box 350  
Trenton, New Jersey 08625-0350

Re: Subject: FY20 CRA, Budgets and Program Plans

To Whom It May Concern,

I am a Licensed New Jersey Master HVACR Contractor as well as the bona fide representative and owner of Vaughan Comfort Services, Inc., a New Jersey based company which employs 26 New Jersey residents with a decent wage and benefits to provide for their families.

My company has been an active participant in the NJOCE's Residential and Commercial Energy efficiency programs, including the WARM Advantage, COOL Advantage and Home Performance for 30 years. We have also participated in Gas utility company fuel conversion financing program for 15 years.

I would like to fully endorse the comments of New Jersey Air Conditioning Contractors Association (NJACCA) dated June 11, 2019. NJACCA is a non-profit trade association representing the Licensed Master HVACR Contractors in the state of New Jersey and their employees. A copy of NJACCA's comments are attached.



ROB VAUGHAN  
PRESIDENT  
NJ Master HVACR License # 5842

212 Barrett Avenue  
Magnolia | NJ 08049

P 856.627.0303  
F 856.627.1973

[VaughanComfort.com](http://VaughanComfort.com)

**NJ Clean Energy Program (NJCEP) on Comprehensive Energy Efficiency & Renewable Energy Resource Analysis and Proposed Funding Levels Fiscal Year 2020**

**Written Comments of:**



**Submitted by:**  
**Pari Kasotia**  
**Mid-Atlantic Director**  
**Vote Solar**  
**[pari@votesolar.org](mailto:pari@votesolar.org)**  
**June 11, 2019**

We appreciate the opportunity provided by New Jersey Board of Public Utilities (NJBP) for stakeholders input on NJCEP's Comprehensive Energy Efficiency & Renewable Energy Resource Analysis and Proposed Funding Levels Fiscal Year 2020.<sup>1</sup> We also appreciate NJCEP's commitment to providing equitable access to energy efficiency and renewable energy programs, especially for low income households. The following comments detail Vote Solar, GRID Alternatives, Environment New Jersey, Isles, Inc. New Jersey Sustainable Business Council, Solar One, Solar United Neighbors and Coalition for Community Solar Access's recommendations to designate funding through the NJCEP strategic plan to increase low-income solar access as well as workforce training opportunities especially for underserved and environmental justice communities in New Jersey.

Given the recent enactment of comprehensive clean energy legislation, including the creation of a statewide community solar pilot program, our comments below are intended to assist NJBP and the New Jersey Department of Environmental Protection (DEP) as it moves forward with incorporating incentives as part of the community solar program design. Financial incentives are critical to enabling the participation of low-to-moderate income households and residential customers, especially those in multi-family housing. In addition, our comments also support workforce training opportunities in New Jersey's growing clean energy economy.

### ***New Jersey: A Case for Equity in Community Solar Programs***

Over 10% of New Jersey's population lives at income levels below the poverty line<sup>2</sup>, with approximately 36% of families considered low-income or moderate income<sup>3</sup>. New Jersey's clean energy and solar programs can take the lead nationwide in implementing equitable, inclusive policies that ensure benefits reach those who need it most, especially New Jersey's low-income, underserved and environmental justice communities. These customers can benefit most from New Jersey's clean energy and solar investments, in the form of bill savings to reduce energy burden, an opportunity to participate in the clean energy transition, a reduction of pollution in their communities, and access to job opportunities in the solar energy economy, which have been growing at over 20% per year<sup>4</sup>. Yet, to date, low-income communities have been largely excluded from participating directly, and thus benefitting directly, in New Jersey's clean energy investments. Low-income communities in the state have made substantial contributions to the funding of these investments as utility ratepayers, often spending double, quadruple, or even more on their utility bills as a percentage of their overall income compared to an average customer. Therefore, it is essential that New Jersey's investments in solar and clean energy are accessible to low-income customers, and offer them opportunities to directly benefit.

We appreciate BPU allocating \$3 million for the community solar pilot program under its Renewable Energy umbrella in the Comprehensive Energy Efficiency & Renewable Energy Resource Analysis and Proposed Funding Levels Fiscal Year 2020. However, we strongly feel that

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<sup>1</sup> While we appreciate the opportunity to provide comments, we strongly underscore the need to provide ample notice on programs like this. This notice was issued on May 29 with written comments due on June 11. This does not provide adequate time for robust stakeholder engagement and is likely to underserve the very people and communities it intends to serve. We encourage BPU to establish timelines that provide ample advance notice as well as time for wide variety of stakeholder comments.

<sup>2</sup> <https://spotlightonpoverty.org/states/new-jersey/>

<sup>3</sup> [https://www.hudexchange.info/onecpd/assets/File/ACS\\_2006\\_lowmod\\_summarized\\_nj\\_2017.xlsx](https://www.hudexchange.info/onecpd/assets/File/ACS_2006_lowmod_summarized_nj_2017.xlsx)

<sup>4</sup> <https://www.thesolarfoundation.org/solar-jobs-census/>

this is not sufficient funding to meet the LMI goal set under the community solar pilot program of 40% LMI households.

Our analysis shows that if the \$3 million funding is translated into an LMI dedicated community solar project or is used to develop a project serving LMI customers, it would, at the most, serve about 500 LMI subscribers with a 2 MW DC system, assuming community solar project \$1.50 per watt<sup>5</sup> and an average subscription of 4 kW<sup>6</sup>. If we were to transition to 100% clean energy by 2050, we will need to serve 20,000 homes per year with clean energy.<sup>7</sup> We recommend that the funding for community solar be at least increased to a minimum of \$10 million per year. This is in line with other comparable programs such as Washington DC which set-aside \$13 million for FY'17 when they launched their Solar for All program.<sup>8</sup> Illinois directed the ratepayer funded Renewable Energy Resources Fund to its low-income Solar for All Program as well as utility investment toward the Solar for All Program (up to \$10 million per year). In California, funding for the Single-Family Affordable Solar Homes (SASH) program, the Solar on Multifamily Affordable Housing (SOMAH) program, and new community solar programs targeted to underserved communities, comes from ratepayer surcharges (not collected from low-income ratepayers) and from greenhouse gas emissions allowances. ***Therefore, NJ should at least dedicate \$10 million per year towards the community solar program to create a meaningful impact, and ensure at least 25% of Clean Energy Program funds per year are dedicated to the broader LMI customer segment for solar adoption.*** Taking a step further, we encourage BPU to provide clarity and details on how funding will be applied to community solar pilot program and under what capacities.

We are also appreciative of BPU's funding allocation for Outreach and Education and Workforce Development. We encourage BPU to provide details on how these two categories serve the low-income and EJ communities in regards to solar energy.

To that effect, we detail our recommendations that are crucial to establish a successful community solar pilot program serving low-income and environmental justice (EJ) communities.

In our Clean Energy Program funding letter to BPU dated April 24, 2019, Vote Solar and a number of our partners recommended that BPU set aside at least 25% of the Clean Energy Program funds to support three activities:

1. Direct incentives to LMI participants in community solar projects; differentiated (or tiered) to support low-income residential customers and low-income affordable housing providers, including minimum savings requirements
2. Outreach and education, and
3. Workforce training

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<sup>5</sup> Using non-resi installation pricing national data from GTM Research, available here: <https://www.seia.org/research-resources/solar-market-insight-report-2018-q2>

<sup>6</sup> Data provided from GRID Alternatives average subscription size for LMI customers below 80% of Area Median Income

<sup>7</sup> This is based on an internal analysis undertaken by Vote Solar on increasing solar access to low-income households

<sup>8</sup> [https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service\\_content/attachments/DOEE-%20Report-%20Solar%20for%20All%20Implementation-%20Final%20for%20Transmittal.pdf](https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/DOEE-%20Report-%20Solar%20for%20All%20Implementation-%20Final%20for%20Transmittal.pdf)

## 1. Direct incentives to LMI participants in community solar projects

Because LMI households are financially-constrained, and are not typically able to cover up-front costs of participation in solar or access financing, funding and financial assistance are essential to LMI customers' participation in solar programs, at scale. Recent research has shown that LMI households typically need 25 - 50% savings to ignite interest in any subscription offering.<sup>9</sup> ***We recommend allocated funds of at least \$5 million out of the \$10 million proposed allocation be utilized as direct subsidies to LMI households to ensure they receive tangible economic benefits as a result of their participation in a community solar program.***

Other states may provide a helpful example of how incentives are used. In New York, NYSERDA, through its Solar for All program<sup>10</sup>, competitively procures solar energy credits directly from community solar projects for the purpose of giving them away to income qualifying electricity customers in the state. The program was capitalized with a \$20 million budget and seeks to provide free solar energy credits to 10,000 low-income households.

Washington DC offers incentives to solar developers to serve low-income customers. Under the Solar for All program<sup>11</sup>, DC has established a goal to bring the benefits of solar energy to 100,000 low-to-moderate income families. The DC Department of Energy and Environment partners with organizations and offers grants to install solar on single family homes and develop community solar projects to benefit renters and residents in multi-family buildings. Program participants under the Solar for All program are expected to see a 50% savings on their electricity bill over 15 years.

## 2. Education and Outreach to Low-Income and Environmental Justice Communities

As New Jersey begins to build community solar programs, it is vital to ensure that information about program participation reaches all customers. As noted in the NJCEP FY19- FY22 Strategic Plan, marketing, education, and brand awareness are critical for increased participation among all customers.

Given the newness of community solar in New Jersey, it is crucial that information about program functionality, participation, and resulting benefits is clearly shared with potential participants. Therefore, serious thought and consideration is needed to ensure people that are traditionally hard to reach are not left behind.

***We encourage BPU to provide grants to local entities to provide technical assistance on solar and community solar to low-income and environmental justice communities.*** The technical assistance should cater towards the unique customer needs in New Jersey. For example, multilingual communications, both verbal and written, as well as in-person meetings in EJ communities and during times that work for EJ communities will ensure all potential customers are informed of the program and its requirements.

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<sup>9</sup> GTM Research (2018). *The Vision for U.S. Community Solar: A Roadmap to 2030*. Available online: [www.votesolar.org/csvision](http://www.votesolar.org/csvision)

<sup>10</sup> <https://portal.nyserdera.ny.gov/servlet/servlet.FileDownload?file=00Pt000000CasHREAZ>

<sup>11</sup> <https://doee.dc.gov/solarforall>

We also recommend that BPU address the topic of LMI customer eligibility and verification head on. ***One approach could be to direct funds to develop a government run platform that allows developers to qualify households as LMI.*** Customers are generally suspicious of sharing personal and sensitive information with private developers and by establishing a platform that is owned and administered by BPU, it will minimize trust issues that LMI households often have with sharing private data with vendors. New York provides a guide post on how this could be developed.<sup>12</sup>

Grantee organizations could also serve as eyes on the ground for BPU. They can gather feedback, concerns, and questions from low-income communities that can be used to make improvements to the program in addition to providing critical outreach, planning support, and engagement with low-income communities.

The Illinois Solar for All program<sup>13</sup> supports education and outreach under its community solar program. The program specifies that community solar developers must engage in partnership with community stakeholders when planning community solar projects; New Jersey similarly encourages such activity by making it a criterion in the rubric by which community solar pilot projects are evaluated. However, in addition to encouraging community engagement, Illinois also sets aside funds to engage in grassroots education about the Solar for All program. ***Therefore, we encourage BPU to set-aside \$2.5 million out of its \$6.4 million Education and Outreach allocation for solar and community solar outreach and a state-sponsored portal to help educate and verify customers.***

### **3. Workforce Development**

New Jersey is a leading solar market nationally, and the New Jersey solar market is poised for further growth through expanded investments in solar and clean energy. Solar creates good, local, living wage jobs that can support a wide range of skillsets and opportunities for growth. New Jersey should work to ensure that these opportunities are available to communities most in need of economic opportunities. This can be achieved by investing in workforce training for low-income and underserved communities.

***We recommend BPU issue an open grant opportunity to encourage competitive programming that provides solar job training, apprenticeship programs, and entrepreneurial training and mentoring, starting at the high school level and onward, to create a diverse, well-trained workforce able to fill all roles of the solar industry value chain, and help launch new solar enterprises located in low-income and EJ communities.*** California and Washington, DC have integrated job training programs as a key component of their low-income solar programs and can provide examples in designing industry integrated workforce development programs. Along with these job training opportunities, it is vitally important that there be a mechanism in place to track the progress of these opportunities so that New Jersey can measure the results of this investment.

We are thankful to BPU for their thoughtful consideration in developing the FY'20 Clean Energy Program budget. However, by incorporating the recommendations above, we can create a more robust community solar pilot program and advance the social, economic, and environmental goals for low-income and EJ communities.

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<sup>12</sup> <https://www.nyserda.ny.gov/All-Programs/Programs/NY-Sun/Solar-for-Your-Home/Community-Solar/Solar-for-All/Solar-for-All-Eligibility>

<sup>13</sup> Illinois Solar for All, summary article: <https://libguides.law.illinois.edu/c.php?g=795745&p=5720227>

Respectfully Submitted,

Pari Kasotia  
Mid-Atlantic Director  
Vote Solar

Tom Figel  
Director of Community Solar  
GRID Alternatives

Jeff Cramer  
Executive Director  
Coalition for Community Solar Access

Doug O'Malley  
Director  
Environment New Jersey

Martin Johnson  
President and CEO  
Isles, Inc.

Richard Lawton  
Executive Director  
New Jersey Sustainable Business Council

Noah Ginsberg  
Director, Here Comes Solar  
Solar One

Glen Brand  
Policy and Advocacy Director  
Solar United Neighbors of New Jersey

**Vote Solar** is a non-profit solar advocacy organization with a mission to make solar a mainstream energy resource across the U.S.

**GRID Alternatives** is a non-profit organization that brings together community partners, volunteers and job trainees to implement solar power and energy efficiency for low-income families.

**Environment New Jersey** is a citizen-based environmental advocacy project of the non-profit Environment America.

**Isles, Inc.** is a Trenton-based nonprofit that fosters self-reliant families and healthy, sustainable communities.

**New Jersey Sustainable Business Council** is where like-minded businesses are joining together for the purpose of creating a new and dynamic 21st century economy for the Garden State based on the “triple bottom line”: people, profit, and planet.

**Solar One** is a 501(c)(3) not-for-profit organization whose mission is to design and deliver innovative education, training, and technical assistance that fosters sustainability and resiliency in diverse urban environments.

**Solar United Neighbors of New Jersey** envisions a clean, equitable energy system that directs control and benefits back to local communities, with solar on every roof and money in every pocket.

**Coalition for Community Solar Access** is a national coalition of businesses and non-profits working to expand customer choice and access to solar for all American households and businesses

through community solar. Our mission is to empower every American energy consumer with the option to choose local, clean, and affordable community solar.

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**From:** Tim Foley <foleymech@comcast.net>  
**Sent:** Saturday, June 15, 2019 9:56 AM  
**To:** publiccomments@njcleanenergy.com  
**Subject:** New Changes

I'm late as usual because I am an owner operator of a 26 year old hvac contracting company in Medford N.J. We participate in most of the high efficiency programs and have since before the NJ Clean Energy program existed. We have about 10 employees that mostly rely on the volume that we have because of our reputation in the industry. Our main supplier of equipment required us to purchase and take training for the manual J and manual S 25 years ago in order to purchase their equipment. We need to show proof annually that we maintain this type of training or we get shut off. We understand the importance of these reports as we seal up and insulate these buildings. To eliminate the requirement would be a detriment to everything we do. Not a single municipality has asked for a manual J in our area since Bob Perri retired in Tabernacle. Unless the person viewing the report knows the parameters it is very easy to manipulate it. So I do not agree with the elimination of the requirement. 90% of hvac license holders in NJ do not know or can preform a manual j, or even own the accepted software to do so.

Heat Pumps are great in the right application. There needs to be a work around where they are not applicable (High Temperature boiler systems). Why is there no separate incentive for properly installed ground source heat pumps like New York and Massachusetts have? These are the most efficient and reliable systems we install. They literally NEVER call us with problems. To cut off incentives for fuel switching this quickly is just irresponsible and hurried. Most houses do not have the electrical services to handle the change to electric auxiliary heating. Our local gas utility has been a great pleasure to work with the high efficiency programs. Our customers have had an incredible reduction in their consumptions as a whole. Let's get the buildings consuming less energy totally before we throw a whole bunch of solar panels on the roof. It's the right thing to do.

Thank You  
Tim Foley  
Ruthann Foley  
David Foley  
Susan Foley  
And our 6 other employees at

Foley Mechanical Inc.  
11 Broad St. Medford NJ 08055

Sent from my iPad