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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").

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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
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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.[1] 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");

[1] 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.[2] 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.

[2] 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[3]

	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

[3] 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.[4] 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

[4] 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).[5]

[5] 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.[6]

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

[6] 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.[7]

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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[7] 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.[8] 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

[8] 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.[9] 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

[9] https://neep.org/sites/default/files/resources/2019ASHPProgramSummaryUpdatedFeb2019.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.[10] The cost of saved electricity for the Comfort Partners program is upwards of four times the LBNL estimate.[11] 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

[10] 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.

[11] 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.[12]

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:

[12] 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.[13] 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. 60and 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

[13] 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.[14] 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

[14] 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).[15] 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.[16] 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.[17] 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

[15] This calculation is based on savings provided in TRC FY20 Filing Appendix H, and the budget provided in TRC FY20 Filing Appendix F.

[16] LBNL 2014. The Program Administrator Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs, p. E-3.

[17] 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.[18]

[18] 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).[19]

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

[19] 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.[20] 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.[21]

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 ...."[22] 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.[23] OCE is proposing to expand the program to allow incentives for FCs without heat recovery. Further, instead of being subject

[20] OCE FY20 Summary of Program Changes, p. 10; June 6, 2019 Clarification.
[21] Id.
[22] OCE FY20 Summary of Program Changes. p. 10.
[23] 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."[24] 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.[25]

OCE is proposing a budget of $7.565 million for this program.[26] OCE states that this amount "includes funding for grants and administration" of the program.[27] 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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[24] OCE FY20 Summary of Program Changes. p. 10.
[25] OCE FY20 Compliance Filing, p. 7.
[26] NJCEP Draft FY20 Budget.
[27] 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.[28] 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.[29]

OCE is proposing a budget of $4 million for to provide funding for the Phase 2 incentives.[30] 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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[28] 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).
[29] OCE FY20 Compliance Filing, p. 8.
[30] 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.[31]

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.[32]

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."[33] 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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[31] TRC FY20 Compliance Filing, p. 73.
[32] OCE FY20 Compliance Filing, p. 4.
[33] 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 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 a retained by the Board.[34] 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."[35] 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.'"[36] The materials circulated for review indicated that these funds will be used for "Rebates, Grants, and Other Direct Incentives"[37] 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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[34] Id., p, 5-6 & Attachment A; NJCEP Draft FY20 Budget.
[35] OCE FY20 Summary of Program Changes, p. 2; OCE FY20 Compliance Filing, p. 4-5 & Attachment A.
[36] Id., p, 5, quoting Governor's State of Innovation 2018 report, available at: https://www.njeda.com/pdfs/StrongerAndFairerNewJerseyEconomyReport.aspx
[37] OCE FY20 Compliance Filing, Attachment A.