DRAFT FOR PUBLIC COMMENT

New Jersey's Clean Energy Program
Fiscal Year 2019 Program Descriptions and Budget

Energy Efficiency and Renewable Energy
Program Plan Filing

FY19 Compliance Filing
Volume 1

June 22, 2018

(this page intentionally left blank)

Table of Contents

Introduction

This Fiscal Year 2019 (FY19) Compliance Filing presents the program plans, budgets, and anticipated savings of the Residential, Local Government, and Commercial and Industrial initiatives of *New Jersey's Clean Energy Program*™ (NJCEP).[1] This Compliance Filing is presented in two volumes: Volume 1, describing the program plans as they are proposed to take effect immediately on the commencement of FY19 (i.e., on July 1, 2018) and Volume 2, describing certain changes that are expected to be finalized and take effect over the course of FY19. The finalization of the changes reflected in Volume 2 would entail, among other things, further opportunities for public and stakeholder input and comment as details are developed and further review and approval by the New Jersey Board of Public Utilities (Board or NJBPU).

Administered through the Office of Clean Energy, NJCEP is a signature initiative of the New Jersey Board of Public Utilities (BPU or Board) that provides financial incentives and support for energy efficiency technologies, distributed energy resources, and solar renewable energy.

FY19 Budgets

Budget information for the FY19 programs that will be implemented by the TRC Team can be found in Appendix E: FY19 Program Budgets.

FY19 Savings Goals

Energy savings projections for the FY19 programs that will be implemented by the TRC Team can be found in Appendix F: FY19 Program Goals and Performance Metrics.

[1] This FY19 Compliance Filing only addresses the programs that are implemented by TRC Energy Services, a division of TRC Environmental Corporation (TRC or Program Administrator), as Program Administrator. On January 13, 2017, TRC acquired the NJCEP Program Administrator Contract from Applied Energy Group, Inc. (AEG) and assumed AEG's rights and duties thereunder. Comfort Partners is a NJCEP program that is implemented by the utilities and as such will be described in a separate filing submitted by the utilities. NJCEP funds are also directed to other state energy programs that are not implemented by TRC and that are not addressed in this filing.

Table References

Residential Energy Efficiency Programs

General Overview

NJCEP offers a broad range of opportunities for New Jersey's homeowners and tenants living in single family and multifamily homes to save money by making their homes more energy efficient. NJCEP ensures that reasonably priced efficient lighting and appliance choices are available when new products are being purchased. The program works with homebuilders to support the incorporation of energy efficiency into the design and construction of new homes. In addition, the program builds the capacity and capability of market participants for safely and effectively upgrading the efficiency of existing homes through Home Performance with ENERGY STAR®. This Compliance Filing provides program descriptions, goals, and budgets for the four residential energy efficiency programs that will be implemented by the TRC Team[2] in Fiscal Year (FY) 2019:

- Residential New Construction (New Jersey ENERGY STAR Homes) Program
- Residential Gas & Electric HVAC (*COOLAdvantage* and *WARM*Advantage) Program
- Energy Efficient Products Program
- Existing Homes Program (Home Performance with ENERGY STAR)

Detailed information regarding each of these programs follows.

[2] Comfort Partners, the fifth NJCEP residential program, which targets low-income customers, is implemented by Atlantic City Electric, JCP&L, New Jersey Natural Gas, Elizabethtown Gas, PSE&G and South Jersey Gas and is not addressed in this Compliance Filing. See the document titled "FY19 Program Descriptions and Budgets for the Utility Residential Low-Income Comfort Partners Program."

Residential New Construction Program

Program Purpose and Strategy Overview

The Residential New Construction (RNC) Program is designed to increase the energy efficiency and environmental performance of residential new construction buildings (single and multifamily) in New Jersey. The Program has the long-term objective of transforming the market to one in which a majority of residential new construction in the state is "net zero-energy," i.e. extremely efficient buildings whose low energy needs can be met by renewable energy generation.

The program strategy is to establish technical standards for energy efficient new construction in New Jersey utilizing nationally recognized platforms including EPA ENERGY STAR® Certified New Homes Program, EPA ENERGY STAR Multifamily High- Rise Program, and the DOE Zero Energy Ready Home Program (ZERH). The program then provides technical support and incentives to home energy raters, architects, trade allies, builders and homebuyers to enable them to design, build, and purchase homes that comply with these standards.

Using an account management approach, the Program recruits new and supports existing participating raters who oversee the energy efficiency work completed by participating builders. The Program is focusing on building stronger relationship with the participating builders through the development and use of a Builder's Participation Agreement clarifying the builders relationship with the program, the use of account managers to provide more direct support to the builders, and the use of the Enhanced Outreach Team to recruit new builder participants with an emphasis toward ZERH projects. The Program also provides the necessary training to raters, trade allies, and builders to ensure they understand the program rules/requirements and have the skill set to meet the higher-than-code program standards and build homes that contribute to New Jersey's energy reduction efforts. Incentives are offered both to partially offset the incremental construction costs associated with building higher efficiency homes and to generate interest and enthusiasm for the program among builders and homeowners.

Program Description

The RNC Program is market-based and relies on builders and raters to build to nationally recognized platform standards, which are defined by core efficiency measures, energy modeling, rater and builder oversight, and checklists to ensure quality installation.

To participate in this program, raters must use modeling software approved by the program to model savings, calculate the HERS Index, and determine program compliance. To be so approved, the software must be accredited by Residential Energy Services Network (RESNET) and capable of providing batch reporting, including building components for QA review of rating files and savings utilizing the NJ User Defined Reference Home (UDRH). The Residential Energy Services Network (RESNET) is a not-for-profit organization responsible for creating the national training and certification standards for HERS Raters and Home Energy Survey Professionals, both of which are recognized by the U.S. mortgage industry and federal government agencies such as the U.S. Department of Energy, the U.S. Environmental Protection Agency.

There are a number of market barriers to efficiency investments in new construction in New Jersey. Key among these are:

1. Builders do not always see the value of the additional administrative procedures and associated costs of ENERGY STAR;
2. Builders and designers are not proficient with the energy code requirements that the program requires them to meet and or exceed;
3. Conflicting motivations guiding design criteria and choices (i.e. builders who make design, procurement, and construction decisions do not pay the homeowners' operating costs associated with those decisions);
4. Lack of local market awareness regarding the benefits of efficiency and environmental performance on the part of consumers, builders, lenders, appraisers, realtors and others;
5. Limited technical skills on the part of some builders and their trade allies to address key elements of efficiency;
6. Lack of local consumer marketing on the benefits of owning a Program-participating home to drive demand;
7. Limited awareness of the Zero Energy Ready Home requirements, benefits and incentives that are available to support that market segment; and
8. Inability of consumers, lenders, appraisers and others to differentiate between efficient and standard new construction homes.

This program employs several key strategies to overcome these barriers including:

- Direct financial incentives to builders of homes that meet program standards.
- Multiple pathways that allow participation across efficiency levels, entice new builders to the program, support the NJ construction market for energy code, and promote increased efficiency and quality-assurance with higher incentives.
- Utilization of nationally recognized EPA ENERGY STAR and DOE Zero Energy Ready Home brand and website to help promote residential energy programs.
- Technical assistance to inform builders and their trade allies on details of the program pathways and how to comply with the rigorous performance requirements.
- ENERGY STAR and ZERH certification, inspections and testing through third-party rating companies that compete in an open market for services.

The program will continue to offer multiple pathways for participation with applicable incentives, but the Energy Rating Index (ERI) pathway is eliminated due to the lack of incremental savings at this level. The following are the eligible FY19 RNC pathways:

- ENERGY STAR Certified Home, Version 3.0 or Version 3.1 depending on whether the home was permitted under the 2009 IECC or the 2015 IECC.
- Zero Energy Ready Homes (ZERH) and Zero Energy Home + RE (ZERH + RE), will use ENERGY STAR Certified Homes version 3.1 as a baseline.
- ENERGY STAR Multifamily High Rise aligns with the EPA guidance to allow multiple baseline codes with corresponding efficiency percentages above code requirements, based on permit date.

Program Enrollment Procedures and Requirements

1. For more efficient processing, raters must utilize an online portal to submit electronic applications, all required program documents, and project status updates.

2. Acknowledged Status: If an applicant chooses to submit its building permit through the alternative building code compliance pathway of participating in the RNC Program (with the understanding the applicant will submit the building permit to the RNC Program when the permit subsequently issues), the applicant may obtain an Acknowledgement Letter from the RNC Program by informing the Program that the builder has made the foregoing choice. (The Acknowledgement Letter generally supports the issuance of a building permit.) For the avoidance of doubt, an Acknowledgement Letter does not constitute a commitment of funds. However, if and when the conditions for Enrollment (see below) are met, the project will be upgraded to being Enrolled and issued an Enrollment Letter.
3. Registered Status: When an applicant creates an application in the portal and uploads all documents that are necessary for Enrollment, the applicant obtains a registration number from the portal and the project achieves a Registered status. Projects at a Registered status may proceed with pre-drywall inspections.
4. Technical review: Once Registered, the project is subject to a full technical review which may require additional or corrected information be submitted by the applicant.
5. Enrolled Status: When the Program Manager confirms that all documents and information required for Enrollment have been submitted in a manner that meets Program Requirements, and that the Program has sufficient funds to commit to the application, the project will be Enrolled and issued an Enrollment Letter. The Enrollment Letter will commit Program funds for the project's incentive.
6. Registrations and Acknowledgments will expire according to building type as listed below, with the time measured from the issuance of the Registration or Enrollment as applicable. Among other consequences of expiration, the project's commitment amount, if any, will be terminated, freeing the previously committed amount for other NJCEP purposes.
    a. Single Family and Multi-single[3] projects expire in one (1) year.
    b. Low-Rise multifamily and multifamily high-rise projects Registered on or after August 1, 2018 will expire in three (3) years and shall not be eligible for any extensions. Such projects Registered prior to August 1, 2018 will have their time frames governed by the provisions of the Financial Incentives for Legacy Projects subsection below.
    c. In addition to the above, Single family and Multi-single projects must a pre-drywall inspection within 120 days of their Registered date or else they will expire and be canceled.
    d. An applicant for Single Family or Multi-single project may apply to the Program Manager for an extension of its expiration date. Such extensions may be granted only for good cause shown and in unusual and extenuating circumstances that were beyond the applicant's control.
    e. Expired projects may reapply, in which case they will be governed by the technical requirements applicable at the time the project's then-current building

[3] As defined below in Planned Program Implementation Activities for FY19.

permit issued and will be eligible for the incentives, if any, available at the time of reapplication.

Program Participation Pathways

The following participation pathways provide New Jersey's builders and homeowners with a range of participation options to suit builders at different levels of experience with energy efficient construction techniques and homebuyers with varying interest and budgets. All are based on the presumption that the IECC 2009/2015 energy code sets the minimum energy performance requirement for newly constructed homes, and as such they all result in energy performance that is better than that required by IECC 2009/2015 as applicable depending on the home's permit date. The below incentive structures are for projects Registered on or after August 1, 2018. Projects Registered prior to this date are eligible for the incentive applicable at the time of Enrollment. See see the Financial Incentives for Legacy Projects subsection below.

ENERGY STAR Home

Builders that enroll in this pathway will satisfy the requirements for ENERGY STAR Version 3.1 or 3.0 based on permit date utilizing the Performance Path, including full inspection checklist requirements. Homes that meet these requirements will be ENERGY STAR certified. The incentive structure within this segment will include a base incentive plus a performance incentive using MMBtu saved as compared to the applicable code UDRH as the indicator.

Zero Energy Ready Home (ZERH)

This pathway recognizes a higher energy efficiency achievement in new home construction. Program requirements include meeting or exceeding all DOE Zero Energy Ready Homes technical standards, building in compliance with the ENERGY STAR Homes Program and all checklists (https://www.energy.gov/eere/buildings/guidelines-participating-doe-zero-energy-ready-home-program), meeting 2015 IECC insulation levels, and certifying under EPA's Indoor airPLUS Program. The incentive structure within this pathway will include a base incentive plus a performance based incentive using MMBtu saved as compared to the applicable UDRH as the indicator.

Zero Energy Home +RE (ZERH+)

This pathway has the same requirements as the ZERH pathway with the additional requirement that 100% the building's modeled energy usage is met by renewable energy systems installed prior to completion of the home. The incentive structure within this pathway will include a base incentive plus a performance based incentive using MMBtu saved as compared to the applicable UDRH as the indicator. Incentives will be paid based upon the HERS Index before the addition of renewables. An additional fixed incentive for the renewable energy system will be awarded for a project meeting the ZERH+ eligibility requirements.

ENERGY STAR Multifamily High Rise

During FY19, TRC anticipates developing with stakeholder input and presenting to the Board a unified approach to serving multifamily projects to assure that all multifamily properties are eligible to receive energy efficiency services suited to their particular needs. (See Volume II of this Compliance Filing). In the meantime, multifamily buildings at four (4) to five (5) stories will be eligible, at the applicant's choice, for the ENERGY STAR Certified Homes Program or the

ENERGY STAR Multifamily High-Rise (MFHR Program), while buildings of six (6) stories or more will be eligible for only the MFHR Program. The incentive structure will include a base incentive plus a performance-based incentive using the reported MMBtu saved.

Target Market and Eligibility

Newly constructed single family, Multi-single, and low-rise, mid-rise (≤ 5 stories) and high-rise multifamily buildings (≥ 6 stories) are eligible for RNC Program benefits if the home/building will use natural gas and/or electricity as the heating fuel supplied by a New Jersey public utility. The target markets for this program are homebuilders and energy raters.

Multifamily buildings can either be considered low to mid-rise (which participate in the first four pathways described above) or high-rise (which participate in MFHR Program) depending on several factors including number of stories, heating, cooling, DHW systems, and square footage of commercial space in the building. Eligibility of multifamily buildings for the RNC Program is determined as follows:

For projects Registered prior to August 1, 2018	The Multifamily Decision Tree and the ENERGY STAR Multifamily Guidelines 2015 (at Appendix D, Figures 1 and 2, respectively)
For projects Registered on or after August 1, 2018	The Multifamily Decision Tree at Appendix D, Figure 1 and the ENERGY STAR Multifamily Guidelines Version 1.3 (at Appendix D, Figures 1 and 3, respectively)

The RNC Program will also enroll any existing home/building undergoing substantial ("gut") renovation or remodeling that meets the above criteria.

Projects participating under the RNC program are not eligible for participation or incentives under any other NJCEP program including but not limited to the Residential HVAC program (*COOL*Advantage/*WARM*Advantage) for any building envelope components, equipment or appliances that were included in the HERS rating of the home.

Program Requirements

To qualify for the FY19 Program, a home must meet ENERGY STAR Home, Zero Energy Ready Home (ZERH, Zero Energy Home + RE (ZERH+), or ENERGY STAR Multifamily High Rise requirements.

The technical details presented below address most, but not all, program requirements. The full technical specifications for RNC program compliance are available upon request. The ENERGY STAR Certified Homes and Zero Energy Ready Home program requirements (e.g. checklists, standards and modeling inputs) are periodically updated by US EPA ENERGY STAR and supersede requirements of this program.

ENERGY STAR Certified Homes

Meet or exceed all EPA ENERGY STAR Certified Homes version 3.1 or 3.0 (based on permit date) Performance Path standards[4] including:

- Meet or exceed the ENERGY STAR Certified Homes version 3.1 or 3.0 HERS Index Target.
- Complete all ENERGY STAR Certified Homes version 3.1 or 3.0 mandated checklists.

Zero Energy Ready Home

Meet or exceed all DOE Zero Energy Ready Home Performance Path technical standards[5] including:

- Complete all ENERGY STAR Certified Homes Version 3.1 Program and all ZERH checklists.

Additional RNC Program Requirements:

- Only for projects Registered prior to August 1, 2018, maximum HERS index of 50.

Zero Energy Home 100% Renewable

Meet or exceed all ENERGY STAR and ZERH requirements as described above.

Additional RNC Program Requirements:

- 100% of the building's modeled electric site energy usage must be met by renewable energy systems installed onsite prior to completion of the home

ENERGY STAR Multifamily High-Rise

Meet or exceed EPA ENERGY STAR Multifamily High Rise (MFHR) Program standards[6] including:

- Follow Performance Path which utilizes ASHRAE approved energy modeling software to determine energy savings of a customized set of measures
- Align with EPA guidance to allow multiple baseline codes with corresponding percent above code requirements per Table 16 at Appendix A below.
- NJCEP will require the application of a specific baseline within six months of EPA imposing such a requirement.

During FY19, the Program Administrator anticipates developing with stakeholders and presenting to the Board a unified program serving multifamily projects to assure that all multifamily properties are eligible to receive energy efficiency services suited to their particular

---

[4] ENERGY STAR New Homes Standards: http://www.energystar.gov

[5] Zero Energy Home Standards: http://energy.gov

[6] Multifamily High-rise Standards: http://www.energystar.gov

needs. Accordingly, during FY19, it is expected that multifamily (MF) participation in the present Program will be transitioned to the pending Multifamily Program. (See Volume II of this Compliance Filing).

Incentives

Residential New Construction program incentive tables can be found in Appendix A.

Financial Incentives for Legacy Projects

During FY17, it was discovered that several "legacy" (i.e., prior to the current Program Administrator Contract) Multi-single, MF, and MFHR projects had commitments but no clear expiration date. The subject projects were assigned an enrollment date of July 1, 2016 with a two-year commitment that expires on June 30, 2018. These projects may also be eligible for a one-time extension period equivalent to the length of their original commitment, but only if they demonstrate that their Pre-Drywall Inspections have been successfully completed by the time of their commitment expiration date (in accordance with the Program Enrollment Procedures and Requirements subsection above in this Compliance Filing).

Incentives for all projects Registered prior to August 1, 2018 remain eligible for the incentives set forth in the tables in Appendix A, Residential New Construction, and labeled "Legacy Financial Incentives."

Planned Program Implementation Activities for FY19

The following program implementation activities will be undertaken in FY19. The Program will:

- Observe DCA's timeline for adoption of the 2018 version of the IECC code, and, if and as appropriate, make any changes to the program that are necessary to conform to that adoption.
- As agreed upon with stakeholders, for projects Registered on or after August 1, 2018 the Multi-single participation level will be limited eligibility to "townhouse" as defined by code (i.e., a single-family dwelling unit constructed in groups of three or more attached units in which each unit extends from foundation to roof and with open space on at least two sides).
- Continue to review applications and, on a first-in-time basis, issue Enrollment Letters (that indicate, among other things, the amount of program funds committed) to projects whose applications demonstrate their eligibility for the program as long as funding is available.
- Continue to process incentives for completed projects meeting program requirements.
- Provide technical training to help raters, builders, and associated trade allies become more familiar with the IECC 2015/18 code, ENERGY STAR v3.1 requirements as well as H-QUITO, Zero Energy Ready Homes workshops and others.
- Continue use of the User Defined Reference Home (UDRH) based on IECC 2009/2015 code. The UDRH is used as the baseline to calculate savings (including the MMBtu saved for performance incentives) for projects completed under the applicable IECC code as determined by reference to the project's building permit date. Building component values used in the UDRH are included in the NJ Protocols. If a new construction baseline study is completed for New Jersey in FY19, adjust the UDRH as deemed

necessary to accurately reflect savings as compared to standard construction. Because FY19 program incentives have a performance component based on MMBtu savings over the UDRH, if the UDRH needs to be adjusted to baseline study results, a corresponding adjustment may need to be made to the MMBtu performance incentive metric.

- Initiate a stronger relationship between the Program and both current and new builders via promoted use of a Builder's Participation Agreement.
- Utilize the Enhanced Outreach Team to recruit new builder participants with an emphasis on ZERH projects.
- Actively engage with DOE, raters and builders to identify challenges of participating in the Zero Energy Ready Home pathway.

Quality Control Provisions

Market-based delivery of rating services and certifications requires an effective set of standards for quality assurance. The responsibility for builder quality and ENERGY STAR and/or ZERH Certification rests with raters, ratings providers, EPA, DOE, and RESNET. It is incumbent upon the program to assure that a robust system for identifying and communicating quality issues exists to manage the credibility of the savings and associated incentives offered.

To maintain a robust rating marketplace, the TRC Team will perform inspections and conduct oversight processes on raters and projects. Quality Assurance activities will continue to be performed by the TRC Team based on the track record of raters and builders measured through program inspections.

In addition to reviews for data completeness on all checklists, forms and applications, on-site inspections and technical review of building and rater files will be required based upon the demonstrated proficiency of the builders and raters. Inspection requirements will be adjusted based upon the track record of the program participants. Initial inspection rates for new builders and rating companies will be above average and will decrease as they demonstrate proficiency in proper building techniques and in understanding the qualifying requirements of the Program.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Residential Gas & Electric HVAC Program

"New Jersey *WARM*Advantage & *COOL*Advantage"

Program Purpose and Strategy Overview

The purpose of the New Jersey Residential Gas & Electric Heating, Ventilation, and Air Conditioning (HVAC) Program is to increase the selection and quality installation of high efficiency residential HVAC equipment in the New Jersey market through the use of incentives, supply chain support, and customer outreach and education. In addition, the team will work with the HVAC supply chain to generate increased recognition of the business opportunities that exist for New Jersey's HVAC contractors to expand their services into the "whole-house" residential retrofit market (see Home Performance with ENERGY STAR section). Effectively making significant reductions in the amount of energy used in homes requires a comprehensive approach that addresses HVAC equipment and the insulation and air leakage characteristics of the building shell, as well as lighting and plug loads. HVAC contractors have historically focused their businesses on the equipment sales and installation— and opportunities exist to expand HVAC business practices to include building shell improvements and to support partnerships between HVAC and building shell contractors that will result in comprehensive home energy savings for New Jersey's residents.

To build towards these more comprehensive approaches the Residential Gas & Electric HVAC Program will work in close coordination with the Home Performance with ENERGY STAR Program to promote quality installation services under similar technical standards to customers who may not be ready to undertake comprehensive improvements all at once but who may be open to a phased, step by step approach to improving the energy efficiency of their homes.

Program Description

The *WARM*Advantage and *COOL*Advantage Programs incentivize customers to purchase high efficiency HVAC equipment. The Programs are designed to make the quality installation of high efficiency residential HVAC equipment an easy choice in the New Jersey market. HVAC contractors are the primary vehicles for promoting the program; they with the aid of the program incentives, complete the sale and subsequently deliver quality installations of high-efficiency equipment.

As with other market areas, efficient HVAC options continue to evolve as technology advances. As HVAC equipment becomes even more efficient through this evolution the program must continue to address market barriers to achieve its goals. While the barriers listed below may seem to stay the same, it is important to note that the efficiencies of the systems are increasing:

- High upfront incremental cost of super high efficient systems with incrementally smaller energy savings compared to readily available minimum efficiency systems;
- Consumers' inability to differentiate, and therefore value, the difference between good and poor quality HVAC installation, and the resultant challenge faced by contractors who are trying to sell higher-cost quality installations;
- Consumers' lack of information and awareness on the benefits (both energy and non-energy) of efficient equipment and quality installations, particularly during repair, renovation and remodeling;

- HVAC contractor perception of low value and/or sense of difficulty about program participation;
- HVAC contractor unwillingness to voluntarily participate in the program and fulfill the program's requirements for successful application submission due to lack of consumer demand; and
- On-going training needs for HVAC contractors on key installation issues including proper installation methodologies, proper unit sizing and utilization, and health and safety issues including proper venting of equipment.

The program employs several key strategies to address these barriers:

- Financial incentives for the purchase of energy efficient cooling, heating and water heating equipment meeting or exceeding the performance criteria of national and regional standards such as ENERGY STAR and Consortium for Energy Efficiency (CEE) specification tiers;
- Information aimed at consumers to help them make better energy saving purchase decisions, which also provide better comfort, health and safety.;
- Utilization of the Enhanced Outreach Team to promote high efficiency equipment with an emphasis on promoting through distributors/manufacturers;
- Sales training for contractors (i.e. how to sell energy efficiency);
- Technical training for HVAC contractors on (i) quality installation practices (including, for example, the use of Manual J & S for proper sizing and selection of equipment) and (ii) health and safety concerns regarding orphaned gas appliances; and
- Collaboration with regional and national efforts to amplify program influence with support for market-wide initiatives (such as emerging technologies & specification revisions) that advance the interests of the program.

New Jersey's Clean Energy Program will continue to support efforts, where technically and economically justifiable, to upgrade federal appliance efficiency standards. The Program also provides, when necessary, technical support for the development of such upgrades, tracking and monitoring developments, and review and modification of program designs to integrate changes to the standards and codes.

Target Market and Eligibility

*COOL*Advantage promotes the installation of new, energy efficient, residential electric air conditioners and heat pumps. The program covers conventional central and mini-split air conditioning and air source heat pump systems. It also offers a new incentive for "mini-split" cold climate Air Source Heat Pumps (ccASHP) with an additional bonus for houses heated with electric resistance and have no natural gas service. Qualifying ccASHP units must be listed by Northeast Energy Efficiency Partnership (NEEP) at http://www.neep.org/initiatives/high-efficiency-products/emerging-technologies/ashp/cold-climate-air-source-heat-pump. This comprehensive offering enables the program to accelerate market adoption of recent technology improvements such as inverter-driven compressors and advanced controls that enable significantly greater heating and cooling performance by heat pumps.

*WARM*Advantage promotes energy efficient natural gas-fired furnaces, boilers, water heaters and associated equipment for use in residential buildings. The *WARM*Advantage program

specifically addresses water heating units that are not planned to be replaced when a furnace is replaced, which can pose a combustion appliance safety issue for the customer, by offering additional incentives to participants that change both heating and water heating units at the same time. This is an industry-leading program design that safeguards customers and delivers greater energy savings through the program.

Program Requirements

Contractors are strongly encouraged to utilize an HVAC Contractor **online portal** to submit applications and check the status of applications in process. A recorded webinar training and the online portal are located at: www.NJCleanEnergy.com/HVACPORTAL. An online portal is also available for applicants to electronically submit applications and check the status of an application in process at the same location.

The Program currently requires that documentation be provided to support each incentive application. The documentation requirements include:

- Heating and or cooling load reports (e.g. Manual J) with equipment selected in accordance with the Air Conditioning Contractors of America Association (ACCA) Manual S criteria. For boilers that also provide potable hot water (e.g., combi-boilers, boiler with indirect tank), equipment selection in accordance with manufacturer's guidelines may be submitted in lieu of a Manual J load report.
- Permit Number or a copy of the Permit Application for all HVAC Program projects.
- Copy of the (Air-conditioning, Heating, and Refrigeration Institute (AHRI) certificate rating sheet supporting the efficiency rating of the installed equipment. If the equipment is not listed by AHRI, the Program can accept (i) an efficiency listing by ENERGY STAR, NEEP, or CEE or (ii) the manufacturer's documentation of ratings in accordance with DOE standards.

Offerings and Incentives

COOLAdvantage

The Program will offer incentives for central and mini-split air conditioners and heat pumps meeting or exceeding the performance criteria of national and regional standards such as ENERGY STAR® and CEE specification tiers.

By supporting equipment that performs efficiently at times of peak electric demand, the program's rebates help minimize the costs associated with meeting that demand. Performance levels are aimed to align with the levels established by national and regional specification-setting organizations such as ENERGY STAR and CEE, as appropriate for the New Jersey market. If new program requirements, procedures and/or incentives are proposed at any time, they will take effect after a notification period is provided to program participants (i.e. contractors, etc.) and posting at njcleanenergy.com. Any completed applications received after the notification period will be subject to new program rules. Rebate applications for cooling system equipment purchased prior to the end of the notification period will continue to be processed. Contractor and customer outreach and education on the benefits of efficient HVAC equipment and quality installation practices will continue to be supported. There is a great market potential in New

Jersey for the mini-split systems. Incentives offered through the *COOL*Advantage Program can be found in Appendix A.

WARMAdvantage

*WARM*Advantage will offer incentives for efficient furnaces, boilers and hot water heaters. The program will continue to offer an incentive to promote the combined upgrade of qualifying space and potable water heating equipment as well as combination equipment with the goal of achieving greater savings and facilitating the appropriate treatment of any potential combustion appliance safety issues. Incentive levels offered through the *WARM*Advantage Program can be found in Appendix A.

Any HVAC incentives available for State Energy Program (SEP) participants will be identical to those provided by NJCEP for similar equipment when funds are available. *COOL*Advantage and *WARM*Advantage incentives will be paid directly to homeowners, or with written consent, assignable to contractors.

Planned Program Implementation Activities for FY19

The following program implementation activities will be undertaken in FY19:

- Provide monetary incentives and education to participants to simultaneously replace both heating and potable water heating systems with high efficiency equipment to safeguard against potential combustion appliance safety issues.
- Support the training of HVAC contractors and technicians on the proper calculation of heating and cooling loads, system selection and design, installation techniques, and consumer benefits of high efficiency heating and cooling equipment and/or any other substantial form of training that is directly related to the promotion of energy efficiency and quality equipment installation. The Program will also support training in the recognition and proper techniques to deal with atmospherically drafted, orphaned water heaters that can result from boiler or furnace replacements.
- Coordinate with utilities to ensure program offerings complement each other with the intent to harmonize incentives offered by all parties.
- Work with NJIT to develop an online HVAC Orientation training to introduce the Home Performance with ENERGY STAR Program to HVAC contractors. This online training will be offered to all NJ HVAC contactors interested in growing their business beyond HVAC work.
- During FY19, the Program Administrator anticipates developing with stakeholder input and presenting to the Board a unified program serving multifamily projects to assure that all multifamily properties are eligible to receive energy efficiency services suited to their particular needs. Accordingly, during FY19, it is expected that multifamily (MF) participation in the present Program will be transitioned to the pending Multifamily Program. (See Volume II of this Compliance Filing.)

Quality Control Provisions

The Program Manager maintains documented policies to ensure consistency in the processing and quality control for all incentive program participants. All applications are reviewed for verification of the qualifying equipment efficiency rating. In addition, a percentage of

applications are reviewed for proper sizing, and contractors with applications with substandard sizing procedures are provided with guidance and encouraged to attend a Program-offered training class. Qualifying equipment efficiency levels are verified with the AHRI, AHRI/CEE directory of air conditioning and heat pump equipment, eligible products list from ENERGY STAR, or compared against the performance criteria listed in each appliance category. Each application and its information are entered into a database which checks for duplicate applicants through an equipment serial number comparison.

On an ongoing basis, units from both WARM and COOL*Advantage* Program applications are randomly selected for an in-depth quality control review and inspection. Quality Control includes a paperwork review of the application and a field inspection to verify qualifying equipment installations and proper installation. A field inspection report is prepared for each inspection.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Energy Efficient Products Program

Program Purpose and Strategy Overview

The Energy Efficient Products (EEP) Program promotes the sale and purchase of ENERGY STAR® certified and other energy efficient products including lighting, appliances and consumer electronics, while also supporting the "early retirement" and recycling of existing inefficient appliances in New Jersey households. Aligned and complementary to the Residential HVAC, New Construction, and Home Performance programs, the EEP is focused on the reduction of plug load and lighting energy usage in New Jersey homes. The Program strategy focuses on providing participants with knowledge and motivation so that they want to make efficient purchases, and on offsetting the initial price of higher efficiency products so they can do so affordably.

Providing relevant information to consumers most typically occurs through retail partners, and the EEP strategically invests in assuring that participating retailers have the information they need so their floor staff— the knowledgeable sales people who consumers rely on— can speak to the benefits of energy efficient purchase options. The Program also provides in-store Point of Purchase (POP) materials and signage to clearly identify promoted products and steer consumers towards them. The EEP seeks to capture the greatest savings possible at the lowest cost, while also making sure that opportunities are available through a wide range of retail channels and through creative promotions aimed at historically hard-to-reach customers. The EEP program is designed to be nimble, especially with respect to the continued evolution of the lighting market, so that midstream adjustments to the product mix can be made as necessary to assure continued savings.

Program Description

The EEP Program provides targeted rebates and messaging to consumers, community partners, manufacturers, and retailers for the sale and purchase of selected energy efficient products. Rebates are intended to reduce the initial purchase price of energy efficient lighting and appliances so their typically higher costs do not deter consumers from choosing them over less efficient alternatives. Messaging raises awareness of efficient options and of the benefits they can provide, and rebates provided by the program makes these products more affordable.

The Program employs several key approaches to deliver energy savings to New Jersey residents including:

- Educating consumers on the role energy efficiency can play in reducing home energy consumption;
- Supporting the availability of a range of affordably-priced energy efficient product choices for consumers through rebates and midstream/upstream markdowns;
- Offering marketing and training support for retailers, manufacturers and contractors selling energy efficient products to ensure that they can address with customers the benefits provided by these products;
- Sponsoring event-based initiatives and other innovative approaches to bring energy efficient technologies to hard-to-reach populations that have not historically participated in retail-based program approaches;

- Working with national government agencies, manufacturers, and retailers to help develop and introduce new energy efficiency offerings;
- Supporting and informing consumers regarding product recycling and disposal to address potential environmental impacts;
- Leveraging national energy efficiency programs, promotions, marketing materials, and advertising to support New Jersey initiatives; and
- Coordinating with NJ electric and gas utilities and other entities, such as Sustainable Jersey, to co-brand and leverage customer participation and savings.

The Program continues to transition towards relatively greater upstream and midstream initiatives that leverage manufacturer, distributor and retailer incentives and marketing dollars. These approaches have high potential to increase the sales volumes of efficient products when compared with rebate programs that require consumers to fill out a form for each purchase. In FY19, the program will continue to explore ways to expand the proportion of the Program that incorporates the upstream/midstream approach with additions that support specific efficient appliances. The Program will also offer training support to new retailers, manufacturers, and other organizations while continuing to maintain existing partner relationships.

Target Market and Eligibility

The target market for the EEP Program is all New Jersey consumers who purchase lighting, appliances, and other energy consuming devices in retail stores across the state. The appliance recycling program also targets all New Jersey residents who have older working refrigerators, freezers, room air conditioners (RACs) and dehumidifiers that typically consume considerably more electricity than comparable newer efficient models.

Offerings and Incentives

The EEP Program will continue to offer promotions and incentives in three different product categories:

- Lighting (expected to reopen during FY19)
- Appliances and Consumer Electronics
- Appliance Recycling

Lighting

The Lighting component is expected to reopen during FY19. It will continue to offer retail price incentives through upstream markdown and creative markdown promotions for qualified lighting products. Lighting products will be limited to ENERGY STAR-certified Light Emitting Diodes (LEDs). Due to recent changes to the ENERGY STAR specification, LEDs have become the dominant efficient lighting option, competing directly with halogens. However, some non-certified LEDs have begun to squeeze ENERGY STAR-certified LEDs off the shelves, which may lead to customers making quick purchasing decisions that favor those lesser quality bulbs over ENERGY STAR-certified LEDs and could ultimately lead to customer disenchantment with all LEDs. Eligible lighting products will be as set forth in the table immediately below:

Table 1: Eligible LEDs

LED Bulb Tier Effective Date	Bulb Lifetime	Availability in Stores
ES LEDs V2.0 – specification released 12/31/15; eff. 1/1/17	15,000+ hours	Currently in stores

Through an RFP process, incentives will be provided for eligible products (up to a negotiated volume) sold by selected New Jersey retailers during promotional periods. Incentives will vary by type of product and/or distribution channel, based on negotiations with manufacturers and/or retailers. Based on experience with the earlier initiatives and regional promotions, the FY19 maximum incentives will be as shown in Table 2 below:

Table 2: FY19 Lighting Program Incentives

Product Type	Subtype	Maximum Per Bulb/Fixture Incentive
Standard LED	Standard Omni A-Line	$3.00
Specialty LED	BR, Globe, PAR, R, Torpedo, Flame Tip, Other Decorative, 3-way	$5.00
LED Fixture	Retrofit Kit, Portable, Hardwire	$8.00

In addition to the retail markdowns described above, the Lighting Program will continue to support Creative Outreach and Education Promotions, the goals of which are to:

- Create awareness through events that attract consumers and provide opportunities to disseminate Program information and interact with consumers to answer questions;
- Educate consumers on the benefits of energy efficient lighting and appliances;
- Encourage consumers to move beyond the "first step" of using energy efficient lighting products and to take the next step to adopt more significant energy efficiency measures;
- Create awareness and encourage adoption of no/low cost methods of reducing energy consumption (such as addressing standby loads, the use of advanced power strips etc.); and
- Focus on hard-to-reach residential market channels that have not been well-served through the markdown lighting initiative.

Appliance and Consumer Electronics

The Appliance and Consumer Electronics Program will continue to offer downstream mail-in rebates on clothes washers, clothes dryers and refrigerators purchased by NJ customers. Customers are able to apply via a traditional paper application or through an online application. The Program will also offer midstream rebates on appliances and advanced power strips with retail partners based on market opportunities. These incentives will be supported with a variety

of promotional approaches, including leveraging the Environmental Protection Agency's (EPA) national ENERGY STAR campaigns.

The FY19 Program will offer mail-in (or online form), midstream or point-of-sale incentives in partnership with New Jersey retailers for promotion of higher performance ENERGY STAR clothes washers, clothes dryers, refrigerators, and advanced power strips. Incentives for two tiers of performance will be offered for clothes washers, clothes dryers, refrigerators, and advanced power strips to promote higher efficiency levels to New Jersey residents.

The Program performance criteria for clothes washers in FY19 will align with the ENERGY STAR V7.1 specification. The higher tier incentive for washers will align with the current CEE Tier 2 specification to support increased market share of the highest efficiency models.

For refrigerators, the Program performance criteria in FY19 will align with the ENERGY STAR V5.0 specification. Similar to washers, the higher tier incentive for refrigerators will align with the current CEE Tier 2 specification to support increased market share of the highest efficiency models.

For clothes dryers, the program performance criteria in FY19 will align with the ENERGY STAR V1.0. The higher tier incentive will align with the criteria for the 2018 ENERGY STAR Most Efficient Product.

Through the midstream promotion process, certain retailers are able to provide an "instant" rebate at the register. If the retailer does not participate in the midstream promotion, consumers will be able to submit rebates for clothes washers, refrigerators and dryers in two forms: online via the NJCEP website or by mail.

The Program will continue to provide midstream point-of-sale incentives for advanced power strips in a tiered structure similar to that utilized for appliances. A Tier 1 unit requires manual control and a Tier 2 unit is designated by its ability to provide automatic active power management. These will be offered through participating retailers or through partners in the Creative Markdown Promotions, or both.

The appliance and consumer electronics incentive table can be found in Appendix A.

Appliance Recycling

The Appliance Recycling Program offers residential customers the opportunity to recycle their old, inefficient refrigerators and freezers in exchange for a "bounty" incentive payment. Small commercial customers are also eligible if they meet program requirements. In addition, the Program either will have, or will be working to add, the option of customers receiving an additional rebate for room air conditioners and dehumidifiers when a refrigerator or freezer is already being picked up for a household. Customers can call or go online to schedule a pick-up appointment. NJCEP uses a third-party vendor to provide turnkey program implementation. The vendor manages the appointment scheduling, confirms customer and unit eligibility, conducts the pick-ups, transports the units to a recycling facility, and oversees their decommissioning.

In FY19, the Program will continue to promote and facilitate the early retirement of inefficient, working appliances. Implementation will include:

- In-house appliance pickup and direct access to participants;

- Tracking of individual units and recording of the recovery and destruction of all hazardous materials in compliance with the EPA's Responsible Appliance Disposal (RAD) guidelines; and
- Evaluating retail partnerships that support removal and recycling of refrigerators and freezers at the time of new product purchase.

In FY19, the Program will continue to offer a $50 incentive to New Jersey residents and small commercial/businesses for turning in their working old, inefficient primary and secondary refrigerators and freezers for recycling, and a $25 incentive for recycling a room air conditioner or dehumidifier. The room air conditioners or dehumidifiers would be secondary units, so a customer could only recycle them in conjunction with a larger unit (refrigerator/freezer). In other words, the recycling vendor would not schedule a pick-up at a customer's home just for a room air conditioner or dehumidifier. The customer would need to be recycling a larger unit in order to recycle the smaller one and receive a rebate.

The planned Program incentives are shown in Table 3:

Table 3: FY19 Appliance Recycling Incentives

Product Type	Terms	FY19 Incentive
Refrigerator/Freezer	Limit 2 TOTAL per year per residential customer	$50
Room Air Conditioner (RAC)/Dehumidifier	Limit 2 of each per year per residential customer	$25

General Activities

The TRC Team, in consultation with Board Staff, will maintain the existing retailer base and recruit new retailers as needed. In FY19, the Program will continue to leverage retailer participation in developing and distributing collateral and "point of purchase" (POP) materials for product groups and in providing retail associate training and generating consumer awareness at the point of product display. The Program Manager's Retail Outreach Team will also continue to promote the Program at NJCEP sponsored events.

National ENERGY STAR Promotions

The Program will participate in applicable and appropriate National ENERGY STAR promotions. For example, because NJCEP offers both a rebate on a new ENERGY STAR refrigerator purchase and the recycling of an older refrigerator, the Program will continue to support the EPA's "Flip Your Fridge" campaign. NJCEP will advertise the campaign on the NJCEP website by leveraging materials developed by the EPA for "Flip Your Fridge" participants.

National Meetings

The TRC Team will attend the National ENERGY STAR Lighting, Appliance and Consumer Electronics Partners Meetings to showcase New Jersey's innovative work on efficient products,

to learn new best practices to incorporate with the Program, and to meet with national manufacturers and retailers to discuss New Jersey promotions.

Quality Control Provisions

For promotions featuring customer rebates, such as the appliance rebate and recycling promotions, documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all rebate program participants. All applications are reviewed as they are processed for verification of the documentation that the equipment meets Program requirements. Each application and its information are entered into a database that allows checking for duplicate applicants through an equipment serial number comparison.

For promotions that include markdowns taken at the point of sale, such as the lighting promotions, the Retail Outreach Team visits the participating storefronts on a regular basis to verify that Program products have been received and have been displayed properly and are priced according to Program requirements. If necessary, they will help unpack the products, and put them on display with the required program materials, as well as train sales staff about Program rebates and the energy savings a customer might expect from purchasing a Program product. Performance reports, including photos of program products and signage, are provided to the program managers to assist in evaluating retailer feedback, developing future promotions and selecting the most effective proposals.

When invoices are received for marked down products, they are reviewed to ensure that the sales meet all program stipulations. These include verification that the products were sold in a participating location; incentive amounts are correct and for the stipulated products; final retail prices are correct; and total allocation amount has not been exceeded. All of these conditions must be met in order for payment to be processed for each sales period.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Existing Homes Program

NJ Home Performance with ENERGY STAR

Program Purpose and Strategy Overview

Homes use a variety of energy sources— including electricity, natural gas, fuel oil, propane, and/or wood— for a variety of uses. Looking at homes comprehensively, across all of these energy sources and end uses provides the greatest opportunity to save the most energy. But doing so is complex, and well beyond the expertise of home improvement contractors who have not received specialized training. Similarly, the average homeowner may want to reduce energy costs, but simply does not have the information to be able to figure out how to save significantly without assistance.

Home Performance with ENERGY STAR (HPwES) is a national home efficiency improvement program administered by the Department of Energy (DOE). The Program supports the development of a qualified and robust contractor network, contributing to local job growth and boosting local economies. The Program encourages contractors (primarily insulation contractors, HVAC contractors, and remodelers) to pursue an integrated, "whole house approach" to energy efficiency and home improvement providing customers comfort while making their homes healthier and safer. Participating contractors must meet Building Performance Institute (BPI) GoldStar Contractor Program requirements. BPI certifications are based on national standards that ensure that home assessors have the skills required to identify and realize savings opportunities following industry best practices. As such, it is a market transformation program aimed at raising the technical standards for trade allies working in the home improvement market. It also offers interested customers the opportunity to undertake comprehensive energy efficiency projects by working with a group of certified contractors to maximize savings— providing the information and expertise that they do not have themselves.

Because the Program's purpose is primarily long-term market transformation, it is challenged to meet standard cost-effectiveness criteria used for programs that are designed only to achieve near-term savings. Its value in creating both the expertise and infrastructure to achieve comprehensive home energy savings and the direct benefits to homeowners who participate is not well-measured using the various cost benefit tests, but is nevertheless a significant piece of the total lifetime savings contribution to the New Jersey's energy efficiency program portfolio.

Program Description

Over the past several years, the New Jersey Home Performance with ENERGY STAR program (Program) has provided information, education, and incentives directly to participants to encourage them to make energy efficiency improvements to their homes. The Program also has provided contractors with the training and the BPI GoldStar Contractor Program qualifications necessary to consistently achieve comprehensive energy savings. The Program has successfully trained and approved over 200 BPI accredited / GoldStar qualified contractors. Yet, market barriers to achievement of greater numbers of comprehensive home retrofits persist, the following among them:

- High upfront cost of implementing a comprehensive retrofit package;
- Consumers' inability to differentiate, and therefore value, the difference between good and poor quality HVAC installation;
- Consumers' lack of information and awareness about the Program's available incentives and the benefits (both energy and non-energy) of a "whole-house" approach to saving energy, resolving health and safety issues, and improving home comfort;
- The home improvement industry's negative perception of the HPwES program stemming from, the requirement for performance of comprehensive work; the absence of guaranteed multi-year program funding; and the slow payment timelines that lead to contractor cash flow issues; and
- Limited availability of trade allies with qualified skilled employees who are invested in the HPwES program.

The Program will continue to serve homes and multifamily units through a combination of:

- Robust, performance-based incentives for energy efficiency improvements to both participants and contractors.
- Zero percent and low interest loans to qualified participants through participating NJ utilities or directly through the Program.
- Partnerships with trade allies to bridge the gap between the HVAC and HPwES Programs by focusing on the alignment of the technical standards of both programs.
- Contractor training on program and technical topics, and partial reimbursement for annual BPI GoldStar Contractor Program fees.
- Quality Assurance inspections that are conducted to ensure that participants receive contracted energy efficiency services based on BPI national standards, and
- Effective relationships with NJ's investor owned utilities to leverage additional resources and offers.
- Outreach efforts focused toward the remodeling industry to recruit remodeling trade allies informing them about the program's available incentives and identifying potential partnerships.

To initiate participation in the Program, a customer requests an assessment performed by a NJ HPwES-participating, BPI GoldStar contractor. Contractors also market the program directly to customers, and encourage customers replacing heating and air conditioning equipment to undertake comprehensive efficiency improvements at the same time. The assessment includes recommendations for appropriate energy efficiency improvements relevant to the home and checks for health and safety issues. Contractors are trained to promote the installation of

comprehensive energy efficiency improvement measures, which may be eligible for Program incentives and financing incentives based upon the savings estimated for the recommended work scope.

Participating contractors must employ properly trained staff and must allow inspection by the TRC Team of the work performed to ensure that all measures are properly installed and safety precautions are observed. Only contractor firms which are GoldStar Qualified by BPI may participate in the program. The BPI GoldStar requirements regarding contracting company qualifications provide assurance to both participants and the Program that contractors are competent, that all cost-effective savings opportunities have been identified, and that any health and safety considerations are also included in the report of recommended actions. Participating contractors must guarantee all work, and abide by BPI standards governing health and safety, work quality, insurance coverage, customer service, and complaint resolution.

Target Market and Eligibility

The Program is designed to serve existing New Jersey households across all income categories, but particularly targets the broad market not eligible for low-income program services. The Program targets customers served by an investor-owned utility that reside in existing one, two, three and four-family homes; either attached or detached, and multifamily buildings which are three stories or less.

During FY19, the Program Administrator anticipates developing with stakeholders and presenting to the Board a unified program serving multifamily projects to assure that all multifamily properties are eligible to receive energy efficiency services suited to their particular needs. Accordingly, during FY19, it is expected that multifamily (MF) participation in the present Program will be transitioned to the pending Multifamily Program. (See Volume II of this Compliance Filing).

Multifamily Buildings

In FY19, the Program Administrator anticipates developing with stakeholder input and presenting to the Board aa unified program serving multifamily projects to assure that all multifamily properties are eligible to receive energy efficiency services suited to their particular needs. Accordingly, during FY19, it is expected that multifamily (MF) participation in the present program will be transitioned to the pending Multifamily Program (See Volume II of this Compliance Filing). In the meantime, small MF building developments may participate in HPwES. The HPwES program defines eligibility as buildings that are:

- No more than three stories high;
- Have single ownership;
- Can provide whole building energy usage data either for (a) individual dwelling units' mechanical systems, or (b) a mechanical system serving the entire building (but not more than a single building, i.e., not a central heating plan serving multiple buildings); and
- Made up of five or more units in a single building, or multiple buildings (each with five or more units), within a single geographic boundary and with a single property ownership/management structure.

Multifamily facilities that do not meet these criteria may receive services through C&I Programs described later in this filing.

The total incentive amount for a multifamily project must not exceed 50% of the total costs of approved measures. If the total multifamily project incentive based on the above structure yields an amount greater than 50% of the costs of approved measures, the incentive amount offered will be lowered to the 50% maximum.

The program work scope **must** utilize a whole building approach to be approved. Individual units within a multifamily structure or development are not eligible for the program unless the whole building is served; however, they may take advantage of other NJCEP offerings, such as the *WARM* and *COOL*Advantage programs.

Townhouses, as defined by the New Jersey Residential Code[7], and when individually-owned, are considered single-family homes, and as such, the same incentive levels given to single-family homes will apply.

The Program works with the contractors of multifamily projects to ensure proper project assessment and approval processes. Multifamily buildings are addressed in accordance with the BPI Multifamily Building Standards. The Program only approves such projects for contractors that have at least one staff member holding BPI Multifamily certification.

Program Incentives

Two types of incentives are offered by the program:

- Customer incentives and loans to make home retrofit projects more affordable and encourage customer participation and energy savings; and
- Contractor incentives to encourage contractor participation and deliver projects that provide energy savings and comfort, as well as healthy and safe homes.

Further, incentives are structured to promote comprehensive savings with the highest incentive offered for the greatest energy savings, as well as to accommodate those who participate in other NJ energy efficiency programs. For example, it is possible for a customer to install properly sized, efficient HVAC equipment and receive *WARM* and/or *COOL*Advantage and utility equipment rebates, and then at a later date install thermal envelope measures (such as air sealing and insulation) through the HPwES Program, or vice versa. Participants are free to choose from among the comprehensive work scope recommendations provided by the participating program contractor, so the incentive structure is intended to reward participants who pursue the highest possible savings. Similarly, contractors are rewarded for promoting a comprehensive set of recommendations.

The Program's tiered incentive structure has been maintained. The savings estimates will be determined by use of the Program's software tool. BPI GoldStar Contractor Program requirements will be enforced including (a) the prohibition against performing air sealing work

[7] NJ IRC R202: Townhouse: A single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with open space on at least two sides

without first addressing relevant health/safety issues such as failing spillage/back draft testing, and (b) requiring mechanical ventilation to ensure adequate indoor air quality to meet ASHRAE and BPI ventilation requirements.

The incentive tables for the Existing Homes program can be found in Appendix A.

Planned Program Implementation Activities for FY19

The following program implementation activities will be undertaken in FY19:

- The Program will continue providing customer and contractor incentives for HPwES projects as described above.
- The Program will continue to work with the NJ utilities to offer 0% or low interest loans or on-bill repayment and to leverage these and any other applicable utility incentives in FY19. As mentioned in the HVAC section, coordinate with the utilities to ensure programs offer complementary incentives to increase overall participation.
- The Program will continue to work with the current lenders to offer 0% and low interest loan options. The loan options for HPwES are offered to any program participant where a utility loan or on-bill repayment program is not available.
- The Program will continue implementation of automated processes that reduce administrative costs and remove some of the paperwork requirements to simplify and ease contractors' participation.
- The Program will offer New Jersey BPI annual GoldStar Contractor Program reimbursements for all participating GoldStar contractors who have completed at least 10 projects during FY19. The New Jersey BPI GoldStar Contractor Program fee reimbursement will be 25% of the annual New Jersey BPI fee and will be processed upon presentation of the contractor's paid invoice showing the full amount of the GoldStar annual fee.
- The Program will support the HPwES contractors by providing sales and business practice support/trainings to help contractors learn how to best sell HPwES features and benefits to homeowners, and technical trainings to improve contractors' technical skills and support them in meeting the continuing education requirements for BPI certification.
- The Program will continue to evaluate new technologies and installation practices.
- The Program will continue to engage with potential partners and stakeholders, including insulation contractors, remodelers, and real estate industry professionals, Sustainable Jersey, distributors, and suppliers, to increase program awareness and participation.
- The Program will work with NJIT to finalize an online "residential journey" which will take a customer through a decision tree, helping them identify energy savings opportunities, determine their priorities and navigate through the suite of residential programs offered by NJCEP.
- The Program will continue to pilot a basic entry level opportunity for insulation contractors to perform air sealing and insulation measures with prescriptive incentives (mirrors current *WARM*/*COOL*Advantage programs but with a focus on envelope measures) to engage insulation and remodeling contractors and increase customer participation. The incentive tables for the pilot component can be found in Appendix A; the major elements of the pilot component are set forth immediately below:
    - Only those homes that do not use atmospheric draft combustion appliances and that have an ENERGY STAR bathroom or inline exhaust fan will be eligible.

    - The air-sealing and insulation work must meet the technical requirements detailed in the HPwES Eligible Measures document.
    - Contractors need not be BPI-certified to be eligible to participate, but uncertified contractors will be required to attend at least one (1) NJCEP-sponsored class that covers air sealing and insulation and health and safety practices.
    - Multifamily housing is not eligible.
- The program will continue to pilot a residential Direct Install component to the program (LEDs, water conservation measures) to capture additional savings, including for fuel saved as a result of water use reductions. The incentive tables for the pilot component can be found in Appendix A; the major elements of the pilot component are set forth immediately below:
    - The measures to be installed would consist of at least nine (9) items selected by the contractor and/or consumer from a published list of eligible measures.
    - Only the HPwES program's accredited and certified contractors may participate.
    - Available only as part of an eligible HPwES project.

Quality Control Provisions

The Program will continue to promote BPI's quality management system process to the participating contractors providing feedback in response to technical reviews of energy modeling, submitted documents, and/or field inspections of completed projects. The Program performs Quality Assurance Inspections of a percentage of all jobs completed. Typically, there is a high inspection rate for the first approximately 10 jobs that each new contractor performs, with the percentage dropping for subsequent jobs in inverse proportion to the level of contractor performance. These inspections assure that contractors maintain the high-quality standards expected of them and guard against misuse of Program funds. If a job, or an important aspect of the job, fails to meet program requirements, a Quality Assurance Inspection Report will be given to the contractor which details the necessary corrective action that must be taken. Once the corrective work is done, a Quality Assurance Inspection Report must be signed by the contractor and customer and sent to the Program, which may schedule a re-inspection to ensure compliance. The Program team will continue to work with contractors to resolve inspection failures as quickly and reasonably as possible.

The integration of these procedures, along with reducing contractor incentive for failed QA inspections to lower the overall percentage of projects that must receive an inspection from the Program while recognizing and rewarding high performing contractors, is anticipated to significantly reduce overall Program administration costs.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Commercial and Industrial Energy Efficiency Programs

General Overview

The NJCEP Commercial & Industrial (C&I) Energy Efficiency Programs are designed to help New Jersey's businesses use electricity and natural gas more efficiently so that they can be competitive and successful in their industries while retaining and creating jobs and improving the environment. The C&I suite of programs includes eight individual programs and one pilot program targeting the commercial and industrial market segments: 1) New Construction, 2) Retrofit, 3) Pay for Performance (P4P) New Construction, 4) Pay for Performance, 5) Local Government Energy Audit (LGEA), 6) Direct Install, 7) Large Energy Users Program, 8) SBC Credit Program, and 9) Customer Tailored Energy Efficiency Pilot Program.

The Programs are designed to:

- Provide information on how to meet and exceed current energy code requirements so that buildings operate efficiently thereby minimizing operating costs;
- Encourage customers to choose high efficiency options when undertaking construction or equipment upgrades (i.e., when customers normally construct buildings or purchase building systems equipment);
- Support market transformation by providing information and incentives to help customers and designers make energy efficient equipment specification, building/system design**,** lighting design**,** and commissioning part of standard business practices;
- Stimulate commercial and industrial customer investments in energy efficiency that will support the growth of the industries that provide these products and services.

The Programs address the key market barriers that make it challenging for developers, designers, engineers, and contractors to routinely incorporate energy efficiency in their projects including:

- Unfamiliarity or uncertainty with energy efficient building technologies and designs;
- Bias toward lower first cost and lack of procedures for considering lifetime building operating costs during decision-making;
- Compressed time schedules for design and construction;
- Aversion to risk involved with specifying technologies less familiar to the local design community despite the proven reliability of efficient technologies and designs; and,
- Priorities for engineers, designers and contractors which often do not align with incentive structures and energy efficiency considerations.

The Programs employ a comprehensive set of offerings and strategies to address the market barriers noted above and to achieve market transformation in equipment specification, building/system design and lighting design. These include:

- Program emphasis on intervention during customer-initiated construction and equipment replacement events that are a normal part of their business practice;
- Coordinated and consistent outreach to commercial and industrial customers, especially large and centralized players, such as national/regional accounts, major developers, etc.;
- Consistent incentive levels for efficient electric and gas equipment and design practices to permanently raise efficiency levels;

- Prescriptive incentives for pre-identified energy-efficient equipment and custom incentives for more complex and aggressive measures to permanently raise the efficiency levels of standard equipment;
- Pay for Performance (P4P) opportunities that emphasize building operation and performance in addition to the efficiency of installed equipment;
- Information and technical support provided to customers and designers to make energy efficient equipment specification, building/system design, lighting design, and commissioning part of standard business practices;
- Information and technical support provided to customers and designers to facilitate compliance with New Jersey's new commercial energy code as well as future upgrades to that code; and
- A wide range of programs designed to meet the needs of a diverse set of customers including nonprofit entities, local governments, small and large business.

Unless specifically stated in the following program descriptions, customers eligible for incentives under New Jersey's Commercial & Industrial Energy Efficiency Program are defined as non-residential electric and/or gas customers of one of New Jersey's regulated electric or gas utilities who contribute to the Societal Benefits Charge fund. With the exception of the new construction segment applicants to any of the NJCEP C&I Programs must be contributors to the Societal Benefits Charge (SBC) fund within the previous 12 months.

Construction projects are subject to prevailing wage requirements pursuant to P.L. 2009, c. 203, which amends P.L. 2009, c. 89, as well as the prevailing wage regulations promulgated by the New Jersey Department of Labor and Workforce Development pursuant to P.L. 1963 c. 150 as amended, and N.J.A.C. 17:27-1.1 et seq. and Affirmative Action rules. The prevailing wage rate shall be paid to workers employed in the performance of any construction undertaken in connection with Board of Public Utilities financial assistance programs. This law applies to contracts greater than $15,444. Unless otherwise stated, by submitting an application to the program and receiving program incentives, customers self-certify that they are complying with prevailing wage requirements.

C&I New Construction and Retrofit Programs

Program Purpose and Strategy Overview

The C&I New Construction and Retrofit Programs (SmartStart) are part of the original suite of commercial & industrial programs available through the NJCEP. These programs are offered to eligible customers that contribute to the Societal Benefits Charge.

The program's primary goals are to induce C&I customers to choose high efficiency equipment rather than standard efficiency equipment when they are making purchase decisions and to replace aging standard equipment in existing buildings. This is accomplished by providing incentives and information on a wide range of high efficiency alternatives. "Prescriptive incentives"— where dollar amounts are fixed for specific categories of equipment— are offered where one-for-one, business as usual replacements are typical. The prescriptive applications are labeled by technology, such as lighting and HVAC, and defined as equipment most commonly recommended for energy efficient projects with well-established energy savings. Custom incentives are offered for non-standard equipment, complex systems, and specialized technologies that are not easily addressed through prescriptive offerings. Customers are provided a discrete yet flexible application process with the ability to submit one or multiple applications for any size project. The transparency of incentives aids customers in making informed decisions while assisting energy efficiency professionals to better solicit a prospective energy efficiency project.

The program adds, removes or modifies prescriptive incentives for various energy efficiency equipment routinely based on national and local market trends, the development of new technologies, and changes in efficiency baselines.

Program Description

The SmartStart programs offer both prescriptive and custom incentives for the broad range of C&I customers who are in the market to purchase energy efficiency measures. On September 21, 2015, the State of NJ adopted the ASHRAE 90.1-2013 energy code for all commercial and industrial buildings. For FY19, New Jersey's Clean Energy Program will utilize this code in determining performance requirements and incentive eligibility.

The Programs will include the following offerings:

- ***Prescriptive Efficiency Measure Incentives*** that provide fixed incentives for energy efficiency measures. Incentives are based on incremental costs (i.e., the additional cost above baseline equipment) taking into consideration market barriers, changes in baselines over time and market transformation objectives. Eligible measures include:
    - Electric Chillers
    - Natural Gas Chillers
    - Unitary HVAC (Heating, Ventilating, Air Conditioning) Systems
    - Ground Source Heat Pumps (Geothermal)
    - Gas Fired Boilers
    - Gas Furnaces
    - Variable Frequency Drives (VFDs)
    - Gas Fired Water Heating
    - Gas Fired Water Booster Heating

- Tankless Water Heaters
- Select Premium Efficiency Motors
- Prescriptive Lighting & Lighting Controls
- Performance Based Lighting
- Kitchen Hood Variable Frequency Drives
- Low Intensity Infrared Heaters
- Boiler/AC Economizing Controls
- Refrigeration Controls
- Refrigerated Doors/Covers
- Food Service Equipment
- Custom Measures

- ***Custom Measure Incentives*** for more complex and aggressive efficiency measures. The process for calculating custom measure incentives is performance-based which may include a commissioning component. Incentives are evaluated and determined via an incremental cost and energy savings analysis to be provided by the customer or customer's authorized representative (vendor/contractor). Determination of the appropriate baseline (existing conditions and/or industry standard) will be reviewed on a case-by-case basis subject to program review and approval. For measures that appear to have no clear baseline per energy code or recognized industry standard, the Program Manager will work with the applicant to define an appropriate baseline. The Program Manager has the discretion to determine the reasonableness of project costs for proposed technologies based on industry standards and other market research. Eligible electric and gas measures include lighting systems, HVAC systems, motor systems, large boiler systems, gas-engine driven chillers and other non-prescriptive measures proposed by the customer. Technologies not explicitly listed as custom (per the filing and/or Program Guide) will be reviewed for eligibility and are subject to approval at the discretion of the Program Manager. More details regarding this process can be found later in this document in the section entitled "C&I Construction Program Incentives."

Customers or their contractors must submit an application for the type of equipment they have chosen to install. The application should be accompanied by a related worksheet (where applicable), a manufacturer's specification sheet for the selected equipment, and one month of the most recent electric/natural gas utility bill for a prescriptive application or twelve months for a custom application. To qualify for incentives, customers must be contributors to the type of SBC fund that corresponds to their incentive (e.g., must contribute to the SBC electric fund if applying for an electric incentive). For example: customers applying for prescriptive lighting incentives must provide an investor-owned utility (IOU) electric bill identifying SBC fund contribution. Similarly, an IOU gas bill identifying SBC fund contribution is required for natural gas saving measures such as gas heating. Program representatives will then review the application package and approve it, reject it, and/or advise of additional upgrades to equipment that will save energy costs.

Target Markets and Eligibility

The C&I New Construction and C&I Retrofit Programs target commercial, educational, governmental/institutional, industrial, and agricultural customers engaged in customer-initiated construction events including public schools construction, other new building construction,

renovations, remodeling, equipment replacement, and manufacturing process improvements. The Program offers incentives and technical support for both existing buildings and new construction. In addition, the Program may be used to address economic development opportunities and transmission and distribution system constraints. The Program is primarily geared towards the mainstream C&I market, as opposed to programs that target specialized markets such as the Large Energy Users Program, the Local Government Energy Audit Program, and the Direct Install Program. Applicants to the Program must be contributors to the SBC fund. Any multifamily participation in this program will be transitioned to the proposed Multifamily Program expected to be submitted to the Board for review and approval in FY19.

Incentives

The tables in Appendix B: Commercial and Industrial Incentives list the proposed FY19 statewide incentives for the C&I New Construction, and C&I Retrofit program components. The incentives vary by size, technology and efficiency level and will be paid based on specific eligibility requirements. The program offers both prescriptive incentives and custom measure incentives.

Custom Measure Incentive Guidelines

The Program utilizes a performance-based approach to determine incentives for custom equipment. Established incentive caps for the program are the lesser of:

- $0.16/kWh and/or $1.60/therm based on estimated annual savings
- 50% of total installed project cost
- buy down to a one-year payback

Eligible projects must have a minimum first year energy savings of 75,000 kWh for custom electric projects or 1,500 therms for custom gas projects. This requirement may be waived by the Program Manager on a case-by-case basis if project savings are within 10% of these minimum requirements. Projects with both electric and gas savings may be considered for incentives if either of the minimum savings requirements are met.

Multiple applications for separate, individual facilities may not be grouped to meet minimum savings requirements. The program will allow a single facility with multiple utility accounts to submit a proposed custom project under one application. A customized set of Microsoft Excel-based forms is required for all projects. These forms summarize the critical components of the custom measure including a detailed description of the technology, installed cost, and projected savings. Upon project completion, additional documentation is required to confirm that the measures were installed as proposed and that any changes during construction are reflected in the final savings values. As is clearly described in the Program forms, certain measures may require post-installation metering, trending analysis, and/or the installing contractor's Statement of Substantial Completion. Baseline for custom retrofit projects are existing conditions, however the custom measure must exceed ASHRAE 90.1-2013 standards by at least 2% where specific guidelines exist. In cases where ASHRAE guidelines do not apply, the Program will require that custom measures exceed industry standards per the Consortium for Energy Efficiency (CEE), EPA ENERGY STAR, or using such resources as: current New Jersey baseline studies and other market research; the program experience of the Commercial/Industrial Program Manager; experience of the New Jersey utilities or utility/public program experience from other

comparable jurisdictions. New construction/gut-rehab projects will use ASHRAE 90.1-2013 as the baseline for estimating energy savings. The Program Manager will provide contractors with Program spreadsheets that include standard formats for reporting Program savings as well as standard incentive calculations.

The Program can limit the number of custom applications accepted for the same technology in order to evaluate if a prescriptive incentive can be developed. For most technologies, three (3) applications will be the limit. During the prescriptive evaluation period no new custom applications for the same technology will be accepted. Customers applying to the program will be formally notified that any applications received over the limit will not be accepted by the Program. The customer will not be able to resubmit an application until the technology has been evaluated and/or a prescriptive incentive has been developed.

C&I New Construction and Retrofit Programs Pre-Approval Guidelines

Pre-approval by the Program Manager is required for the following project types:

- Prescriptive Lighting;
- Prescriptive Lighting Controls;
- Performance Lighting (for existing buildings only); and
- Custom measures

Pre-approval is not required for all other SmartStart application types. However, to be eligible for incentives related to those other application types, the application must be submitted to the Program Manager within 12 months of equipment purchase. Sufficient documentation must be provided to the Program Manager confirming date of equipment purchase (material invoice, purchase order, etc.). Customers implementing projects prior to program approval do so at the risk of being deemed ineligible to receive incentives.

Delivery Methods

All of New Jersey's Commercial & Industrial Clean Energy Programs will be managed by the TRC Team. The Programs will be offered on a consistent program design and implementation basis to ensure consistency across the state.

As new technologies are introduced and prices for measures change, sometimes in response to program offerings, program managers will continuously monitor technologies and costs and adjust program incentives accordingly. The Program Manager will propose adjustments to program offerings based on program experience, the results of any evaluations, program and market studies as well as other state/regional market research, and current pilot/demonstration projects.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all C&I program participants. All applications are reviewed upon receipt to verify adherence to eligibility requirements. In addition, all technical information submitted in support of the application is reviewed to confirm measure qualification and to verify the incentive calculation. Applicant-supplied information and Program Manager-performed

incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence.

A sample percentage of applications will be randomly selected for pre-inspection and/or post site inspections and Quality Control file reviews. The specific percentages by program are outlined in the individual program guideline documents. Inspections include a site visit to verify customer eligibility and energy efficient measure technical specifications that result in a verification of the incentive calculation. A field inspection report is prepared and maintained in the project file for future verification.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Local Government Energy Audit Program

Program Purpose and Strategy Overview

The Local Government Energy Audit Program (LGEA) program was launched as part of NJCEP's portfolio in 2008 to provide financial incentives to cover the cost of having an energy audit performed on eligible facilities owned by municipalities, school districts, 501(c)(3) nonprofits, and other local and state government entities (Applicants).

The goal of the energy audit is to provide Applicants with information on how their facilities use energy, identify energy conservation measures (ECMs) that can reduce energy use, and put Applicants in a position to implement these ECMs. The energy audits also guide Applicants towards appropriate NJCEP funded incentive programs to help reduce costs associated with implementing the ECMs.

The program is also used as a means of qualifying applicants for other relevant initiatives, most notably the Energy Savings Improvement Program (ESIP) and Sustainable Jersey's municipal and school programs. Collaboration with these programs can provide cost-effective benefits to these publicly funded facilities while helping to achieve mutual goals.

Program Description

This program is implemented as follows:

- The Applicant will submit a pre-application to the program identifying basic facility information such as, building type and square footage, recently implemented ECMs, as well as the reason(s) for requesting an energy audit.
- A case manager will assist the Applicant in determining the audit path that best addresses the Applicant's needs (as described below) before the Applicant submits additional information regarding utility accounts and associated bills, and other applicable energy usage information for each building in the scope.
- Available energy audit paths include:
    - ASHRAE Level I audit[8];

[8] From the ASHRAE Handbook:

Level I – Walk-through Assessment – Assess a building's energy cost and efficiency by analyzing energy bills and conducting a brief survey of the building. A Level I energy analysis will identify and provide a savings and cost analysis of low-cost/no-cost measures. It will also provide a listing of potential capital improvements that merit further consideration, along with an initial judgment of potential costs and savings.

Level II – Energy Survey and Analysis – This includes a more detailed building survey and energy analysis. A breakdown of energy use within the building is provided. A Level II energy analysis identifies and provides the savings and cost analysis of all practical measures that meet the owner's constraints and economic criteria, along with a discussion of any effect on operation and maintenance procedures. It also provides a listing of potential capital-intensive improvements that require more thorough data collections and analysis, along with an initial judgment of potential costs and savings. This level of analysis will be adequate for most buildings and measures.

Level III – Detailed Analysis of Capital-Intensive Modifications – This level of analysis focuses on potential capital-intensive projects identified during Level II and involves more detailed field data gathering and engineering

    - ASHRAE Level II audit, except for lighting which follows ASHRAE Level III guidelines;
    - Add-on scope audits (e.g., a more detailed review of an existing or potential CHP or renewable energy system added on to the scope of a standard audit).[9]
- When an Applicant is enrolled in LGEA and participating in any NJCEP equipment incentive programs at the same time for the same facility(ies), the Program Manager will assess the impact that the work may have on the energy audit and require the applicant take one of the following actions within a determined timeframe, depending on the level of impact:
    - Proceed with energy audit and equipment upgrades (minimal impact);
    - Complete equipment upgrades prior to proceeding with energy audit process or vice versa (moderate impact);
    - Cancel energy audit application (significant impact).
- If the initial program eligibility and application requirements have been met and the Applicant is approved to have an energy audit performed under this program, the Program Manager will issue an Approval Letter/Notice to Proceed to the Applicant.
- The scopes of work of the energy audit paths are consistent with Section 3.8.1 of RFP 16-X-23938, dated April 21, 2015 http://www.nj.gov/treasury/purchase/noa/contracts/t3009_16-x-23938.shtml, and the related Technical Proposal and Contract (#A40225).
- In order to provide compatibility with the Energy Savings Improvement Program (ESIP), the energy audit scope will include an evaluation of energy related water conservation measures, demand response potential, and estimated greenhouse gas reduction for each recommended measure.
- After verifying all program requirements have been met, the Program Manager will perform the audit, prepare an audit report, and notify the Applicant when the audit report is completed. In addition, the Program Manager may meet in person or conduct a web/phone conference with the Applicant to discuss audit findings and next steps for implementing measures recommended in the report.

The LGEA will provide audits up to a value of $100,000 per program year, per Applicant. For larger Applicants interested in pursuing ESIP (by selecting intent to pursue ESIP on the application), if the audit cost exceeds or is expected to exceed $100,000, the Program Manager will work with BPU's Office of Clean Energy Staff (OCE Staff) to determine and authorize a larger cost cap, not to exceed $300,000. For the avoidance of doubt, the Board itself, in accordance with its rules, may consider granting waivers that would authorize incentives that exceed $300,000 on whatever terms and conditions the Board determines to be appropriate.

---

analysis. It provides detailed project cost and savings information with a high level of confidence sufficient for major capital investment decisions.

[9] For the avoidance of doubt, the add-on scope audits must be added on to a standard eligible audit and cannot be a standalone study.

Services offered under LGEA do not count towards the fiscal year incentive cap (see *Program-Wide Entity Caps* in Appendix B of this Compliance Filing).

Target Markets and Eligibility

LGEA is open to the following eligible entities that contribute to the Societal Benefits Charge fund through either their gas and/or electric utilities:

- "State contracting agency" as defined by N.J.S.A. 52:34-35
- "Public agency" as defined by N.J.S.A. 52:35A-1
- Local governments per Local Public Contracts Law (N.J.S.A. 40A:11-1)
- Local governments per Public School Contracts Law (N.J.S.A. 18A:18A-1)
- County colleges per County College Contracts Law (N.J.S.A. 18A:64A-25.1)
- NJ State Colleges or State Universities per State College Contracts Law (N.J.S.A. 18A:64-52)
- Nonprofit charitable organizations per Section 501(c)(3) of the Internal Revenue Code

Applicants may apply for an energy audit for buildings that they own, although a building may still be eligible if the Applicant leases the building and provides supporting documentation from the building owner authorizing the energy audit before it is performed.

Buildings must demonstrate an average demand of 200kW or greater in the most recent 12 months of electric utility bills (inclusive of all accounts in the building) in order to qualify to participate in LGEA. Buildings that do not meet this requirement will be recommended to apply for the Direct Install program. The Program Manager will have the ability to grant exceptions to the kW requirement, on a per building basis, if the Applicant can demonstrate they meet at least one of the following criteria:

1. ESIP is an anticipated source of funding;
2. Master or campus metering arrangement on-site, where demand of any one building is unknown;
3. Demonstrates:
    a. The scope of one or more measures the Applicant would like to pursue is not available in the Direct Install program; or
    b. The type of building is not a good fit for the Direct Install program (e.g., it is an industrial building).

For #2 and #3 above, the Applicant must provide a detailed explanation as to how it meets the criteria for the claimed exception. LGEA is available to buildings never previously audited under the program, as well as buildings that have received an audit no less than three (3) years earlier (measured from the audit report approval date). All program requirements must be met in order for an entity to qualify for a second energy audit.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all LGEA participants. All applications are reviewed upon receipt to verify adherence to eligibility requirements and technical information. Applicant-supplied information is entered into the database and electronic files are created for all

documents, including project correspondence. The Program Manager will perform internal quality assurance reviews on audit reports.

On an annual basis program quality control staff will accompany each LGEA auditor on a visit to a randomly selected LGEA applicant's facility to verify that the audit is conducted in accordance with proper protocols and to ensure the accuracy of the audit in documenting the facility's detailed building survey. Quality control staff will also regularly conduct technical reviews of full audit reports; the selection of projects will be based on a pre-determined, random sampling percentage. Finally, audit pricing will be reviewed by the Program Manager for consistency and compared to LGEA historical data, referencing similar facilities for comparison.

The TRC Team will, if and to the degree applicable, utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Direct Install Program

Program Purpose and Strategy Overview

The Direct Install Program was established in 2009 to address the unique barriers experienced by the small business sector that resulted in a historical reluctance or inability to pursue energy efficiency improvements, even when they would yield significant economic benefits. Small businesses in New Jersey, as elsewhere, frequently lack the ability to acquire funding for capital improvements, and almost universally lack the in-house expertise to identify economically advantageous energy efficiency projects in which to invest. Perhaps even more critically, small business owners tend to be spread thin, so that even if projects could be identified, and even if funding could be obtained, the decision-makers simply do not have time to prioritize them— the time and energy required simply exceed what is available.

The Direct Install Program is a turnkey offering that provides small business customers with a single source for financial incentives, information, and technical assistance. Designed specifically with these customers in mind, the Program works through a set of approved contractors who are empowered to promote, enroll, audit, and then install energy efficient measures. The use of fully trained and qualified contractors to provide customers with energy efficiency assessments, effective measure recommendations and installation, and access to incentives that cover up to 70% of the total project costs creates a powerful engine to transform this sector of the C&I market that has historically been unable to participate in the NJCEP programs at desired levels.

In additional to small businesses, this Program is used in certain cases by local government entities, non-profit organizations and for certain multifamily buildings and certain religious facilities.

Background

Under the Direct Install Program, the unique needs of New Jersey's small business community will be addressed.

Program Description

The Direct Install Program offers eligible small business customers the opportunity to replace existing inefficient equipment with more energy efficient systems. Municipal and other local government agencies that have successfully participated in the Local Government Energy Audit Program are also eligible. The Program provides turnkey services including technical assistance, financial incentives and education to encourage the early replacement of existing equipment with new high efficiency alternatives. A variety of electric and natural gas energy-using systems are eligible for improvements including lighting and lighting controls, refrigeration, HVAC and HVAC controls, variable speed drives and water conservation measures. The Program strives to include a comprehensive package of cost-effective energy efficiency improvements in each customer's project.

Target Market and Eligibility

The Direct Install Program is open to all eligible commercial and industrial customers whose average demand, averaged over the preceding 12 months, is less than or equal to (≤) 200 kW.

This small business sector targeted by the Program tends to have a historical reluctance or inability to fund energy efficiency improvements. In addition, their small size tends to exclude them as beneficiaries of services from other energy service providers. Religious facilities[10] which are metered residentially will be permitted to participate in the Direct Install Program. Applicants will be required to meet all other program requirements.

During FY19, it is expected that multifamily (MF) participation in the present Program will be transitioned to the pending Multifamily Program.

Program Offerings and Incentives

The Direct Install Program provides turn-key services by offering customers a consistent source of technical assistance, installation services and financial incentives. The Program will be delivered across the state by the Program Manager in association with multiple regional contractors (contractors) who will be selected via a Request for Proposal (RFP) process to deliver installation and related services. Contractors will work in conjunction with material suppliers (vendors), who will be selected under a separate competitive RFP process.

All contracts with vendors and contractors will be negotiated to establish consistent, statewide pricing. All equipment proposed must be cost effective per Program rules and, depending on the project, certain equipment may not be considered cost effective. Eligible equipment categories include but may not be limited to:

- Energy efficiency T8 & T5 lamps, ballast and fixtures
- ENERGY STAR approved LED lamps
- Compact Fluorescent Lamps
- Design Lights Consortium (DLC) Qualified LED Fixtures
- HVAC & HW controls
- LED Exit Signs
- Occupancy Sensors
- VFDs
- ENERGY STAR Programmable Thermostats
- ENERGY STAR/High Efficiency Boilers (up to 1,500,000 Btuh)[11]
- ENERGY STAR Furnaces (up to 140,000 Btuh)[12]
- Oil to Natural Gas Conversions allowed for existing furnaces and boilers
- High Efficiency Cooling Systems

[10] Refers to buildings that are used as places of worship. This includes churches, temples, mosques, synagogues, meetinghouses, or any other buildings that primarily function as a place of religious worship. It also refers to non-residential buildings that are associated with religious organizations, such as religious schools and religious community centers, but not convents or rectories.

[11] In cases where the existing boiler is oversized, the existing larger boiler may be evaluated and considered for replacement as long as the replacement unit does not exceed 1,500,000 Btuh.

[12] In cases where the existing furnace is oversized, the existing larger furnace may be evaluated and considered for replacement as long as the replacement unit does not exceed 140,000 Btuh.

- ENERGY STAR Products
- Refrigeration Measures
- Other measures may be added after evaluation by the Program such as investigating the potential of implementing retro-commissioning measures which may include rooftop HVAC tune-ups, refrigerant charges, filter replacements, controls adjustment, and optimization.

In K-12 public and private schools where the facility has an existing boiler that does not exceed 3,000 kBtuh in output heating capacity, the contractor will have the ability to propose a new system that comprises multiple modular boilers in series as an appropriate replacement, based on the total output heating capacity and efficiency of the existing boiler. A minimum efficiency level of 93% will be enforced.

Contractors will be solely responsible for boiler project design, providing proper training to the applicant, and developing and providing load calculations to the applicant and the Program Manager. Further, the contractor will be required to work with township code enforcement officials to ensure the installation meets all current local and state codes and standards.

Customer incentives are offered to reduce the cost of installing energy efficient equipment and are based on the total installed cost of the retrofits. Qualifying C&I customers are eligible for incentives up to 70% of the installed cost of cost-effective, approved measures with a project incentive cap of $125,000. Direct Install participants will also be held to a fiscal year entity cap of $250,000 per entity. For Direct Install projects which are participating in the state's Energy Savings Improvement Program (ESIP), the Program's entity cap is increased to $500,000. This facilitates the submission of larger projects that provide a good opportunity for significant, cost-effective energy savings. Incentives are paid to the installation contractor and the contractor will invoice the customer for the remaining balance of the installation.

The Program Manager will investigate additional/enhanced incentives for distressed communities such as Urban Enterprise Zones (UEZ) and work with OCE Staff to determine if additional incentives are appropriate.

Open Program for Contractor Participation

If an applicant wishes to utilize their own contractor, rather than the pre-selected regional contractor for their area, the Program Manager will work with the applicant's contractor to confirm that the contractor:

1. Meets all of the Program's bid requirements.
2. Agrees to the Program's set pricing.
3. Participates in program training provided by the Program Manager.
4. Signs the Direct Install Program Sub-Contractor Agreement.

If all requirements are met, the contractor will be allowed to participate in the Program. If the applicant's contractor is unable to meet these requirements, the applicant will be given the option to proceed in the Direct Install Program utilizing an approved contractor for that specified geographic area, or continue with their contractor outside of the Program with the option to access other available NJCEP programs.

Program Financing

Some, but not all of the local utilities have provided 0% interest, on-bill repayment for Direct Install projects in their service territories. This offer has reportedly been extremely effective in making it easier for business to participate. The Program Manager will continue to work with the BPU to explore the potential to expand the availability of financing for Direct Install projects statewide, either through on-bill repayment or other financing options.

Direct Install Team Responsibilities

The Program Manager will be responsible for the following program components:

- Review and approval of all projects' Scopes of Work before installation to confirm Program eligibility and cost effectiveness.
- Final review and approval of all projects which have been completed through the execution of the Program's Measure Acceptance Form for incentive finalization.

Direct Install Participating Vendors will be responsible for the following program components:

- Providing offered program equipment required for installation statewide for all approved Direct Install projects.
- Ensuring all provided equipment meets or exceeds the Program's minimum efficiency requirements and program guidelines.
- Packaging and shipping of all procured program equipment to the specific project site or Contractor.
- Providing all manufacturer's specifications/certifications and equipment warranties for all installed program equipment to the installation contractor.

Direct Install Participating Contractors are responsible for the following program components:

- Completing Direct Install Program training provided by the Program Manager.
- Program marketing within their assigned program territories.
- Educating the applicant on the Direct Install Program, completing the program application, gathering utility information, and pre-qualifying an applicant.
- Performing site visits and collecting existing equipment inventory and energy usage data, analyzing information and identifying opportunities for efficiency improvements, and making preliminary recommendations.
- Submitting completed energy assessments, using the Program's Energy Assessment Tool (EAT), to the Program Manager for review and approval.
- Presenting finalized comprehensive recommendations to the customer, including costs and savings estimates, obtaining customer agreement to proceed with installation, and the collection of the balance of projects costs owed by the program applicant ($\geq$ 30% of the total project cost). The customer agreement will be a standard agreement approved by the Program.
- Submission of completed and executed scope of work (SOW), including pre-implementation report to the Program Manager for review and approval. All measures identified in the Direct Install Scope of Work are subject to the Program's Total Resource Cost (TRC) test, which test is utilized to screen out measures that are not cost-effective. (Note that a participant would be given the option of retaining measures that fail the TRC

test by the participant agreeing to bear sufficiently more of the cost of the measure to bring the Program's share of the cost to within the required TRC score. For example, a participant would have the option of increasing its share of the cost of a new furnace to 37%, instead of the usual 30%, if that increased share would increase project's TRC score to the required level.)

- Procurement of all approved program equipment from the Program's selected equipment vendor for lighting and refrigeration. Contractor is responsible for providing all HVAC and mechanical equipment associated with the Program. Contractor is also responsible for procurement of all ancillary equipment required for complete installation.
- Installation of eligible measures per the SOW, including obtaining all appropriate permits.
- Submission of post-implementation report, including payment request. The Program Manager will review all post-implementation reports and either forward the incentive (≤ 70%) as approved for payment or send back to the contractor with questions or issues for resolution.
- Providing program applicant with all installed equipment technical manuals, manufacturer's specification/certification sheets, and warranties for all equipment and labor.
- Providing a one-year warranty on all labor and equipment.
- Tracking and reporting on program activity as requested by the Program Manager, including, but not limited to:
    - Inventory of equipment replaced, including quantity, type, location, hours of use
    - Estimates of energy (kWh &/or therms) and demand (kW) savings and total project costs
    - Installation schedules
    - Coordinating the proper disposal of all removed equipment.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all Direct Install Program participants. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of energy efficient measure qualification and incentive calculation. Applicant supplied information and program manager performed incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence. A sample of applications will be selected for quality control file review and site inspections.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Delivery Methods

The Direct Install Program will be managed by the Program Manager and will be delivered by a competitively selected pool of contractors and equipment suppliers (vendors). The Program will be available to eligible commercial and industrial customers statewide. (Note that, as indicated in the General Overview section for the C&I Energy Efficiency Programs in this Compliance Filing, existing facilities must be contributors to the SBC to be eligible.)

For material pricing (vendors), the Program Manager will reserve the right to renegotiate and/or rebid pricing annually. For installation pricing (contractors), the Program Manger will provide a 2-year contract with an optional 1-year extension, and it will reserve the right to renegotiate pricing at these trigger points, or rebid for these services.

Contractors will be informed when program changes are anticipated based on changes in market conditions and/or the strategic direction of the Program and adjustments will be made as needed during the term of their contract.

The Program Team will, as applicable, utilize its contractual rights, its common law rights, and the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Pay for Performance – Existing Buildings

Program Purpose and Strategy Overview

The Pay for Performance – Existing Buildings Program (P4P EB) was launched in 2009 as a market transformation initiative with a comprehensive, whole-building approach to energy efficiency in existing commercial and industrial buildings. It is intended to encourage contractors and building owners to look for ways to lower their total energy consumption from a whole-building perspective in order to achieve deeper levels of savings than are typically achieved through one-for-one equipment change-outs. Instead of simply providing incentives to replace existing equipment with high-efficiency equipment, P4P EB seeks to transform the way in which contractors and design professionals consider energy use. The program does this by requiring the use of standardized energy simulation software to estimate initial savings, and then encourages building owners and their designated contractors to continue to measure their facility's energy consumption and savings year after year. The program adds focus to the impact that building operation practices have on energy use by paying a portion of the incentive based on a measurement and verification (M&V) component to determine whether estimated savings levels are actually achieved.

Program Description

This market-based program relies on a network of contractors ("Partners"), selected through a Request for Qualifications process. Once approved, Partners may provide technical services to program participants. Partners work under contract to building owners, acting as their "energy expert", but are never the less required to strictly follow program requirements. Partners are required to develop an Energy Reduction Plan (ERP) for each project, including a whole-building technical analysis, a financial plan for funding the energy efficiency improvements, and a construction schedule for installation. The ERP must include a package of energy efficiency measures that achieve the minimum Energy Target of 15%[13] energy reduction of total building source energy consumption, based on an approved whole-building energy simulation. The achievement of the Energy Target is verified using post-retrofit billing data and EPA Portfolio Manager methodology.

Additionally, the ERP must include a comprehensive mix of measures and include at least two unique measures (e.g. lighting and HVAC improvements). The rule is that no more than 50% of the total source energy savings may be derived from lighting measures. Notwithstanding the foregoing rule, lighting measure savings over 50% may be considered if the Program Manager determines the scope of work is otherwise comprehensive in that it (a) assesses of the cost-effectiveness of installing energy conservation measures in each of the following areas: (i) heating systems, (ii) cooling systems, (iii) ventilation systems, (iv) domestic hot water systems, and (v) building envelopes, and (b) implements all cost-effective energy conservation measures identified through the foregoing assessment or, as to any such measures not implemented, explains why such implementation would not be practicable. For example, a scope of work in a high school that does not include replacement of a 30-year-old atmospheric boiler would not be

[13] Energy Target is rounded down to two significant figures e.g. 0.1487 is rounded to 0.14 or 14%.

allowed to include lighting savings greater than 50% of the total source energy savings. Recommended measures must meet or exceed ASHRAE 90.1-2013 requirements or Program minimum efficiency requirements, whichever is more stringent.

An alternative savings threshold of 4% source energy savings is offered to customers whose annual energy consumption is heavily weighted to manufacturing and process loads. In order to be considered for this alternative savings threshold, the project must involve:

- A manufacturing facility (including such industries as plastics and packaging, chemicals, petrochemicals, metals, paper and pulp, transportation, biotechnology, pharmaceutical, food and beverage, mining and mineral processing, general manufacturing, and equipment manufacturers), data centers, and hospitals.
- Manufacturing and/or process-related loads, including data center consumption, consume 50% or more of total facility energy consumption.
- For hospitals, 50% or more of the gross floor area must be used for general medical and surgical services and 50% or more of the licensed beds must provide acute care services.

Savings projections will be calculated using calibrated energy simulation. The approach involves the following steps:

1. Develop whole building energy simulation using approved simulation tools. The list of approved tools will be based on the software requirements outlined in ASHRAE 90.1 Section 11 or Appendix G, or as approved by the Program Manager.
2. Calibrate simulation to match pre-retrofit utility bills.
3. Model proposed improvements to obtain projected energy savings.
4. Calculate percent energy reduction to demonstrate achievement of Energy Target.

Modeling methodology is in general compliance with national programs such as LEED and EPAct Federal Tax Deductions for Commercial Buildings.

Pre-approval of the ERP, which may include a site inspection, is required for all projects. An ERP must be approved by the program and an approval letter sent to the participant and Partner in order for incentives to be committed. Upon receipt of an ERP, all project facilities must be pre-inspected. Measures installed prior to pre-inspection of the facility shall not be included as part of the ERP scope of work and will not be eligible for incentives. Measure installation undertaken prior to ERP approval, but after pre-inspection, is done at the customer's own risk. In the event that an ERP is rejected by the program, the customer will not receive any incentives.

Projects that cannot identify efficiency improvements that meet the above requirements may be referred to another appropriate C&I Buildings Program(s).

Target Market and Eligibility

The P4P EB program is open to existing commercial and industrial buildings with peak demand of 200 kW or greater in any of the preceding twelve months. This participation threshold is 100 kW for eligible multifamily facilities. The Program Manager has the discretion to approve projects that are within 10% of the minimum 200 kW threshold (100 kW for multifamily facilities). In addition, any multifamily facility which does not meet the eligibility requirements of the Home Performance with ENERGY STAR Program is eligible to participate in the P4P program. Due to the comprehensive design of this program, projects may not apply for incentives

in other NJCEP programs while enrolled in P4P for the same facility(ies). All eligible measures must be considered in P4P, with the exception of on-site generation (e.g. CHP program). Additional exceptions may be considered by the Program Manager on a case-by-case basis.

The P4P EB program defines a project as a single, detached commercial, industrial, or multifamily building. The entire building must be analyzed under the Program and meet program requirements. Exceptions apply as follows:

Campuses/Multiple Buildings: A campus-style facility is one where ALL the following conditions apply:

- There are two or more P4P-eligible buildings that are located on adjacent properties
- Buildings are owned by a single entity
- AND one of the following:
    - Buildings are master-metered
    - Buildings are served by a common heating and/or cooling plant.
    - Buildings share walls and/or are connected via a physical structure.

In this instance, the entire campus is treated as a single project under the program. The 200 kW participation threshold will be met through an aggregation of all buildings. The Energy Target (as well as all other program requirements) will be achieved in aggregate as well. Only one set of incentives will be paid per project, and all incentive caps apply.[14]

Multifamily Buildings: In FY19, the Program Administrator will develop a single Multifamily Program to serve all multifamily projects and ensure they receive energy efficiency services suited to their particular needs. Accordingly, during FY19, it is expected that multifamily (MF) participation in the present Program will be transitioned to the pending Multifamily Program. In the meantime, the P4P program will continue to accommodate certain types of multifamily buildings. Specifically, multifamily customers that fit the following description will be able to participate in the present Program:

- ***High-rise/Mid-rise buildings***
    - High-rise/Mid-rise apartment complexes are apartments, cooperative, and/or condominiums structures that are four stories or more above ground.

- ***Low-rise, garden-style buildings with central heating and/or cooling or master meters***

[14] For the purpose of tracking technical reviews and site inspections, each building addressed within a multi-building ERP may be considered a separate project. This is necessary because, although a single ERP will include all of the necessary project information, the modeling and other information for each building will require building-by-building review. Similarly, site inspections will take considerably longer for multi-building projects as each building will require an inspection. Where applicable, administrative tracking will be associated with any approved sampling of building simulation models (i.e., if a single model is developed to represent several similar buildings).

- Garden-style apartment complexes consisting of multiple low-rise apartments, cooperatives, condominiums and/or townhouses that are three stories or less, surrounded by landscaped grounds.
- Central heating and/or cooling means that each individual unit does not contain its own heating or cooling systems. The building must contain a central heating and/or cooling plant that serves multiple buildings and/or units.
- Master meters means electric and/or gas meters that serve multiple buildings (rather than individual units or a single building).

Low-rise (and mid-rise where appropriate) garden-style complexes will be treated as one project under the P4P program. In other words, if there are ten garden-style buildings that are part of one multifamily community, all ten will be aggregated into one P4P application. The 100 kW participation threshold will be met through this aggregation (including common area and in-unit billing). The Energy Target and all other program requirements will be achieved in aggregate as well. Only one set of incentives will be paid per project, and all incentive caps apply. Exceptions to this rule may be considered by the Program Manager on a case-by-case basis where financial constraints prevent the entire complex from participating at once, or where parts of the complex are determined to be better suited for Home Performance with ENERGY STAR.

Please see the logic tree in Appendix D for guidance on multifamily program eligibility. While a unified Multifamily Program is being developed in FY19 the Program Manager will continue to use this logic tree to make sure that multifamily customers are properly served. As previously mentioned, multifamily participation in this program will be transitioned to the proposed Multifamily Program expected to be submitted to the Board for review and approval in FY19.

Partner Network

The P4P Program has developed a network of Partners who can provide the technical, financial, and construction-related services necessary for participation in this program. One of the goals of this program is to expand the network of energy efficiency firms that can provide these services to make this program accessible for all eligible commercial and industrial customers. This market-based approach is a key component of market transformation by creating "green collar" jobs and helping to develop the workforce necessary to achieve ambitious long-term energy savings targets. New Partnership Applications are accepted on a rolling basis, subject to review and approval by the Program Manager and completion of a program orientation and training webinar. Certain entities who have their own in-house professional engineering expertise can become a Partner for their own facility(ies)[15]. The Program Manager also holds monthly Partner Conference Calls to present program updates, technical topics, and discuss any issues that Partners may be encountering. For FY19, existing approved Partners will need to complete online re-training in order to remain an approved Partner in the program. Program Manager may offer select Partners one-on-one training on projects to ensure success in the program, as well as kick-off meetings upon project enrollment.

[15] This option is geared toward larger customers. This opportunity will be evaluated on a case-by-case basis by the Program Manager. All other Program requirements will be in effect.

Program Offerings and Incentives

The P4P EB program's incentive structure was conceived to encourage the design and achievement of comprehensive energy savings, and as such incentives are released in phases upon satisfactory completion of each of three program milestones, which are:

1. Submittal and approval of a complete Energy Reduction Plan
2. Installation of all recommended measures per the Energy Reduction Plan
3. Completion of Post Construction Benchmarking Report demonstrating achieved energy savings.

At the Customer's written request, Incentive payments may be assigned or directed (including re-assignment or re-direction) to either the Customer, the Partner, or other designated representative.

Incentive #1 – Energy Reduction Plan – This incentive has been developed to offset the cost of services associated with the development of the Energy Reduction Plan (ERP) and is based on the square footage of the building(s) paid at $0.15/sq. ft. with a maximum incentive of $50,000 and minimum of $7,500. This incentive is capped at 50% of annual energy cost, which assists in limiting incentives for facilities with large square footage but very low energy intensity (e.g. warehouses).

Please note, for customers who have successfully participated in the Local Government Energy Audit Program (LGEA), Incentive #1 related to the ERP will be reduced by 50%, with a maximum incentive of $25,000 and minimum of $3,750, to recognize the value of the audit provided through the LGEA Program. This reduction only applies if the date of the audit report is less than 3 years from the date of receipt of the P4P Initial Application.

The Incentive #1 is contingent upon moving forward with the installation of measures identified in the ERP and must be supported by a signed Installation Agreement. The Program Manager, in coordination with the Office of Clean Energy, may waive this requirement due to extenuating circumstances. If a project is cancelled after the receipt of Incentive #1 and the Incentive #1 payment is not returned to NJCEP, the customer/Partner may reapply to the Program in the future but will not be eligible for another Incentive #1 payment for the same facility.

Paid Incentive #1 may be up to 5% higher than committed to account for fluctuations in square footage identified between Initial Application and ERP submittal.

Incentive #2 – Installation of Recommended Measures – This incentive is based on the projected energy savings as estimated in the approved ERP. The performance-based incentives to be paid at completion of construction are as follows:

- Projected first year electric savings from $0.09/kWh for the minimum 15% (or 4% when applicable) savings up to $0.11/kWh, based on $0.005/kWh per additional 1% savings.
- Projected first year natural gas savings from $0.90/therm for the minimum 15% savings (or 4% when applicable) up to $1.25/therm based on $0.05/therm per additional 1 % savings.

In certain circumstances, the committed incentive may be adjusted due to changes between the scope of work approved in the ERP and what was actually installed. Significant changes to measures, including removal or addition of a measure, will require a revision to the ERP subject

to re-review and adjustment of incentives #2 and #3. Additionally, if the total incentive is capped at project cost, an increase in cost will not result in an increased incentive, although a decrease in cost will result in a decreased incentive. In general, adjustments that increase the incentive are subject to budget availability. Minor modifications to the approved scope of work will not require ERP revisions and it is assumed these fluctuations will be captured in Incentive #3.

Incentive #3 – Post Construction Benchmarking Report – This incentive is based on the actual energy savings demonstrated in the 12 months following installation of recommended measures. Savings are measured at the whole building level using weather-normalized utility bill analysis. The performance-based incentives are as follows:

- Actual first year electric savings from $0.09/kWh for the minimum 15% savings (or 4% when applicable) up to $0.11/kWh, based on $0.005/kWh per additional 1% savings.
- Actual first year natural gas savings from $0.90/therm for the minimum 15% savings (or 4% when applicable) up to $1.25/therm based on $0.05/therm per additional 1 % savings.
- If savings are below the 15% minimum but at or above 5%, the project will still be eligible for an incentive, although at a reduced rate calculated at $0.005/kWh less and $0.05/therm less from the base incentive (i.e. $0.09/kWh and $0.90/therm) for each 1% savings below 15%. So long as the savings are at or above 5%, the minimum incentive paid is $10,000 or committed value, whichever is less, assuming all required data and documentation is submitted. If savings are less than 5%, there would be no Incentive #3.

Incentives # 2 and #3 are intended to act as a single performance incentive that is paid in two installments in order to provide up-front financial assistance in implementing the project. The Post Construction Benchmarking Report's main purpose is to "true-up" this performance incentive in the post-retrofit period by adjusting Incentive #3 so that the total performance incentive (i.e. Incentive #2 and #3) is in compliance with the program's incentive structure. Therefore, true-up of Incentive #3 includes any under or overpayment of Incentive #2, based on actual savings.

The Post Construction Benchmarking Report must demonstrate savings over at least one year of post-construction energy consumption. Program Manager may grant up to an additional twelve (12) month extension for extenuating circumstances where projected savings levels were not reached based on the initial one-year post-construction consumption.

Incentives #2 and #3 combined will be capped not to exceed 50% of the total project cost. The total of Incentives #1, #2, and #3 combined shall not exceed $2,000,000 per project, assuming both electric and natural gas measures are recommended and implemented. Should only electric measures or only gas measures be recommended and implemented, then the total of Incentive #1, #2, and #3 combined shall not exceed $1,000,000 per project. For the avoidance of doubt, the foregoing would place a $1,000,000 per project cap on electric-only facilities. Entity caps also apply.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all P4P program projects. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of measure qualification and incentive

calculation. Applicant supplied information and project technical data are entered into the database. Electronic files are created for all documents and for ongoing project correspondence. The Program Manager reviews submitted Energy Reduction Plans.

The Program Administrator quality control staff will perform pre- and post-construction inspections, will regularly conduct pre-approval technical reviews of Energy Reduction Plans, and will perform file reviews on a sampling of applications prior to incentive payments. The selection of inspections and reviews will be based on a pre-determined, random sampling percentage.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Pay for Performance New Construction

Program Purpose and Strategy Overview

The Pay for Performance – New Construction program (P4P NC) was originally launched in 2009 to incentivize commercial and industrial projects that are designed to perform better than required by the current state energy code. It is intended to encourage developers and design professionals to look for ways to optimize design, operation, and maintenance of new construction and substantial renovation projects in order maximize energy cost savings. The program does this by requiring the use of standardized energy simulation software to estimate energy costs of the proposed design compared to a code-compliant baseline. As with P4P EB, a portion of project incentives is tied to actual building performance to emphasize to building owners the critical value of addressing operational practices. The P4P NC program aligns with other rating authorities such as LEED, ENERGY STAR, and ASHRAE Building Energy Quotient.

Program Description

The P4P NC program takes a comprehensive, whole building approach to energy efficiency in the design and operation of new commercial and industrial buildings, as well as in major renovations. The program provides tiered incentive levels correlated to the modeled energy cost savings as demonstrated in the proposed design, and includes a performance component to reflect the value that effective building operation has in determining energy use. This market based-program relies on a network of Partners, selected through a Request for Qualifications process. Once approved, Partners may provide technical services to program participants. Partners work under contract to building owners, acting as their "energy expert", but are never the less required to strictly follow program requirements. Partners will be required to develop a Proposed Energy Reduction Plan (ERP) for each project. The Proposed ERP details a set of recommended measures that will achieve the minimum performance target. Partners will then provide an As-Built ERP, along with a Commissioning Report to demonstrate that recommended measures are installed and functioning. Finally, the Partner will benchmark the building following one year of operation to document how well the building is operating relative to the As-Built ERP.

Participants will be required to work with an approved Partner to develop the Proposed ERP and facilitate the incorporation of the recommended energy efficiency measures. The submitted Proposed ERP must include a package of energy efficiency measures that achieve the minimum performance target of 5% savings for commercial and industrial buildings and 15% for multifamily buildings compared to ASHRAE 90.1-2013[16]. The minimum performance target will be measured in terms of energy cost, which is consistent with ASHRAE 90.1, Appendix G, EPAct Federal Tax Deductions, and LEED NC. Program Guidelines will outline equivalent savings values depending on the modeling compliance path chosen.

[16] Energy Target is rounded down to two significant figures e.g. 0.0487 is rounded to 0.04 or 4%.

Partners are required to develop whole building energy simulations using approved simulation tools. The list of approved tools will be based on the software requirements outlined in ASHRAE 90.1 Section 11 or Appendix G, or as approved by the Program Manager. The program will offer two modeling compliance paths to demonstrate that the proposed design meets or exceeds the minimum performance target:

Path 1: ASHRAE Building Energy Quotient (bEQ) As-Designed Path

Under this path, the Partner will develop a single energy model representing the proposed project design using prescribed modeling assumptions that follow *ASHRAE Building Energy Quotient (bEQ) As-Designed* [17] simulation requirements. Proposed design simulation results, including Energy Use Intensity ($EUI_{standard}$), will be measured against the median EUI for the building type (EUI_{median}) to evaluate the Performance Score.

$$\text{Performance Score} = (EUI_{standard} / EUI_{median}) \times 100.$$

Measures must be modeled within the same proposed design energy model, but as parametric runs or alternatives downgraded to code compliant parameters.

Path 2: ASHRAE 90.1-2013 Appendix G Path

Under this path the Partner will model a baseline and proposed building using ASHRAE 90.1-2013 Appendix G *modified by Addendum BM.* Addendum BM sets a common baseline building approach that will remain the same for ASHRAE 90.1-2013 and all future iterations of ASHRAE 90.1, and is roughly equivalent to ASHRAE 90.1-2004. To comply with ASHRAE 90.1-2013, a proposed building has to have energy cost savings of 11-40% from the Addendum BM baseline, depending on the building type and climate zone. Measures must be modeled as interactive improvements to the ASHRAE 90.1-2013 Appendix G baseline with Addendum BM accepted.

Each project, regardless of compliance path selected, must have at least one measure addressing *each* of the following building systems: envelope, heating, cooling, and lighting (e.g. increased insulation, improved HVAC efficiency, lighting power density below code requirements, etc.). Buildings that are not heated (e.g. refrigerated warehouse) or not cooled (e.g. warehouse) will not be required to have a measure addressing the missing building system. Measures are defined as components that exceed ASHRAE 90.1-2013 requirements.

Core and Shell vs. Tenant Fit-Out Considerations

Generally, P4P NC projects are required to evaluate the whole building design. Further, if a P4P NC Application is submitted to the program, that same building(s) cannot also

[17] http://buildingenergyquotient.org/asdesigned.html

submit applications to other programs. An exception to this rule may apply to eligible projects pursuing Core & Shell separate from Tenant fit-out improvements, which may fall into one of two scenarios below.

Scenario 1: Core & Shell and Tenant Fit-out are combined - In this scenario, all aspects of the design (whole building) must be included under a single P4P NC Application and treated as a single project following all Program Guidelines as typical. This may apply where:

- Developer is funding and constructing both Core & Shell and Tenant fit-out.
- High performance systems are specified and funded for the Tenant space separate from Core & Shell, but the building owner and tenant come to an agreement to include both scopes of work under a single project.

Scenario 2: Core & Shell Separate from Tenant Fit-out - This scenario applies when the Core & Shell work is known but the tenant space development is unknown and/or is funded separately. Therefore, the Core & Shell is treated as a separate project from the Tenant fit-out. In this case, a building may apply for P4P NC for either Core & Shell or Tenant fit-out(s), not both. The determining factor depends on which scope will include design and construction of the central HVAC system, in which case:

- P4P NC incentives will apply to all conditioned square footage of the building serviced by the central HVAC in the project's scope of work.
- The project scope applying for P4P NC (e.g. Core & Shell OR Tenant Fit-out) must be able to meet all requirements for P4P NC on its own.
- Any Tenant fit-out OR Core & Shell work not included in P4P NC, (and connected to a non-residential electric/gas account paying into the SBC), may seek incentives through the C&I Prescriptive or Custom Measure programs for eligible equipment.

A project may apply to the program at any point during the design phase. Projects that have begun construction may still apply so long as measures have not been purchased prior to receipt of Program Application. Any measures installed prior to approval of Proposed ERP are done so at the project's risk. In the event that the equipment selected does not qualify for an incentive, it will be removed from the Proposed ERP. Projects that cannot identify efficiency improvements that meet the above requirements will be referred to the appropriate C&I Buildings Program(s).

See Program Guidelines at www.njcleanenergy.com for additional modeling considerations.

Target Market and Eligibility

The P4P NC Program is open to new commercial and industrial construction projects with 50,000 square feet or more of conditioned space. The Program Manager has the discretion to approve projects that are within 10% of the minimum 50,000 square foot threshold. Projects may include a single building meeting square footage requirements, or multiple buildings as long as those buildings are owned by the same entity, are located on

adjacent properties, and are designed and constructed within the same time period.[18] Multiple buildings that are grouped into one program application are viewed as a single project that is eligible for one set of program incentives, and all incentive caps apply to the group of buildings.

Due to the comprehensive design of this program, projects may not apply for incentives in other NJCEP programs while enrolled in P4P NC for the same facility(ies). All eligible measures must be considered in P4P NC, with the exception of on-site generation (e.g. CHP program). Exceptions also apply to Core & Shell and/or Tenant Fit-out projects—see details as provided above. Additional exceptions may be considered by the Program Manager on a case-by-case basis.

Multifamily Buildings

The P4P program accommodates certain types of multifamily buildings. Please see the decision tree in Appendix D for guidance on multifamily program eligibility.

Low-rise (and mid-rise where appropriate), garden-style complexes will be treated as one project under the Pay for Performance program. In other words, if there are 10 garden-style buildings that are part of one multifamily community, all 10 will be aggregated into one P4P NC application. The 50,000-square-foot participation threshold will be met through this aggregation (including common area and in-unit). The minimum performance target (as well as all other program requirements) will also be determined on an aggregated basis. Only one set of incentives will be paid per project and all incentive caps apply.

While a unified Multifamily Program is being developed in FY19 the Program Manager will continue to use this logic tree to make sure that multifamily customers are properly served. Multifamily participation in this program will be transitioned to the proposed Multifamily Program expected to be submitted to the Board for review and approval in FY19.

Partner Network

Existing approved P4P NC Partners will need to complete online re-training on a regular basis as determined by the Program Manager in order to remain an approved Partner in the program. Program Manager may offer select Partners one-on-one training on projects to ensure success in the program, as well as kick-off meetings upon project enrollment. Depending on program demand, the Program Manager may provide subsidized Energy

[18] For the purpose of tracking technical reviews and site inspections each building addressed within a multi-building ERP may be considered a separate project. This is necessary because although a single ERP will include all of the necessary project information, the review of each of the building simulation models will require individual attention. Similarly, site inspections will take considerably longer for multi-building projects as each building will require an inspection. Where applicable, administrative tracking will be associated with any approved sampling of building simulation models (i.e., if a single model is developed to represent several similar buildings).

Modeling Training Sessions for Program Partners related to ASHRAE 90.1-2013. (See also the P4P EB section of this Compliance Filing.)

Program Offerings and Incentives

The P4P NC program's incentive structure was conceived to encourage the design and achievement of comprehensive energy cost savings, and as such are released in phases upon satisfactory completion of each of three program milestones, which are:

1. Submittal and approval of a Proposed ERP with proposed design meeting all program requirements,
2. Submittal and approval of an As-Built ERP and Commissioning Report confirming installation and operation of recommended measures per the Proposed ERP. Changes between proposed and as-built design must be accounted for at this point, although as-built project must still meet all program requirements.
3. Submittal of ENERGY STAR Portfolio Manager benchmark based on first year of operation with score of 75 or higher. Building types not eligible for ENERGY STAR Certification can qualify for this incentive by obtaining *ASHRAE Building Energy Quotient (bEQ) In-Operation* Certification with equivalent score as set by Program Guidelines. Additional certification for compliance may be considered by Program Manager.

Incentives are paid based on the rate schedule in Table 4 below. At the Customer's written request, Incentive payments may be assigned or directed (including re-assignment or re-direction) to either the Customer, the Partner, or other designated representative.

Table 4: P4P NC Incentive Schedule

	Cost reduction over 90.1-2013 Baseline	Incentive by Building Type Per Square Foot	
Minimum Performance Requirement	15% Multifamily 5% All other	Industrial/High Energy Use Intensity	Commercial and Multifamily
Incentive #1 Proposed Energy Reduction Plan	+ 0 - <2% (Tier 1)	$0.10	$0.08
	+ 2 - <5% (Tier 2)	$0.12	$0.10
	+ 5% or greater (Tier 3)	$0.14	$0.12
	Max	$50,000.00	
	Pre-Design Bonus	$0.02	
	Max	$10,000.00	
Incentive #2 As-Built Energy Reduction Plan and Cx Report	+ 0 - <2% (Tier 1)	$1.00	$0.80
	+ 2 - <5% (Tier 2)	$1.20	$1.00
	+ 5% or greater (Tier 3)	$1.40	$1.20
	Max	75% Measure Incremental Cost	
Incentive #3 Building Performance		$0.40	$0.35
	Max	25% Measure Incremental Cost	

- Incentive #1 is contingent on moving forward with construction and must be supported by required program documentation (e.g. signed Installation Agreement). The Program Manager, in coordination with the Office of Clean Energy, may waive this contingency in extreme situations where construction is halted due to economic or other external factors. If a project is cancelled after the receipt of Incentive #1, the incentive amount shall be returned to NJCEP. If the Incentive #1 payment is not returned to NJCEP, the customer/Partner may reapply to the Program but will not be eligible for another Incentive #1 payment for the same facility.
- The total of Incentives #1, #2, and #3 combined shall not exceed $2,000,000 per project, assuming both electric and natural gas measures are recommended and implemented. Should only electric measures, or only gas measures, be recommended and implemented, then the total of Incentive #1, #2, and #3 combined shall not exceed $1,000,000 per project. For the avoidance of doubt, the foregoing would place a $1,000,000 per project cap on electric-only facilities. Entity caps also apply.
- Certain circumstances may impact an incentive amount after a commitment has been made:
    - If a project incentive is capped by incremental project cost, any decrease in said cost will result in a reduction of the incentive. Alternatively, an increase in incremental cost will not impact the incentive.
    - Increase or decrease in project square feet may increase (budget permitting) or decrease the incentive.
    - Significant modifications to the approved scope of work, including addition and removal of a measure, may impact the overall project savings causing a project to move between incentive tiers. Incentives will be adjusted up (budget permitting) or down accordingly.
    - In general, any required adjustments will also include under or overpayment of incentives already paid.

Incentive #1 Pre-Design Bonus (Integrative Process): Projects that are in pre-design or schematic design may be eligible for a higher Incentive #1. The goal is to incentivize applicants to think critically about their building design from an energy efficiency standpoint early in the process where changes are easier to make, thereby supporting high-performance, cost-effective project outcomes. In order to qualify, the Partner will need to work with the applicant beginning in pre-design and continuing throughout the design phases. They will perform a preliminary "simple box" energy modeling analysis before the completion of schematic design that explores how to reduce energy loads in the building and accomplish related sustainability goals by questioning default assumptions. They will then document how this analysis informed building design decisions relative to owner's project requirements, basis of design, and eventual design of the project. This submittal shall be submitted after Application approval but prior to the Proposed ERP. Although pre-construction inspections are not routinely performed in this program, TRC may inspect projects applying for this bonus.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all P4P NC program projects. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of measure qualification and incentive calculation. Applicant supplied information and project technical data are entered into the database. Electronic files are created for all documents and for ongoing project correspondence. The Program Manager reviews submitted ERPs.

The Program Administrator quality control staff will perform pre- and post-construction inspections, will regularly conduct pre-approval technical reviews of ERPs, and will perform file reviews on a sampling of applications prior to incentive payments. The selection of inspections and reviews will be based on a pre-determined, random sampling percentage.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Large Energy Users Program

Program Purpose and Strategy Overview

The purpose of the Large Energy Users Program (LEUP) is to foster self-investment in energy efficiency and combined heat and power projects for New Jersey's largest commercial and industrial utility customers. This program was established in 2011 as a pilot following requests from these customers to develop a program specific to their needs and in recognition of their large contribution to the SBC. These large, sophisticated facilities have unique needs and internal processes which may not align with the structure of the other C&I programs with respect to submission criteria or timing. The LEUP offers a more flexible process to these customers, many of whom have engineers on staff, but in turn requires that participating facilities comply with accountability processes to obtain incentives, thus assuring that the desired efficiency is achieved. The program supports various types of large customers spanning the pharmaceutical, higher education, industrial, building management, data center and other commercial sectors.

Specific design features include:

- Ability to submit multiple projects/buildings under one application;
- Flexible application submission process providing the customer the opportunity to submit up to 3 scopes of work in each program year;
- Appealing incentive structure allowing customers to obtain up to 90% of their respective NJ Clean Energy Program contribution for qualifying projects;
- Ability to participate in other programs while engaged in LEUP.

Program Description

Incentives are awarded to customers that satisfy the program's eligibility and program requirements ("Eligible Entities or Eligible Customers") for investing in self-directed energy projects that are customized to meet the requirements of the customers' existing facilities while advancing the State's energy efficiency, conservation, and greenhouse gas reduction goals. The program relies on eligible customers and their technical consultants to identify and develop qualifying energy efficiency projects that they believe will be beneficial for their operations and that will meet program criteria as described below. In support of LEUP projects the Program Manager will provide the following services:

- Budget management and energy savings reporting;
- Review and approval/rejection of all submitted Enrollment submittals for program eligibility;
- Review and approval/rejection of all submitted Draft Energy Efficiency Plan (DEEP) submittals; [19]
- Review and approval/rejection of all submitted Final Energy Efficiency Plan (FEEP) submittals;

[19] Note: the approved entity may choose to skip the DEEP submittal and to submit only a FEEP.

- Technical assistance via email and telephone to assist entities in the proper submittal of the required information;
- Updates of data tracking tools to incorporate additional tasks related to this initiative;
- Incentive processing including issuance of checks and tracking/recordkeeping.

Eligible customers who wish to participate in the LEUP must comply with the standards and criteria below.

Target Markets and Eligibility

The Large Energy Users Program is available on a first come, first served basis so long as funding is available to existing, large commercial and industrial buildings that meet the following qualifications:

- Eligible entities must have contributed a minimum of $200,000 (on a pre-sales tax basis) into New Jersey's Clean Energy Program fund in FY18 (i.e., from July 1, 2017 to June 30, 2018) (aggregate of all buildings/sites). Eligible Entities shall be defined as (1) Public: having distinct and separate budgetary authority; (2) Public Schools: having distinct and separate budgetary authority; (3) Private: Non-residential companies including all related subsidiaries and affiliates regardless of separate EIN numbers or locations within New Jersey. Consistent with DOCKET NO. EOO7030203).
- The total FY18 contribution is calculated as $0.025905/therm times total therms plus $0.003437/kWh times total kWh or by updated conversion factors provided and approved by OCE Staff.
- In order to be considered for incentives, the average billed peak demand of all facilities submitted in the DEEP/FEEP must meet or exceed 400kW and/or 4,000 DTherms.
    - Example: Entity submits DEEP/FEEP for two buildings. Building one has a metered peak demand of 200kW; building two has a metered peak demand of 600kW. Per the above guideline, both buildings would be considered for incentives, as the average would be equal to 400kW.

The program will be available via an open enrollment with funding committed on a first come, first served basis.

Entities interested in applying to participate in the program will submit the following information (limit two pages excluding attachments):

- Number of buildings/sites and list of all associated utility and third-party supplier accounts.
- Total usage and number of location or premise IDs as provided by utility.
- Total contribution to New Jersey's Clean Energy Program fund in previous fiscal year from above buildings/sites.

Submittal Requirements for Fund Commitment

Qualifying entities shall submit a FEEP to the Program Manager for existing facilities only. The FEEP must be submitted to the Program Manager for review three (3) months from the date of the DEEP approval letter.

Program Standards

1. All ECMs must meet Minimum Performance Standards, which may be fulfilled during Professional Engineer review, which shall be understood as the most stringent of:
    a. Pay for Performance Guidelines-Appendix B
    b. ASHRAE 90.1-2013
    c. Local code
2. ECMs must be fully installed no later than twelve (12) months from approval of the Final Energy Efficiency Plan. Extensions may be granted for a period of up to six months with satisfactory proof of project advancement. (This could be in the form of copies of permits, equipment invoices, installation invoices indicating percentage complete, updated project schedules, etc.)

Limitations/Restrictions

1. New construction and major rehabilitation projects are not eligible under the program; however, these projects may be eligible for other NJCEP incentives.
2. Incentive will be limited to energy-efficiency measures. The following shall not be included as part of this program:
    a. Renewable energy
    b. Maintenance energy saving projects
3. Incentive shall only be available for ECMs approved in the FEEP. Program Administrator may waive this restriction on a case-by-case basis using the Board's usual waiver standard.
4. ECMs already installed or under construction will not be considered for incentives and shall not be included in FEEP. Program Administrator may waive this restriction on a case-by-case basis using the Board's usual waiver standard.
5. Federal grants/incentives are allowed; other state/utility incentives are allowed so long as they are not originating from NJCEP funds; NJCEP loan funds are allowed. Total of Federal, state, utility, and LEU Program funding shall not exceed 100% of total project cost.

Review and Payment Framework

1. Upon receipt of the FEEP, Program Manager will have sixty (60) days to review each submittal and provide comments to entity.
2. Program Administrator will present FEEPs to Board for approval as required by Board policy and commitment of incentive. Program Administrator may conduct up to three site inspections per FEEP submission including a pre inspection, at 50% completion and 100% completion, as required.
3. If ECMs are not completed within the specified timeframe, incentive commitment may be forfeited.
4. Entity will provide M&V data as requested and will comply with any program evaluation activities.

Program Offerings and Incentives

The Program will offer a maximum incentive per entity which will be the lesser of:

- $4 million.
- 75% of total project(s) cost as identified in the FEEP. Total project costs may include pre-engineering costs, soft costs, and other costs associated with the preparation of the FEEP.
- 90% of total NJCEP fund contribution in previous year (i.e. from all entity facilities), provided, however, that an applicant may choose to bank and combine up to 2 consecutive years of total NJCEP fund contributions for the purpose of calculating its maximum incentive in a given FY, provided the applicant has not participated in LEUP in the FY immediately preceding the subject application. By way of example only, if a participant in FY15 contributed $500,000, in FY16 contributed $600,000, and in FY16 did not submit a LEUP application, the applicant's maximum incentive for a project in FY17 would be no more than $990,000 (.9 x (500,000 + 600,000)).
- $0.33 per projected kWh saved annually; $3.75 per projected Therms saved annually.

The program has a minimum incentive commitment of $100,000. Projects with incentives below this threshold will be redirected to other NJCEP programs. Incentives shall be reserved upon approval of the DEEP. Program funds will be committed upon approval of FEEP by the Program Manager and, if required, by the Board of Public Utilities. Incentive shall be paid upon project completion and verification that all program requirements are met. Entities may submit up to three (3) DEEP/FEEPs throughout the program year.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all Program participants. All energy efficiency plans are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of energy efficient measure qualification and incentive calculation. Applicant supplied information and program administrator performed incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence. Pre and/or post inspections and quality control file reviews will be conducted as required.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Customer Tailored Energy Efficiency Pilot

Program Purpose and Strategy Overview

The Customer Tailored Energy Efficiency Pilot Program (CTEEPP or Pilot) supplements the current New Jersey Commercial and Industrial incentive programs by offering a streamlined approach to developing and implementing energy efficiency projects for mid-to-large customers. The key features of the program include:

- Allows customers to bundle multiple prescriptive and custom measures into one application with one project delivery approach.
- Customers can receive incentives for qualified advanced and emerging energy efficiency technologies that are not currently addressed under SmartStart.
- Technical assistance incentives offered to help minimize the soft costs associated with developing an energy efficiency project.
- Leverages existing energy efficiency professional networks
- Larger customers with multiple measures can access incentives for their targeted energy efficiency projects without enrolling in a whole-building program.
- Performance verification to engage customers after their project is complete to ensure persistence of savings.

The goals of the Pilot are:

- To increase participation among mid-large customers
- To increase the amount of energy saved per project for participating customers
- To understand from participating customers whether assistance other than measure incentives will facilitate the installation of energy efficiency projects
- To promote the installation of advanced lighting controls in conjunction with high efficiency LED luminaires.
- To collect information and data that can inform program changes or new program designs in the future.

Program Implementation Description

This Pilot was developed and launched in FY18 in response to customer concerns regarding the application process for projects that involve completing and submitting multiple SmartStart applications. It will continue to be available as such until it is merged into the new C&I Buildings Program anticipated to occur during FY19. Stakeholders will be provided advance notice of relevant program transition activities.

The program will be promoted via the traditional methods as well as via the C&I Outreach Account Managers and energy efficiency professionals.

The program process is as follows:

1. **Outreach and Recruitment** - This pilot will be included in any C&I customer outreach conducted by the Account Managers. Information about the pilot will be place on the web site and shared with the Ombudsman's office and trade allies who can assist in promoting the pilot to their customers.

2. **Enrollment** - The enrollment application will allow the Program Management team to assess the opportunities, the status of the potential project and to schedule a Scoping Session meeting where the Case Manager performs a needs assessment to determine whether the customer requires additional assistance such as referral to technical expertise, financial assistance, internal sales, or benchmarking.

3. **Benchmarking (Optional)** – The program will offer benchmarking services to help customers identify which opportunities and facilities may benefit most from energy improvements.

4. **Energy Efficiency Plan Development** - Upon application acceptance, the customer works with its technical experts to develop the Energy Efficiency Plan.

5. **Incentive Commitment** - Upon acceptance of a complete Energy Efficiency Plan, TRC will commit incentives as defined by the Energy Efficiency Plan and program requirements. The incentive commitment will be valid for 12 months. The Program Manager will have the ability to extend the initial expiration period in 2, 6-month intervals.

6. **ECM Installation** – The customer will submit final documents necessary to process incentive payment consistent with the schedule defined below.

7. **Performance Verification** – The performance verification submission is for custom measures only. A customer will receive the final 10% of custom measure incentives consistent with the schedule defined below.

Target Markets and Eligibility

The Pilot is intended to serve approximately 30 to 40 C&I customers. The target customer size for existing buildings and new construction/substantial renovation are as follows:

Target Customer Size	
Existing Buildings	**New Construction & Substantial Renovation**
200 kW	50,000 square feet

Among the additional criteria that will be considered for inclusion are:

- Customers with complex operations and/or unique energy usage profiles that would most benefit from custom assessments of efficiency opportunities;

- Customers whose efficiency opportunities, barriers to investment and/or business needs suggest they may benefit from support beyond just financial incentives (e.g. technical analysis, financial analysis, etc.);
- Customers with projects that would require multiple applications under existing program offerings; and
- Customers that are good candidates for installation of new, innovative or advanced efficiency technologies.

Program Offering and Incentives

Financial incentives offered to customers of the Pilot will be the same as those available through the existing prescriptive and custom program offerings. However, for ease of customer participation, they will be bundled into a single "package" application. The total incentive available for any project will be equal to the sum of the incentives that would be available through the existing prescriptive and custom program offerings for the measures installed. For ECMs falling into a "gray area" and possessing both prescriptive and custom features, the Program Manager will have discretion to determine if some or all of the energy efficiency benefits will be eligible under the custom incentive structure.

- **Prescriptive Measures:**
  - Measures meeting the requirements of the current SmartStart Building Program will receive the established incentive under that program.

- **Custom Incentives:**
  - $0.16 per kWh
  - $1.60 per therm
  - 50% of project cost
  - Buy-down to 1 year payback

- **Technical Assistance:**
  In addition to measure incentives, the Pilot may, where initial design costs are a barrier to the pursuit of projects that appear to be promising, offer customers an additional incentive towards design assistance or technical support provided by an independent[20] third party design professional. Incentives will be available for up to fifty-percent (50%) of the cost of the design/technical assistance, up to a maximum of $10,000, upon approval of the NJCEP Program Manager, with half of that incentive payable upon proof of construction kick-off and half upon installation of the recommended measures.

- **Incentive cap:**
  - 50% of project cost
  - Buy-down to 1 year payback

[20] Independent in this case means that the design professional does not sell or represent products that are being considered for installation.

- $250,000 per entity

The Technical Assistance incentive does not count towards this incentive cap. The Program Manager may adjust the entity incentive cap up to 20% based on available incentive budget, participation level and project merit. Any additional incentive cap adjustment would require OCE Staff or Board approval, as appropriate.

Payment Schedule

Incentive payments are made along the life of a project as outlined below.

Project material/labor invoices will signify projection completion followed by a post-inspection as deemed appropriate.

Schedule of Payments			
Type of Incentive	**Milestone 1 Construction Kick-Off**	**Milestone 2 Substantial Completion**	**Milestone 3 Performance Verification**
Technical Assistance Incentive	50%	50%	-
Base Incentives – Prescriptive	-	100%	-
Base Incentives – Custom	-	90%	10%

Milestone 1: The Energy Efficiency Plan is approved and construction contracts are in place.

Milestone 2: All work is installed and new equipment and systems are generating energy savings. Multiple payments may be provided.

Milestone 3: Performance Verification is complete. Multiple payments may be provided. This milestone may occur between 3-6 months after substantial completion.

Program Standards

- **Prescriptive measures** must meet the minimum requirements of the SmartStart Buildings program.
- **Custom measures** must meet or exceed current SmartStart Custom requirements (with the exception of minimum energy savings requirements) or the Minimum Performance Standards for the Large Energy Users Program.
- **Advanced Lighting Control Systems** must be listed on the Design Lights Consortium's Qualified Products List.
- **Emerging Technologies** must meet current building codes or industry standards, as applicable.

Limitations/Restrictions

- Renewable and power storage technologies including, but not limited to, photovoltaics, fuel cells, battery storage, and microturbines are not eligible.
- Combined heat and power systems are incentivized under New Jersey's Combined Heat and Power program and are not eligible for CTEEPP incentives.
- Previously installed measures, i.e., any measures installed prior to enrollment, are not eligible. Equipment being replaced must still be present at time of the facility walkthrough, where pre-existing conditions are documented. Customers may start work at their own risk prior to the Notice to Proceed if the old equipment is still in place at the time of the Scoping Session.
- Measures that do not save energy (kWh or therms) are not eligible. Customers are welcome to install measures that exclusively reduce operating costs and/or energy/demand costs, but they may not be included in the CTEEPP Energy Efficiency Plan.
- Operations & Maintenance and behavioral measures are not eligible. Behavioral measures include those where existing equipment is adjusted to improve performance or change energy use. Behavioral measures may include boiler clean & tunes, commissioning of existing equipment, thermostat adjustment, or seasonal equipment removal.

Data Tracking and Pilot Evaluation

At the conclusion of the Pilot, TRC and Board Staff will assess the results to determine if the program approach should be recommended to the Board for expansion in subsequent program years.

Quality Control Provisions

All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of energy efficient measure qualification and incentive calculation. Applicant supplied information and program administrator performed incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence. Inspection protocols for custom measure projects in FY19 will require a

pre-determined percentage of pre- and post-inspections. Pre-inspections may be waived after successful completion of a Scoping Session.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Distributed Energy Resources

Overview

New Jersey's Clean Energy Program promotes several categories of Distributed Energy Resources (DER) to assist in increasing market activities that will increase overall combined electricity delivery system efficiency, reduce overall system peak demand, further the use of emerging and renewable technologies, reduce emissions, and provide cost-effective reliability solutions for New Jersey while supporting the State's Energy Master Plan.

Combined Heat and Power-Fuel Cell

Program Purpose, Strategy, and Description

NJCEP offers incentives for Combined Heat and Power (CHP) and Fuel Cell with heat recovery projects.

For the purposes of this program, CHP is defined as follows:

- *Combined Heat and Power*

  Combined heat and power (CHP), also known as cogeneration, is the production of electricity and useful thermal energy from a single source fuel. Useful thermal energy means energy in the form of direct heat, steam, hot water, or other thermal form that is used for heating, cooling, humidity control, process use, or other valid thermal end-use energy requirements; and for which fuel or electricity would otherwise be consumed. Bio-power and partial bio-power projects that meet these criteria are considered to be CHP projects for program purposes.

Waste heat to power projects that comply with the following definition are treated as CHP projects by the program:

- *Waste Heat to Power*

  Waste heat to power (WHP) is the process of capturing waste heat discharged as a byproduct of an industrial process and using that heat to generate power. In this configuration, a source fuel is first used to provide thermal energy to meet load requirements of a process or system (i.e. not deliberately creating excess thermal energy for the purpose of electricity generation). The byproduct of this process is heat that would otherwise be wasted to the atmosphere. The waste heat is then repurposed to produce electricity, as opposed to directly consuming additional fuel for this purpose.

Projects meeting the definitions of either CHP or WHP above are eligible to receive incentives, and are collectively referred to as CHP projects in the remainder of this document.

Target Market and Eligibility

The CHP program is open to all New Jersey commercial and industrial utility customers paying into the Societal Benefits Fund. Applications are reviewed and funds committed on a first come, first serve basis provided all program requirements are met. CHP systems that receive funding from the Energy Resiliency Bank will not be eligible for incentives through New Jersey's Clean Energy Program.

Equipment Eligibility

Natural gas, hydrogen, biogas, and mixed fuel (e.g. natural gas and biogas) CHP equipment installed on the customer side of the utility meter is eligible for incentives. 100% renewable fueled projects, including biogas and landfill gas-fueled projects which

meet CHP program criteria, are also eligible to receive incentives. Incentives for CHP systems are listed in Table 28.

To qualify for incentives, CHP projects must meet all of the following eligibility criteria:

- Equipment must be new, commercially available, and permanently installed. (Expansion of an existing system with new equipment is also eligible, however, only the incremental expansion would be eligible for incentives.)
- The CHP system must achieve an annual system efficiency of at least 60% (Higher Heating Value – HHV), based on total energy input and total utilized energy output. Mechanical energy may be included in the efficiency evaluation.
- Waste heat utilization systems or other mechanical recovery systems are required. New electric generation equipment which captures waste heat or energy from existing systems is also allowed. In order to qualify for incentives, systems must operate a minimum of 5,000 full load equivalent hours per year (i.e. run at least 5,000 hours per year at full rated KW output). The Office of Clean Energy (OCE) may grant exceptions to the minimum operating hours requirement for Critical Facilities (as identified in the host municipality's state-certified Emergency Operation Plan and/or as defined by the New Jersey Office of Emergency Management and/or FEMA), provided the proposed system operates a minimum of 3,500 full load equivalent hours per year and has islanding capability.
- All projects are subject to ten (10) year warranty requirements. Notwithstanding the foregoing, public entities that are prohibited from entering into agreements for the full ten (10) years may comply with the 10-year requirement by: (a) providing an agreement for the longest lawful term, (b) committing the entity to purchase an agreement for the remaining years, and (c) either (i) providing the vendor's commitment for specific pricing for those remaining years, or (ii) assuming the pricing for the remaining years will increase by 2.5% each year (e.g., for the purpose of calculating a payback period)
- Each CHP and WHP project must pass a project-level cost-effectiveness analysis demonstrating the simple project payback period, including any federal tax benefits and the Program incentive. CHP systems installed in Critical Facilities must not exceed a payback period of 20 years, CHP systems fueled by a Class 1 renewable source must not exceed a payback period of 25 years, and all other CHP systems must not exceed a payback period of 10 years.
- All CHP project submissions must contain specific cost data for making the unit island mode capable, regardless of whether the project has the capability or not.
- System must be sized to meet all or a portion of the customer's on-site load, not to exceed 100% of most recent historical annual consumption or peak demand. For all CHP projects, any surplus power that may become available during the course of a given year may be sold to PJM. Any CHP system fueled by a Class 1 renewable source is exempted from this program requirement, provided the system is sized to match the Class 1 renewable fuel produced on-site.

Third party ownership (or leased equipment), such as procured under Power Purchase Agreements, is permitted within the program with the following provisions:

- In order to ensure the equipment remains on site and is in operation for the term of the agreement, a binding agreement is required between the parties. A copy of this agreement shall be provided to the Program Manager prior to commitment of incentives. The agreement should state that the equipment could be transferred to new owners should the property be sold or otherwise have a buyout provision such that the equipment remains on site and stays in operation. Only permanently installed equipment is eligible for incentives and this must be physically demonstrable, upon inspection, prior to receiving an incentive. This can be demonstrated by electrical, thermal and fuel connections in accordance with industry practices for permanently installed equipment and be secured to a permanent surface (e.g. foundation). Any indication of portability, including but not limited to temporary structures, quick disconnects, unsecured equipment, wheels, carrying handles, dolly, trailer or platform will deem the system ineligible.
- The customer/applicant will be allowed to sign over the incentive to the third party owner. A valid project cost shall be demonstrated as part of the application in order to establish an appropriate incentive level.
- All other program rules apply.

Not Eligible for CHP Incentives

The following types of generating systems/equipment are not eligible for the program:

- Used, refurbished, temporary, pilot, demonstration or portable equipment/systems.
- Back-Up Generators - systems intended for emergency or back-up generation purposes.
- Any system/equipment that uses diesel fuel, other types of oil, or coal for continuous operation.
- Fuel Cell systems which do not have a heat recovery component.

Incentives

Incentives vary based on CHP technology, fuel source, type, project size and total project cost. Details on qualifying technologies and available incentives can be found in Appendix C: Distributed Energy Resources Incentives.

Projects will receive program incentives in three partial payments. The first incentive will be paid upon proof of purchase of equipment. The second payment will be paid upon project installation and operation, including successful inspection. The remainder of the project incentive will be paid upon acceptance and confirmation that the project is achieving the required performance thresholds based on twelve (12) months of continuous operating data submitted within 24 months of installation demonstrating the system meets program requirements.

The payment structure is summarized in Table 5 below:

Table 5: CHP Incentive Payment Schedule

Purchase	Installation	Acceptance of 12 months post-installation data
30%	50%	20%

Applicants will not be allowed to receive incentives for the installed generation equipment from other available SBC-funded programs or from the Energy Resilience Bank. CHP projects will be evaluated on a per site basis and incentives awarded accordingly. Installations of multiple systems planned for the same site within a 12-month period must be combined into a single project. For the avoidance of doubt, if at any time prior to system installation and operation a project is cancelled or abandoned, the incentive funds paid to date must be promptly returned to NJCEP.

Quality Control Provisions

Quality control provisions are designed to assure that systems that receive incentives are operating as expected and providing the desired benefits to the State. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of energy efficient measure qualification and incentive calculation. Applicant supplied information and Program Administrator performed incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Renewable Electric Storage Program

Program Purpose and Strategy Overview

The Renewable Electric Storage (RES) Program provides financial incentives for electric energy storage systems that are integrated with Class 1 renewable energy (RE) projects installed behind the meter at non-residential customer sites. It seeks to benefit New Jersey ratepayers by supporting the installation of RE Storage (RES) systems in government, commercial, institutional and industrial entities.

Program Description

Renewable electric storage supports the RE market by enhancing the value and benefits of RE systems in providing emergency back-up power for essential services, offsetting peak loads by shifting electricity to hours of higher demand and helping to stabilize the electric distribution system through the provision of frequency regulation services.

Program Requirements

In order to qualify for an incentive in the RES program, the project must meet all of the following eligibility requirements:

- The RES system must be installed in New Jersey and interconnected with the electric distribution system serving New Jersey.
- Incentives are applicable only for RES systems integrated with behind-the-meter, net metered, Class 1 renewable energy installations sized no greater than 100% of the host site's historic annual electric consumption.
- Incentives are limited to electric storage systems only. Thermal storage systems (e.g., those that store energy in the form of ice or hot water) are ineligible.
- The proposed RES system must have a minimum energy storage capacity of 100 kWh. There is no minimum requirement for power capacity (kW).
- The host site facility must be served under a non-residential utility tariff and owned by a customer that pays the into the SBC on its utility bill.
- Only new commercially available and permanently installed equipment is eligible for incentives. Portable systems are not eligible to participate in this program.
- The applicant must receive an approval letter prior to commencing installation and will have 18 months to install the RES system. Applicants are eligible for a 6-month extension from the Program Manager, but will forfeit 10% of their incentive award.
- When an RES system is being added to an existing photovoltaic (PV) system, the existing PV system may not be older than 10 years or new PV inverters must be installed with the ES system. This requirement is to ensure that the PV system will function properly throughout the expected life of the RES system.

The RES program ceased accepting new applications as of the commencement of FY18 on July 1, 2017. However, the RES program will continue to process, approve, issue commitments for, and pay incentives for applications received prior to FY18, all consistent with applicable program requirements. During FY19, commitments and

payments will be made only for applications submitted prior to FY18, and no commitments will be made for applications first submitted during FY18 or FY19.

Program Incentives

The RES program offers an incentive of $300 per kilowatt-hour (kWh) of energy capacity for qualifying storage systems. Capacity data must be verified by the equipment manufacturer's specification sheet.

The maximum incentive per project is $500,000 or 30% of the project's total cost, whichever is less. The maximum incentive per ownership entity is $2,000,000 which applies to multiple projects under the ownership of a single site host, developer/installer or other ownership entity.

RES systems installed at public facilities (e.g. owned by a federal, state, municipality, public school, or public university) or at Critical Facilities (as identified in the host municipality's state-certified Emergency Operation Plan and/or as defined by the New Jersey Office of Emergency Management and/or FEMA) are eligible for an additional 20% incentive and an additional 20% project maximum, regardless of who owns the facility. For example, an eligible RES system installed at a public school would receive an incentive of $360 per kilowatt-hour (kWh) of energy capacity and be subject to a project maximum of $600,000. For the avoidance of doubt, the above-described 20% bonus is available only for commitments made after the date of Board approval of this Compliance Filing and, as described above, no new commitments will be made during FY19.

The incentive for a project cannot be increased if the energy capacity of the installed RES system exceeds the capacity specified in the approved application. However, the incentive award will be reduced proportionately if the energy capacity of the installed project is less than the energy capacity approved.

Projects will receive program incentives in two partial payments. The first incentive (80%) will be paid upon project installation and operation, including successful inspection. The second incentive (remaining 20%) will be paid upon acceptance of twelve months of operating performance data submitted.

Quality Control Provisions

Quality provisions are designed to assure that systems that receive incentives are providing the desired benefits to the State. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of measure qualification and incentive calculation. Applicant supplied information and Program Administrator performed incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Renewable Energy

Solar Renewable Energy Certificate Registration Program

Program Purpose and Strategy Overview

New Jersey's solar policies and Renewable Portfolio Standards (RPS) were established through legislation and implemented through regulation and Board Order. NJCEP's Solar Renewable Energy Certificate (SREC) Registration Program (SRP) is designed to meet the goals and objectives of the regulations.

Program Description

SRECs are tradable certificates that represent the clean energy benefits of electricity generated from a solar electric system. For each 1,000 kWh (1MWh) of electricity a solar electric system generates, an SREC is issued which can then be sold or traded separately from the power. The revenues from SREC sales or trades can make it more economically attractive for individuals and businesses to finance and invest in clean, emission-free solar power.

The SRP provides registration for solar renewable energy certificates (SRECs) for solar projects, including both behind-the-meter and direct grid-supply projects connected to the New Jersey electric distribution system. The Generation Attribute Tracking System (GATS) operated by PJM Environmental Information Services is used for tracking and trading of SRECs as well as Class I and Class II RECs.

In FY19, the focus of the SRP will be on processing the registration of SRECs and continuing to support the goals and objectives of New Jersey's solar polices while communicating accurate, objective information with respect to the SREC market.

FY19 Program Changes

There are no program changes planned for FY19, other than those that may be required to implement any new legislation and/or rules. The Program Manager also will continue to work closely with OCE Staff to update and modify SRP registration submittal requirements as necessary to adhere to other applicable rule amendments that may occur. The Program Manager will also continue to enhance the online portal, streamline the SRP Registration process, and provide up to date reporting on program results/trends.

Target Markets and Eligibility

Eligible solar technology is defined as a system that utilizes semi-conductor technologies to produce electricity directly from sunlight. All systems must meet program requirements regarding equipment certification, proper installation practices and compliance with program procedures and processes. Solar PV systems connected to the electric distribution system serving New Jersey can participate in New Jersey's SREC Registration Program.

Offerings and Customer Incentives

There are no direct customer incentives. The New Jersey SREC Registration Program provides a means for solar electric generation facilities to access the SREC market, for SRECs to be created and verified to allow them to be sold or traded. Solar generating facilities that are interconnected with the electric distribution system in New Jersey and that meet all applicable rule requirements as well as all SREC Registration Program requirements will be eligible to generate NJ SRECs upon successful completion of all requirements. The rules governing the submittal of new SREC Program Registrations and Final As-Built paperwork may be referenced at N.J.A.C. 14:8-2.4. The SRP guidelines will continue to conform to these rules and will be modified as required to reflect any changes to the rules as they become effective.

In addition:

1. The Program Manager will provide support for the Utility's SREC-Based Financing Programs. This will include coordination with the Solicitation Manager for NJCEP website postings, notifications to the Renewable Energy Program distribution list and establishment of timelines for submittal of SREC Registration Program registrations for each solicitation round.
2. A web based solar portal will be used for submitting SRP Registrations, providing a more streamlined and automated registration submittal and acceptance process.
3. The Program Manager will prepare monthly reports identifying program results and trends.

Planned Program Implementation Activities for FY19

The Renewable Energy Programs will have the following areas of focus in FY19:

1. Sustain the growth of New Jersey's solar markets, while communicating accurate and objective information on market development activity.
2. Continue working with the appropriate stakeholder working groups such as the Renewable Energy Committee.
3. Monitor legislative and policy developments, inform the market of key outstanding questions and decisions (e.g. new RPS levels, net metering, etc.) and translate new policies into program operational procedures as required.
4. Consider the input received through the 2017 Solar Generic Proceeding and possible regulatory and/or programmatic changes related to same, including potential enhancements to existing consumer protections.

Quality Control / Quality Assurance Provisions

All renewable energy systems facilitated through the SRP program must be installed in accordance with program equipment requirements, program performance requirements, manufacturer specifications, and provisions of the National Electrical Code (NEC). The Installer is also required to meet SRP program contractor license requirements.

Quality Control (QC) serves as a check to ensure specific parameters of a renewable energy installation have been achieved. Quality Assurance (QA) defines processes that ensure quality standards using efficient and cost-effective mechanisms.

The QA protocol requires diligence on the part of the "in-office" processing team to ensure the "Final As-Built" project information submitted as part of the final application paperwork is complete, correct and in compliance with all program requirements. This review process is critical for the success of the QA program, which complements the on-site QC inspection process to ensure program compliance.

On-site verifications will be conducted for a pre-determined percentage of the SREC Registration Program projects. An on-site verification will be performed for all grid-supply projects, all behind the meter projects with a capacity greater than 500 kW, and all add-on systems that add additional capacity or unique installations. The Program Manager may also conduct on-site verifications upon written request from the OCE or PJM-GATS to verify the cause for high meter reads or system production reading anomalies and submit written explanation of the findings to the OCE and PJM-GATS.

A pre-determined percentage of the projects that receive an inspection waiver will be randomly selected for a more in-depth paperwork review. The Program Manager reserves the right to request additional information, including PV watts, shading analysis, photos, etc.

The TRC Team will utilize the Contractor Remediation Procedures as necessary or appropriate to address significant performance or other problems.

Goals and Renewable Generation

The SRP does not have specific program goals in terms of the number of participants or capacity or quantity of solar electric generating systems installed. However, the SRP program does support the goals outlined in New Jersey's Renewable Energy Portfolio Standards (N.J.A.C. 14:8-2):

Table 6: RPS Requirements for Energy Years 2015-19

Energy Year	Solar Electric*	Class I Renewable Energy	Class II Renewable Energy
June 1, 2014-May 31, 2015	2.45%	8.807%	2.5%
June 1, 2015-May 31, 2016	2.75%	9.649%	2.5%
June 1, 2016–May 31, 2017	3.00%	10.485%	2.5%
June 1, 2017–May 31, 2018	3.20%	12.325%	2.5%
June 1, 2018–May 31, 2019**	3.290 %	14.175 %	2.5%

* The Solar Act of 2012 replaced the gigawatt-hour goals of the RPS with percentage-based goals.
** As of May 7 , 2018.

State Energy Program

Limited funding may be available from the U.S. Department of Energy for a State Energy Program (SEP) grant which would allow fuel oil, propane, and municipal and cooperative electric utility customers (in other words, customers of non-investor owned electric and gas utilities) to participate in select NJCEP programs. Absent this supplemental funding, these customers are not eligible for NJCEP funding since they do not pay into the SBC. If available, funds will be provided on a first come, first-served basis.

Other than expiration dates related to the availability of SEP funds, existing program guidelines and rules related to NJCEP programs will apply. The Program Manager will process applications and provide general support for these initiatives, and the fees associated with administering the participation of these customers and processing these applications will be paid with NJCEP funds. Currently, SEP funding is expected to be available for the following programs:

- Residential Gas and Electric HVAC Program;
- Home Performance with ENERGY STAR;
- C&I Direct Install.

Outreach, Website and Other

Enhanced Outreach Plan Summary

On July 13, 2016, the TRC Team initiated outreach deployment as described in *Enhanced Outreach Plan for Program Administration and Management Services, New Jersey's Clean Energy Program*. The FY19 outreach plan will update and replace the FY18 plan based on experiences in FY17-FY18 and feedback from BPU staff and stakeholders.

The TRC Team is developing a comprehensive Enhanced Outreach Plan (Plan) for FY19 that will be submitted for BPU review and approval. The Plan will describe activities for deploying outreach efforts essential to supporting NJCEP participation.

The FY19 Plan will expand efforts deployed in FY18 and will support NJCEP participation throughout the State. Outreach efforts will complement the trajectory established in the Strategic Plan for FY19-FY22 to increase annual energy savings. As new programs are developed and deployed, the Outreach Team will collaborate with Program Managers and BPU Staff to launch the most effective engagement efforts for each program.

The Plan will continue to incorporate best practices from the Team's experience nationwide while making adjustments based on Plan implementation experience and growth. As stated in the original Plan, the Team will continue to "implement a reasonable and solid structure that provides flexibility as individual programs evolve." The following identifies, at a high-level, FY19 outreach strategies and initiatives that will be expanded upon in the final, more detailed Outreach Plan.

Program-wide Outreach Themes

The Outreach Team supports the entire NJCEP offering. While some outreach themes are unique to particular markets, there are multiple themes that resonate across all sectors. These include:

- Account Management Outreach
- Update Outreach goals and methods of measurement from our Customer Relationship Management (CRM) tool to align with program implementation goals and data
- Maintain regular and ongoing dialogue with Program Managers and BPU Staff to support program goals
- Focus market-specific Account Manager expertise as technical and business model specialists in specific energy-intensive markets
- Coordinate with new Marketing Team once deployed, and ensure any necessary systems integration takes place
- Refine tailored education for sectors such as architects, realtors, and contractors through web-based training via the NJIT Clean Energy Learning Center (CELC) and speaking engagements

- Continue event outreach strategy and prioritize events that provide maximum benefit to residential and/or C&I sectors
- Conduct continuous collaboration, monitoring, and coordination with the BPU (NJCEP staff, Ombudsman, Communications Office and Office of State Energy Services), Investor Owned Utilities (IOUs), Sustainable Jersey, and NJIT
- Continue to identify speaking Opportunities for Commissioners
- Facilitate efforts to encourage deeper Trade Ally awareness and participation in the programs.

The FY19 Plan will combine elements of the FY17 and FY18 plans adjusted for outreach experience with input from BPU staff. Account Management remains the cornerstone to supporting the Plan, and aligns with Strategic Plan recommendations. Based on continuous feedback since Team deployment, we know potential applicants and trade allies benefit from Account Manager assistance to guide them toward the appropriate NJCEP pathway and help them align project plans with potential incentives. Account Managers tailor engagement to participant knowledge and expertise by providing positive customer service and sharing techniques and equipment knowledge best suited for each unique project.

In FY19, we will continue to focus our outreach efforts on one-on-one meetings with potential program participants while also leveraging trade allies and others who can help deliver information about the programs to their customers. Simultaneously, we will increase focus on engaging Trade Allies to guide them through new programs launching in FY19 and to promote NJCEP to their customers.

In addition, the Plan will include continuous collaboration, monitoring, and coordination both within the Team and with the BPU, IOUs, and grantees to ensure the best possible measurable outcome. We will build off existing relationships with various organizations, large and small customers, and trade allies to enhance outreach.

The FY19 Plan will include goals derived from key performance indicators (KPIs); Account Management activities and communications; and event and presentation details. Some examples of goals are as follows:

- Applications received
- Captured energy savings from completed applications
- Outreach meetings with participants and trade allies
- Presentations to trade allies and key stakeholders

The Plan will include monthly and annual targets for each goal.

Residential Programs

During FY19, the residential outreach efforts will continue to focus on maintaining and expanding the relationships with HVAC equipment manufacturers and distributors, as well as developing new relationships with insulation and other home improvement contractors, to identify those contractors that have the aptitude and capability to expand their business scope to participate in NJCEP programs. Initially, we will add an Energy

Advisor Account Manager, who will field technical or programmatic customer inquiries and answer questions about building science related to all residential programs.

In addition, the Account Managers will seek new builders that can build above IECC 2015, ENERGY STAR Homes, or Zero Energy Ready Homes. The Account Managers will continue to promote the programs at events prioritized by the BPU and the Outreach Team and those that can result in the most leads and energy savings contributions. We will also look at opportunities to raise overall brand awareness when working with these industry professionals.

FY19 primary strategies

Some residential outreach strategies that will be developed further in the complete Plan include:

- Deploy an Energy Advisor Account Manager to support technical or programmatic customer inquiries
- Maintain and expand manufacturer/distributor relationships
- Expand builder connections
- Educate homeowners
- Develop strategies to promote the new residential program
- Explore outreach efforts to the remodeling industry

C&I and Renewable Programs

The C&I outreach effort will focus on those sectors and customers that present the highest potential for program participation and significant energy savings. We will also look at opportunities to raise overall brand awareness when working with these sectors and customers.

FY19 primary strategies

Some C&I outreach strategies that will be developed further in the complete Plan include:

- Deploy Technical Account Managers with technical and business model skills in specific energy-intensive markets
- Leverage and train contractors and partners to promote programs
- Distributor/Supply House engagement
- Develop strategies to promote new C&I programs
- Develop strategies with BPU Staff and Program Manager to promote Renewable Electric Storage program to align with new statewide goals
- Continue and improve Large Energy User and CHP focus
- Continue and improve LGEA Post-Audit Account Management follow-up

Website

TRC will continue to host the Clean Energy Program website. A redesign of the website has been identified as a priority once the new Marketing Team is deployed. The TRC Team will provide support to the Marketing Team as the site is developed and continue to

provide feedback from our interactions with trade allies and the public. An improved design will better reflect how customers and partners use the site, making it easier for them to find the most frequently used documents, submit applications, and identify new content. The new website will not only provide an enhanced user experience, but will also provide marketing and outreach with logical points of engagement along the customer's journey.

Other

This category includes support for activities such as memberships and pass-through expenses related to events, sponsorships, etc.

Memberships in national organizations can provide valuable information and support for our programs. We will evaluate memberships in organizations such as Design Lights Consortium (DLC) and the Consortium for Energy Efficiency (CEE) to help further our goals.

Examples of expenses that support our Outreach efforts could include the cost of booth space at a trade show, registration costs, sponsorship at a local chamber of commerce meeting, or printing of a program-specific handout. All expenses are approved in advance by BPU Staff.

Appendix A: Residential Incentives

Residential New Construction

Table 7: Legacy[21] Financial Incentives per Single Family Unit for, Code compliance through ERI pathway, ENERGY STAR Certified Homes, Zero Energy Ready Home, and Zero Energy Home + RE.

HERS (Before Renewables)	Code compliance through ERI Pathway	ENERGY STAR Home	ENERGY STAR home plus ERI path code compliance **	Zero Energy Ready Home	ZERH plus ERI path code compliance **	Zero Energy Ready Home + RE	ZERH + RE plus ERI path code compliance** *
65	-	$1,750	-				
60	-	$2,000	-				
55	$750*	$3,000	$3,750 *				
54	$750	$3,000	$3,750				
50	$750	$4,500	$5,250	$6,500	$7,250	$9,500	$10,250
45	$750	$7,250	$8,000	$9,250	$10,000	$12,250	$13,000
40	$750	$10,250	$11,000	$12,250	$13,000	$15,250	$16,000
35	$750	$13,750	$14,500	$15,750	$16,500	$18,750	$19,500
30	$750	$17,250	$18,000	$19,250	$20,000	$22,250	$23,000
25	$750	$18,250	$19,000	$20,250	$21,000	$23,250	$24,000
20	$750	$19,250	$20,000	$21,250	$22,000	$24,250	$25,000

* For projects within climate zone 5 only

**Amounts include $750 for ERI compliance

[21] "Legacy" means applicable to projects Registered prior to August 1, 2018.

Table 8: Legacy Financial Incentives per Multi Single Family Unit for Code compliance through ERI pathway, ENERGY STAR Certified Homes, Zero Energy Ready Home, and Zero Energy Home + RE.

HERS (Before Renewables)	Code compliance through ERI Pathway	ENERGY STAR Home	ENERGY STAR Home plus ERI path code compliance **	Zero Energy Ready Home	ZERH plus ERI path code compliance** *	Zero Energy ready Home + RE	ZERH + RE plus ERI path code compliance **
70	-	$1,125.00	-				
65	-	$1,312.50	-				
60	-	$1,500.00	-				
55	$750*	$2,250.00	$3,000 *				
54	$750*	$2,250.00	$3,000				
50	$750	$3,375.00	$4,125	$4,875.00	$5,625	$7,125	$7,875
45	$750	$5,437.50	$6,188	$6,937.50	$7,688	$9,188	$9,938
40	$750	$7,687.50	$8,438	$9,187.50	$9,938	$11,438	$12,188
35	$750	$10,312.50	$11,063	$11,812.50	$12,563	$14,063	$14,813
30	$750	$12,937.50	$13,688	$14,437.50	$15,188	$16,688	$17,438
25	$750	$13,687.50	$14,438	$15,187.50	$15,938	$17,438	$18,188
20	$750	$14,437.50	$15,188	$15,937.50	$16,688	$18,188	$18,938
	* For projects within climate zone 5 only **Amounts include $750 for ERI compliance						

Table 9: Legacy Financial Incentives per Multi Family Unit for Code compliance through ERI pathway, ENERGY STAR Certified Homes, Zero Energy Ready Home, and Zero Energy Home + RE.

HERS (Before Renewables)	Code compliance through ERI Pathway	ENERGY STAR Home	ENERGY STAR Home plus ERI path code compliance**	Zero Energy Ready Home	ZERH plus ERI path code compliance**	Zero Energy Ready Home + RE	ZERH + RE plus ERI path code compliance**
75	-	$625	-				
70	-	$750	-				
65	-	$875	-				
60	-	$1,000	-				
55	$750*	$1,500	$2,250*				
54	$750*	$1,500	$2,250				
50	$750	$2,250	$3,000	$3,250	$4,000	$4,750	$5,500
45	$750	$3,625	$4,375	$4,625	$5,375	$6,125	$6,875
40	$750	$5,125	$5,875	$6,125	$6,875	$7,625	$8,375
35	$750	$6,875	$7,625	$7,875	$8,625	$9,375	$10,125
30	$750	$8,625	$9,375	$9,625	$10,375	$11,125	$11,875
25	$750	$9,125	$9,875	$10,125	$10,875	$11,625	$12,375
20	$750	$9,625	$10,375	$10,625	$11,375	$12,125	$12,875
	* For projects within climate zone 5 only **Amounts include $750 for ERI compliance						

Table 10: Legacy Financial Incentives for ENERGY STAR Multifamily High-Rise

Baseline	Savings Before RE	Baseline	Savings Before RE	Baseline	Savings Before RE	Incentive Per Unit
90.1-2007	25%	90.1-2010	20%	90.1-2013 App G 2010 OR 2013	15%	$1,250
	30%		25%		20%	$1,500
	35%		30%		25%	$1,750
	40%		35%		30%	$2,000
	45%		40%		35%	$2,250

Table 11 FY19[22] Financial Incentives per Unit for ENERGY STAR Certified Homes, Zero Energy Ready Home, and Zero Energy Home + RE

	Single Home	Multi-Single (Townhouse)	Multifamily	MFHR
ENERGY STAR	$1,000 + $30/ MMBtu	$500 + $30/ MMBtu	$500 + $30/ MMBtu	$500 + $30/ MMBtu
ZERH	$4,000 + $30/ MMBtu	$2,500 + $30/ MMBtu	$1,500 + $30/ MMBtu	N/A
ZERH + PV	$4,000 + $30/MMBtu + $2,000	$2,500 + $30/MMBtu + $1,500	$1,500 + $30/MMBtu + $750	N/A

Note: The above $30/MMBTU is based on savings before any savings from Renewable Energy.

[22] For the avoidance of doubt, these incentives apply to all projects Registered on or after August 1, 2018.

COOLAdvantage and WARMAdvantage Incentives

Table 12: FY19 COOLAdvantage Customer Incentives[23]

Equipment Requirements	FY19 Incentive Amount
Central A/C: SEER ≥ 18 EER ≥ 13	$500
SEER ≥16 EER ≥ 13	$300
Central Air Source Heat Pump: SEER ≥ 18 EER ≥ 13 & HSPF ≥ 10	$500
SEER ≥ 16 EER ≥ 13 & HSPF ≥ 10	$300
Mini-Split Cold Climate Heat Pump: Must be listed on NEEP approved equipment listing [24] Bonus Incentive per indoor unit:** ***If converting from an electric resistance heat and there is no natural gas distribution line on the subject property.*	$500 $200/indoor unit
Mini-Split A/C: SEER ≥ 20 EER ≥ 12.5	$500

[23] From AHRI directory, CEE-AHRI directory or equivalent ENERGY STAR listing.

[24] http://www.neep.org/initiatives/high-efficiency-products/emerging-technologies/ashp/cold-climate-air-source-heat-pump

Equipment Requirements	FY19 Incentive Amount
Mini-Split Heat Pump: SEER ≥ 20 EER ≥ 12.5 & HSPF ≥ 10	$500
Ground-source (Geothermal) Heat Pump: ENERGY STAR Qualification	$0

Table 13: FY19 WARMAdvantage Customer Incentives[25]

Equipment	Minimum Efficiency	FY19 Incentive Amount
Gas Furnace – Tier 1	≥ 95% AFUE	$250
Gas Furnace – Tier 2	≥ 97% AFUE	$500
Oil Furnace	≥ 85% AFUE	$250
Furnace & DHW Combination[26]	Qualifying Gas Furnace (see Minimum Efficiency for Furnaces noted above); AND EITHER: • a qualifying standalone water heater (see Minimum Efficiency for water heaters below) • OR an indirect-fired water heater attached to the qualifying furnace	$700 (Gas Furnace Tier 1, see Water Heater incentive reductions) $950 (Gas Furnace Tier 2, see Water Heater incentive reductions)
Gas Boiler	≥ 90% AFUE	$300
Oil Boiler	≥ 87% AFUE	$300
Boiler & DHW Combination	Qualifying Boiler (see Minimum Efficiency for Boilers noted above) and water heating as noted below: • Integrated water heating and boiler unit (Combi Boilers) • OR a qualifying standalone water heater (see Minimum Efficiency for water heaters below) OR an indirect water heater attached to the qualifying boiler	$700
Gas Storage Tank Water Heater, power vented	≤55 gallons 0.67 Energy Factor (EF) / 0.64 Uniform Energy Factor (UEF) >55 gallons 90% Thermal Efficiency (TE) / 0.85 UEF	$300
Gas Tankless On-demand Water Heater <2 gallons	0.82 EF / 0.79 UEF	$300
Heat Pump Water Heater	2.0 EF / 2.0 UEF	$500

[25] Incentives in effect for purchases made after the FY18 notification period.

[26] This is the total combined incentive amount for qualifying furnace and hot water heating equipment, and may not be combined with individual NJCEP incentives for furnaces or water heaters.

Solar Domestic Hot Water	ENERGY STAR certified SRCC OG-300 listed; and SF ≥ 0.5)	$0

Appliance and Consumer Electronics Incentives

Table 14: FY19 Appliances and Consumer Electronics Incentives

Equipment	Incentive Tiers	Performance Criteria[27]	FY19 Rebate	Rebate Type
Clothes Washer	Tier 1 (Aligned with ENERGY STAR V8.0)	Front Load - IMEF ≥ 2.75, IWF ≤ 3.7 Top Load - IMEF ≥ 2.06, IWF ≤ 4.3	$50	Downstream
	Tier 2 (Aligned with CEE Tier 2)	IMEF ≥ 2.92, IWF ≤ 3.2	$75	Downstream
Clothes Dryer	Tier 1 (Aligned with ENERGY STAR V1.1 Gas)	CEF ≥ 3.48	$100	Downstream
	Tier 1 (Aligned with ENERGY STAR V1.1 Electric)	CEF ≥ 3.93		
	Tier 2 (Aligned with ENERGY STAR Most Efficient)	CEF ≥ 4.30 for Standard Electric	$300	Downstream
Refrigerator	Tier 1 (Aligned with ENERGY STAR V5.0 =>7.75 cu ft.)	Baseline ENERGY STAR	$50	Downstream
	Tier 2 (Aligned with CEE Tier 2 =>7.75 cu ft.)	15% over the measured Federal Minimum Efficiency Standard	$75	Downstream
Advanced Power Strip	Tier 1	Provides standby power management	$15 (Maximum)	Upstream

[27] Subject to change based on ENERGY STAR and CEE specifications

Equipment	Incentive Tiers	Performance Criteria[27]	FY19 Rebate	Rebate Type
	Tier 2	Provides active power management	$40 (Maximum)	Upstream

Home Performance with ENERGY STAR Incentives

Table 15: NJ HPwES FY19 Single-Family Incentives and Requirements

Incentive Tier	Requirements	Customer Incentive	Contractor Incentive
Tier 1	Energy audit only	No incentives	No incentives
Tier 2	Estimated total energy savings from all work must total at least 5% but less than 20%. Must install attic air sealing. Must install a minimum 6-inches insulation upgrade in the accessible area of the attic if the existing insulation is <7-inches May also install water heater measures from the Eligible Measures List. Heating and A/C equipment is not eligible	Cash rebate of 50% of the costs of the measures used to calculate TES up to $2,000. 0% financing up to $5,000 where a utility financing offer is unavailable.	Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, a $500 production incentive will be paid to the contractor.
Tier 3	Level 1. Estimated total energy savings from all work must total at least 20% but less than 25%. Must install attic air sealing. Must install a minimum 6-inches insulation upgrade in the accessible area of the attic if the existing insulation is <7-inches. May include additional measures from the Eligible Measures List.	Cash rebate of 50% of the costs of the measures used to calculate TES up to $3,000. Either 0% financing up to $10,000 or 4.99% financing up to $15,000, where a utility financing offer is unavailable.	Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, a $500 production incentive will be paid to the contractor.

Incentive Tier	Requirements	Customer Incentive	Contractor Incentive
	Level 2. Estimated total energy savings from all work must total at least 25%. Must install attic air sealing. Must install a minimum 6-inches insulation upgrade in the accessible area of the attic if the existing insulation is <7-inches. May include additional measures from the Eligible Measures List.	Cash rebate of 50% of the costs of the measures used to calculate TES up to $4,000. Either 0% financing up to $10,000 or 4.99% financing up to $15,000, where a utility financing offer is unavailable.	Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, a $500 production incentive will be paid to the contractor.

Table 16: NJ HPwES FY19 Multifamily Incentives and Requirements

Incentive Tier	Requirements	Customer Incentive	Contractor Incentive
Tier 1	Energy audit only	No incentives	No incentives
Tier 2	Estimated total energy savings from all work must total at least 5% but less than 15%. Must install attic air sealing. Must install a minimum 6-inches insulation upgrade in the accessible area of the attic if the existing insulation is <7-inches. May also install water heater measures from the Eligible Measures List Heating and A/C equipment is not eligible.	Cash rebate of 50% of the costs of the measures used to calculate TES up to $500 per unit.	Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, the contractor will be paid a $50 production incentive per unit.
Tier 3	Level 1. Estimated total energy savings from all work must total at least 15% but less than 20%. Must install attic air sealing. Must install a minimum 6-inches insulation upgrade in the accessible area of the attic if the is existing insulation is <7-inches. May include additional measures from the Eligible Measures List.	Cash rebate of 50% of the costs of the measures used to calculate TES up to $1,000 per unit.	Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, the contractor will be paid a $50 production incentive per unit.

Incentive Tier	Requirements	Customer Incentive	Contractor Incentive
	Level 2. Estimated total energy savings from all work must total at least 20%. Must install attic air sealing. Must install a minimum 6-inches insulation upgrade in the accessible area of the attic floor if the existing insulation is <7-inches. May include additional measures from the Eligible Measures List.	Cash rebate of 50% of the costs of the measures used to calculate TES up to $1,500 per unit.	Upon satisfactory project completion, including meeting program guidelines for quality work and addressing health/safety issues, the contractor will be paid a $50 production incentive per unit.

Table 15 and 16 NJ HPwES Incentives and Requirements Notes:

1. Customers replacing heating and/or central cooling systems who receive incentives for their new HVAC systems through the NJCEP HPwES Program may not apply for or receive additional incentives from the NJCEP *WARM/COOL*Advantage program.
2. Insulation installations must comply with the requirements detailed in the NJ HPwES Eligible Measures document. Where there is no existing attic insulation, must install R-49 attic insulation as prescribed by New Jersey code. Where attic flooring is installed with existing insulation <7 inches and the gap between the existing insulation and the flooring is >2 inches, insulation upgrade must be installed to fill the cavity. (To the degree there is any inconsistency between this note and the subject tables, this note shall control.)
3. NJ utilities may offer a 0% loan or on-bill repayment plan up to $10,000 or 4.99% financing up to $15,000 for Tier 3 projects and/or $5,000 for Tier 2 projects to underwrite the non-rebated portion of the customer cost for HPwES projects in their service territories. NJCEP will offer a 0% financing up to $10,000 or 4.99% financing up to $15,000 for HPwES work for any participants where a utility loan or on-bill repayment program is not in place or in instances where a utility customer has been denied through the utility program.
4. NJ utilities may fund HPwES incentives for Tier 3 and/or Tier 2 projects in their service territories. NJCEP will continue to provide incentives for any project where a utility incentive program is not in place or does not cover the full incentive amount due as scheduled in the table above.
5. The Program Administrator and the Office of Clean Energy will continue to process and pay incentives from funds supplied by other sources as they may become available.

6. Appliances, lighting, doors, and windows are not measures eligible for Program incentives.
7. The measures used to calculate TES may also include health & safety measures and qualified accessories, as listed on the NJ HPwES Eligible Measures document, as a component to the installations of Eligible Measures.
8. Projects will continue to have expiration dates. The contractor will need to re-enroll projects to the program following the Auto Proceed process for projects not completed and submitted to the program prior to their expiration date, and will be eligible for the incentive levels available at the time of re-enrollment.
9. The Contractor production incentive will be eliminated if the project fails an initial quality control field inspection. In addition, the contractor will be locked out of the Auto Proceed process if project issues remain unresolved for more than 30-days from the time they are notified of the failed inspection. As soon as the issues are resolved, the contractor will be unlocked from the software. The elimination of the contractor incentive will not be applied to new contractors for their first ten inspections.
10. Incentives are payable only upon satisfactory project completion.
11. A NJ homeowner may apply for a second HPwES project at the same site (home/townhouse) only under the following conditions: 1) The contractor must perform a new audit based on the existing conditions of the home after the first completed HPwES project; and 2) The total incentives from both projects cannot exceed current HPwES incentives caps based on the second project's estimated total energy savings (TES). These rules only apply to a single homeowner for the length of the home ownership. A NJ homeowner may apply for a second HPwES project at a different site (home/townhouse).

Table 17: HPwES Pilot Components Incentives

Air Sealing and Insulation Pilot Component	The lesser of: 1. 50% of total project cost; or 2. $500 for each of (a) air sealing and (b) installing any type of insulation.
Residential Direct Install Pilot Component	$50 paid to the installation contractor; the energy efficiency measures would be provided and installed at no cost to the consumer

Appendix B: Commercial and Industrial Incentives and General Rules

Existing Program Incentive Caps

Incentive caps have been established to ensure that there is equitable access to the C&I programs for all qualifying customers. These caps have been established because of the potential scale of commercial/industrial energy efficiency projects, where a few extremely large projects could otherwise consume a significant share of the available budgets, leaving other customers unable to access project funding.

C&I New Construction and Retrofit Programs - $500,000 per electric account and $500,000 per natural gas account, per fiscal year. A customer is defined as a utility account.

Pay for Performance Program - The total of Incentives #1, #2, and #3 combined shall not exceed $2,000,000 per project, assuming both electric and natural gas measures are recommended and implemented. Should only electric measures, or only gas measures, be recommended and implemented, then the total of Incentive #1, #2, and #3 combined shall not exceed $1,000,000 per project. For the avoidance of doubt, the foregoing would place a $1,000,000 per project cap on electric-only facilities. Entity caps also apply.

Large Energy Users Program – LEUP participants will be limited to the lesser of $4 million per eligible entity per fiscal year, 90% of calculated NJ Clean Energy Program contribution, 75% of eligible project cost or $0.33/kWh and $3.75/Therm saved annually.

Direct Install – Project incentive cap of up to $125,000. Direct Install participants will also be held to a fiscal year entity cap of $250,000 per entity, but for participants in the state's Energy Savings Improvement Program (ESIP), the Program's entity cap will be $500,000. The signed Scope of Work Agreement will be the milestone used to determine proximity to the entity cap.

Local Government Energy Audit Program – LGEA participants will be held to a fiscal year entity cap of $100,000 per entity. Exceptions apply; see the specific program description in this document.

Combined Heat and Power – CHP participants are held to a fiscal entity cap of $4 million per entity, per fiscal year. The entity cap is based on the fiscal program year July 1 to June 30.

Customer Tailored Energy Efficiency Pilot Program (CTEEPP) – CTEEPP participants will be held to an entity cap of $250,000. The entity cap is based on the fiscal program year July 1 to June 30. Exceptions apply; see the specific program description in this document.

Program-Wide Entity Caps

If an entity brings more than one project through the New Jersey's Clean Energy Program in one fiscal year in addition to the project caps defined above, they will be held to a

fiscal year entity cap. The milestones used to determine the cap, by program, are as follows:

- Application approval - Retrofit, New Construction, Combined Heat and Power
- Energy Reduction Plan / Proposed Energy Reduction Plan approval - Pay for Performance / Pay for Performance New Construction
- Final Energy Efficiency Plan approval - Large Energy Users
- Fully executed Scopes of Work - Direct Install

These same milestones will be used in determining whether an entity has exceeded the fiscal year entity cap.

Entity Cap

An entity cap of $4 million per entity, per fiscal year will be in effect in FY19.

Entity Cap "fiscal year"

The C&I Programs use a fiscal 12-month period for tracking entity cap limits from July 1 – June 30. Once the entity cap limit for applications has been reached, based on above milestones, the earliest an entity may apply for subsequent incentive funding is July 1st of the following year. Incentives received under all C&I Programs, except the Local Government Energy Audit, count toward the fiscal year entity cap.

Extension Policies

Many programs include deadlines for submittal of information. For example, some programs require the submittal of a final application within six months or one year from the date of the letter approving the initial application. NJCEP provides for extensions of deadlines provided certain conditions are met. Program Managers in general are authorized to approve first and, in some cases, second, extensions. Additional standards/guidelines for approving extensions and/or reinstatements are set out in the FY19 Compliance Filings and in the Guidelines established for each program. The PA, with the approval of OCE Staff, may approve up to two extensions beyond the extensions the Program Managers are authorized to approve.

C&I New Construction and Retrofit Incentives and General Rules

Table 18: C&I Custom Measure Incentives

Technology Classification	FY19 Incentive
Custom Measure Incentives:	
Measures not covered by the prescriptive incentive tables	Performance incentives of $0.16/kWh and $1.60/therm of first year savings, 50% of total installed project cost, or buy down to 1-year payback. Based on estimated savings - minimum of 75,000 kWh or 1,500 Therms saved annually required. Proposed projects must exceed ASHRAE 90.1-2013 by 2% where applicable. In cases where ASHRAE standards do not apply, the Program will require that custom measures exceed industry standards per the Consortium for Energy Efficiency (CEE), EPA ENERGY STAR, and/or others. Minimum savings requirements may be waived by the Program Manager on a case-by-case basis if project savings are within 10% of these minimum requirements. Projects with both electric and gas savings may be considered for incentives if either of the minimum savings requirements are met. Multiple smaller applications may not be grouped to meet minimum savings requirements. Minimum IRR requirement removed

Table 19: C&I Chiller Incentives

Electric Chillers: FY19 Electric Chiller Efficiency and Incentive Structure

Note A *- The manufacturer's published chiller efficiency must be determined using the Air-Conditioning, Heating and Refrigeration Institute (AHRI) 550/590 test procedures and at the AHRI standard evaporator and condenser temperatures. If an applicant has a water cooled centrifugal chiller that is designed to operate at other than the AHRI standard conditions the procedure in Standard 90.1-2013, Section 6.4.1.2.1 may be used by the applicant to adjust the manufacturer's published efficiency at non-AHRI conditions to the efficiency at AHRI standard conditions. The applicant will need to provide the manufacturer's non-AHRI ratings as well as the calculations for the chiller efficiency at AHRI conditions.*

Constant speed chillers will have to meet or exceed IPLV efficiency to qualify for the incentive program while the incentive will be based on the chillers performance relative to the full load efficiency. Conversely, variable speed chillers will have to meet or exceed the full load efficiency to qualify for the incentive program while the incentive will be based on the chillers performance relative to the IPLV efficiency.

Electrically operated comfort cooling air-cooled and water-cooled chillers are eligible for incentives under the prescriptive path. Chillers for process cooling (e.g. manufacturing, data center, food storage or processing, et cetera) loads may apply for an incentive under the custom path.

Capacity	Path A		Path B		Path A		Path B	
	Incentive Minimum Full Load kW/ton	Qualifying IPLV kW/ton	Qualifying Full Load kW/ton	Incentive Minimum IPLV kW/ton	Incentive Minimum Full Load EER	Qualifying IPLV EER	Qualifying Full Load EER	Incentive Minimum IPLV EER
Air Cooled								
tons < 150					10.30	13.70	9.70	16.12
tons > 150					10.30	14.00	9.70	16.42
Water Cooled Positive Displacement								
tons < 75	0.735	0.600	0.780	0.490				
75 < tons < 150	0.706	0.560	0.750	0.480				
150 < tons <	0.647	0.540	0.680	0.431				
300 < tons <	0.598	0.520	0.625	0.402				
tons > 600	0.549	0.500	0.585	0.372				
Water Cooled Centrifugal								
tons < 150	0.598	0.550	0.695	0.431				
150 < tons <	0.598	0.550	0.635	0.392				
300 < tons <	0.549	0.520	0.595	0.382				
400 < tons <	0.549	0.500	0.585	0.372				
tons > 600	0.549	0.500	0.585	0.372				

Type	Capacity	Existing Building				***New Construction***			
		Constant Speed		Variable Speed		Constant Speed		Variable Speed	
		Base $/ton	Perf $/ton	Base $/ton	Perf $/ton	Base $/ton	Perf $/ton	Base $/ton	Perf $/ton
AC	tons < 150	$20.00	$3.50	$90.00	$4.00	$10.00	$3.50	$45.00	$4.00
AC	tons ≥ 150	$20.00	$2.75	$92.00	$4.00	$10.00	$2.75	$46.00	$4.00
WC positive disp	tons < 75	$13.00	$2.25	$40.00	$2.50	$6.50	$2.25	$20.00	$2.50
WC positive disp	75 ≤ tons < 150	$20.00	$2.00	$43.00	$2.00	$10.00	$2.00	$21.50	$2.00
WC positive disp	150 ≤ tons < 300	$17.00	$2.00	$43.00	$2.00	$8.50	$2.00	$21.50	$2.00
WC positive disp	300 ≤ tons < 600	$15.00	$2.25	$37.00	$2.00	$7.50	$2.25	$18.50	$2.00
WC positive disp	tons ≥ 600	$30.00	$2.00	$44.00	$2.00	$15.00	$2.00	$22.00	$2.00
WC centrifugal	tons < 150	$24.00	$2.25	***$24.00***	***$2.75***	$12.00	$2.25	$12.00	$2.75
WC centrifugal	150 ≤ tons < 300	$10.00	$2.00	$30.00	$2.50	$5.00	$2.00	$15.00	$2.50
WC centrifugal	300 ≤ tons < 400	$8.00	$2.00	$20.00	$2.00	$4.00	$2.00	$10.00	$2.00
WC centrifugal	400 ≤ tons < 600	$8.00	$2.00	$25.00	$2.00	$4.00	$2.00	$12.50	$2.00
WC centrifugal	tons ≥ 600	$8.00	$2.00	$25.00	$2.00	$4.00	$2.00	$12.50	$2.00

Performance Incentives apply for each 0.1 EER above the Incentive Minimum EER or for each 0.01 kW/ton below the Incentive Minimum kW/ton.

Performance Incentives apply for each 0.1 EER above the Incentive Minimum EER or for each 0.01 kW/ton below the Incentive Minimum kW/ton.

For new construction projects operating under ASHRAE 90.1-2013 code, proposed equipment must exceed minimum program efficiency requirements for Path A (constant speed) IPLV and Path B (variable speed) Full Load.

Technology Classification	**FY19 Incentive**
Water Cooled Chillers	Incentive table revised to reflect New Construction and Existing Buildings separately shown above.
Air Cooled Chillers	Incentive table revised to reflect New Construction and Existing Buildings separately shown above.
Natural Gas Chillers: *For gas chillers, full load efficiencies are determined in accordance with A.H.R.I. 560, however, part load efficiencies are not rated.*	
Gas Absorption Chillers	≥1.1 full load or part load Coefficient of Performance (COP)
< 100 tons	Up to $450 per ton
100 to 400 tons	Up to $230 per ton
> 400 tons	Up to $185 per ton
Gas Engine Driven Chillers	Treated under Custom measure path (≥1.1 full or part load COP)
Desiccant Systems	Up to $1.00 per cfm (gas or electric)

Table 20: Electric HVAC Incentives

Technology Classification	FY19 Incentive
HVAC Systems:	***Please refer to tables below for HVAC minimum efficiency standards and incentives***

SmartStart Equipment Type	Cooling Capacity tons	Incentive Tier	Existing Building and New Construction Minimum Qualifying Efficiency SEER	HSPF	EER	IEER	COP	Incentive $/ton
Unitary HVAC Split System	< 5.4	1	14.0					$92
Unitary HVAC Split System	< 5.4	2	16.0					$105
Unitary HVAC Single Package	< 5.4	1	14.3					$92
Unitary HVAC Single Package	< 5.4	2	16.0					$103
Unitary HVAC Single Package or	≥ 5.4 and < 11.25	1			11.5	13.0		$73
Unitary HVAC Single Package or	≥ 5.4 and < 11.25	2			12.5	14.0		$79
Unitary HVAC Single Package or	≥ 11.25 and < 20	1			11.5	12.4		$79
Unitary HVAC Single Package or	≥ 11.25 and < 20	2			12.0	14.0		$89
Central DX AC	≥ 20 and < 63	1			10.5	11.6		$79
Central DX AC	≥ 20 and < 63	2			11.0	12.5		$85
Central DX AC	≥ 63	1			9.7	11.2		$72
Central DX AC	≥ 63	2			10.0	12.0		$77
Air Source HP Split System	< 5.4	1	14.3	8.4				$92
Air Source HP Split System	< 5.4	2	15.5	8.5				$100
Air Source HP Single Package	< 5.4	1	14.3	8.2				$92
Air Source HP Single Package	< 5.4	2	15.5	8.5				$100
Air Source HP Single Package or	≥ 5.4 and < 11.25	1			11.5	12.2	3.4	$73
Air Source HP Single Package or	≥ 5.4 and < 11.25	2			12.1	12.8	3.5	$77
Air Source HP Single Package or	≥ 11.25 and < 20	1			11.5	11.6	3.3	$79
Air Source HP Single Package or	≥ 11.25 and < 20	2			11.7	15.0	3.3	$82
Air Source HP Single Package or	≥ 20	1			9.5	10.5	3.2	$79
Air Source HP Single Package or	> 20	2			9.7	12.0	3.2	$82

SmartStart Equipment Type	Cooling Capacity Btu/hr	Incentive Tier	Existing Building Minimum Qualifying Efficiency EER	COP	Incentive $/ton	New Construction Minimum Qualifying Efficiency EER	COP	Incentive $/ton
PTAC	< 7,000	1	12.0		$40	12.0		$20
PTAC	≥ 7,000	1	12.0		$40	12.0		$20
PTAC	≥ 8,000	1	11.7		$40	11.7		$20
PTAC	≥ 9,000	1	11.4		$40	11.4		$20
PTAC	≥ 10,000	1	11.1		$40	11.1		$20
PTAC	≥ 11,000	1	10.8		$40	10.8		$20
PTAC	≥ 12,000	1	10.5		$40	10.5		$20
PTAC	≥ 13,000	1	10.2		$40	10.2		$20
PTAC	≥ 14,000	1	9.9		$40	9.9		$20
PTAC	≥ 15,000	1	9.6		$40	9.6		$20
PTHP	< 7,000	1	12.0	3.4	$40	12.0	3.4	$20
PTHP	≥ 7,000	1	12.0	3.4	$40	12.0	3.4	$20
PTHP	≥ 8,000	1	11.7	3.3	$40	11.7	3.3	$20
PTHP	≥ 9,000	1	11.4	3.3	$40	11.4	3.3	$20
PTHP	≥ 10,000	1	11.1	3.2	$40	11.1	3.2	$20
PTHP	≥ 11,000	1	10.8	3.2	$40	10.8	3.2	$20
PTHP	≥ 12,000	1	10.5	3.1	$40	10.5	3.1	$20
PTHP	≥ 13,000	1	10.2	3.1	$40	10.2	3.1	$20
PTHP	≥ 14,000	1	9.9	3.0	$40	9.9	3.0	$20
PTHP	≥ 15,000	1	9.6	3.0	$40	9.6	3.0	$20

SmartStart Equipment Type	Cooling Capacity tons	Incentive Tier	Existing Building Minimum Qualifying Efficiency EER	Existing Building Minimum Qualifying Efficiency COP	Existing Building Incentive $/ton	New Construction Minimum Qualifying Efficiency EER	New Construction Minimum Qualifying Efficiency COP	New Construction Incentive $/ton
Water Source Heat Pump	< 1.4	1	12.4	4.3	$40	12.4	4.3	$20
Water Source Heat Pump	< 1.4	2	14.0	4.8	$45	14.0	4.8	$23
Water Source Heat Pump	≥ 1.4 and < 5.4	1	13.3	4.3	$60	13.3	4.3	$30
Water Source Heat Pump	≥ 1.4 and < 5.4	2	15.0	4.5	$68	15.0	4.5	$34
Water Source Heat Pump	≥ 5.4 and < 11.25	1	13.3	4.3	$80	13.3	4.3	$40
Water Source Heat Pump	≥ 5.4 and < 11.25	2	15.0	4.5	$90	15.0	4.5	$45
SPVAC	< 5.4	1	10.2		$45	10.2		$10
SPVAC	< 5.4	2	10.7		$47	10.7		$12
SPVAC	≥ 5.4 and < 11.25	1	10.2		$45	10.2		$10
SPVAC	≥ 5.4 and < 11.25	2	10.7		$47	10.7		$12
SPVAC	≥ 11.25 and < 20	1	10.2		$45	10.2		$10
SPVAC	≥ 11.25 and < 20	2	10.7		$47	10.7		$12
SPVHP	< 5.4	1	10.2	3.1	$45	10.2	3.1	$10
SPVHP	< 5.4	2	10.7	3.2	$47	10.7	3.2	$12
SPVHP	≥ 5.4 and < 11.25	1	10.2	3.1	$45	10.2	3.1	$10
SPVHP	≥ 5.4 and < 11.25	2	10.7	3.2	$47	10.7	3.2	$12
SPVHP	≥ 11.25 and < 20	1	10.2	3.1	$45	10.2	3.1	$10
SPVHP	≥ 11.25 and < 20	2	10.7	3.2	$47	10.7	3.2	$12

SmartStart Equipment Type	Cooling Capacity tons	Incentive Tier	Existing Building Minimum Qualifying Efficiency EER	Existing Building Minimum Qualifying Efficiency COP	Existing Building Incentive $/ton	New Construction Minimum Qualifying Efficiency EER	New Construction Minimum Qualifying Efficiency COP	New Construction Incentive $/ton
Groundwater Source Heat Pump	< 11.25	1	18.4	3.7	$80	18.4	3.7	$40
Groundwater Source Heat Pump	< 11.25	2	22.0	3.9	$96	22.0	3.9	$48
Ground Source Heat Pump	< 11.25	1	14.4	3.2	$80	14.4	3.2	$40
Ground Source Heat Pump	< 11.25	2	18.0	3.6	$100	18.0	3.6	$50

Occupancy Controlled Thermostats for Hospitality / Institutional Facilities	Up to $75/per occupancy controlled thermostat
A/C Economizing Control	≤5 tons - $85 >5 tons - $170

Table 21: Gas HVAC Incentives

<table>
<tr><th>Technology Classification</th><th>FY19 Incentive</th></tr>
<tr><td colspan="2">Gas Fired Boilers: FY19 Efficiency Levels
<table>
<tr><th>Boiler Type</th><th>Size Category (MBh input)</th><th>Non-Condensing</th><th>Condensing Tier 1</th><th>Condensing Tier 2</th></tr>
<tr><td>Hot Water</td><td>< 300</td><td>85% AFUE</td><td>88% AFUE</td><td>93% AFUE</td></tr>
<tr><td>Hot Water</td><td>≥ 300 and ≤ 2,500</td><td>85% Et</td><td>88% Et</td><td>91% Et</td></tr>
<tr><td>Hot Water</td><td>> 2,500</td><td>85% Ec</td><td>88% Ec</td><td>93% Ec</td></tr>
<tr><td>Steam</td><td>< 300</td><td>82% AFUE</td><td>NA</td><td>NA</td></tr>
<tr><td>Steam, all except natural draft</td><td>≥ 300 and ≤ 2,500</td><td>81% Et</td><td>NA</td><td>NA</td></tr>
<tr><td>Steam, all except natural draft</td><td>> 2,500</td><td>81% Et</td><td>NA</td><td>NA</td></tr>
<tr><td>Steam, natural draft</td><td>≥ 300 and ≤ 2,500</td><td>79% Et</td><td>NA</td><td>NA</td></tr>
<tr><td>Steam, natural draft</td><td>> 2,500</td><td>79% Et</td><td>NA</td><td>NA</td></tr>
</table>
</td></tr>
<tr><td>< 300 MBH</td><td>Hot Water Non-Condensing - $0.95/MBH; Min $400

Hot Water Condensing – Tier 1 - $1.35/MBH, Tier 2 - $2.00/MBH ; Min $1,000

Steam Natural Draft - $1.40/MBH; Min $300

Steam Power Ventilation - $1.40/MBH; Min $400

Efficiency level defined by above table</td></tr>
</table>

≥300 MBH - 1500 MBH	Hot Water Non-Condensing - $1.75/MBH Hot Water Condensing – Tier 1 - $2.00/MBH, Tier 2 - $2.20/MBH ; Min $1,000 Steam Natural Draft - $1.00/MBH Steam Power Ventilation - $1.20/MBH Efficiency level defined by above table
> 1500 MBH - 2500 MBH	Hot Water Non-Condensing - $1.50/MBH Hot Water Condensing – Tier 1 $1.85/MBH, Tier 2 - $2.20/MBH Steam Natural Draft - $0.90/MBH Steam Power Ventilation - $1.20/MBH Efficiency level defined by above table
> 2500 MBH – 4000 MBH	Hot Water Non-Condensing - $1.30/MBH Hot Water Condensing – Tier 1 - $1.55, Tier 2 - $2.00/MBH Steam Natural Draft - $0.70/MBH Steam Power Ventilation - $1.00/MBH Efficiency level defined by above table
> 4000 MBH	Treated under Custom Measure Path
Boiler Economizer Controls	BTU - Incentive ≤800,000 - $1,200 >800,000 - <1.6mil - $1,500 ≥1.6mil - <3mil- $1,800 ≥3mil - <3.5mil - $2,100 ≥3.5mil - <4mil - $2,400 ≥4mil - $2,700
Gas Furnaces	
AFUE to ≥ 95% ≥ 2.0% Fan Efficiency, ENERGY STAR qualified	Incentive up to $400 per furnace

Technology Classification	FY19 Incentive
Gas Infrared Heating	Low Intensity Infrared Heater with Reflectors ≤100,000 btu/hr. - $500 per unit >100,000 btu/hr. - $300 per unit Indoor Only

Table 22: Gas Water Heating Incentives

<table>
<tr><th>Technology Classification</th><th>FY19 Incentive</th></tr>
<tr><td>Gas Fired Water Heating:</td><td>
<table>
<tr><th colspan="2">Gas Water Heater Type and Capacity</th><th>Minimum Efficiency</th><th>Incentive Rate</th></tr>
<tr><td rowspan="6">Gas-fired, Storage</td><td rowspan="2">≤ 75,000 Btu/h
(consumer)</td><td>≥ 0.67 EF or
≥ 0.64 UEF</td><td>$1.75/MBH</td></tr>
<tr><td>≥ 0.87 EF or
≥ 0.81 UEF</td><td>$3.50/MBH</td></tr>
<tr><td>>75,000 Btu/h and
≤ 105,000 Btu/h
(residential duty commercial)</td><td>≥ 82% Et or
≥ 0.64 UEF</td><td>$1.75/MBH</td></tr>
<tr><td>≥ 90% Et or
≥ 0.85 UEF</td><td>$3.50/MBH</td></tr>
<tr><td rowspan="2">>105,000 Btu/h
(commercial)</td><td>≥ 82% Et</td><td>$1.75/MBH</td></tr>
<tr><td>≥ 92% Et</td><td>$3.50/MBH</td></tr>
<tr><td rowspan="2">Gas-fired, instant (tankless)</td><td>< 200,000 Btu/h
(consumer)</td><td>≥ 90% Et or
≥ 0.82 EF or
≥ 0.81 UEF</td><td>$300/tankless water heater</td></tr>
<tr><td>≥ 200,000 Btu/h
(commercial)</td><td>≥ 90% Et</td><td>$300/tankless water heater</td></tr>
</table>
</td></tr>
<tr><td colspan="2">Gas Fired Water Booster Heaters:</td></tr>
<tr><td>≤ 100 MBH</td><td>Up to $17 per MBH</td></tr>
<tr><td>> 100 MBH</td><td>Up to $35 per MBH</td></tr>
</table>

Table 23: Variable Frequency Drives

Variable Frequency Drives

VAV - Variable Air Volume HVAC System:	5 HP ≤ 50 HP
CV - Constant Volume HVAC System:	0.5 HP ≤ 50 HP
T - Cooling Tower:	10 HP ≤ 50 HP
P - Chilled Water Pump:	20 HP ≤ 50 HP
A - Air Compressor:	25 HP ≤ 200 HP
BP - Boiler Feed Water Pump:	5 HP ≤ 50 HP
BF - Boiler Fan Motor:	5 HP ≤ 50 HP
K- Kitchen Hood:	0.5 HP ≤ 50 HP

- Controlled HP is the cumulative motor HP controlled by each VFD.
- Controlled HP less than the listed eligible values are ineligible for incentives.
- Controlled HP more than the listed eligible values should use the C&I Custom program.
- If the controlled HP falls in between the HP listed on the VFD incentive table, the incentive is based on the lower controlled HP listed.
- For all VFD measure except air compressors, the maximum controlled threshold is 50HP. VFDs controlling more than 50HP, except related to air compressors, will be reviewed through the custom measure path.
- For new air compressors with VFDs, prescriptive incentives will be provided for units up to 200HP. VFDs controlling air compressor motors exceeding 200HP will be reviewed through the custom measure path.

Motor Size (HP)	Incentive ($)
0.5	$50
1	$75
2	$100
3	$200
4	$300
5	$900
7.5	$1,000
10	$1,100
15	$1,200
20	$1,300
25	$1,400
30	$1,500
40	$2,500
50	$3,000
60	$3,500
75	$4,000
100	$5,000
200	$7,000

Table 24: Premium Efficiency Motors

Technology Classification	FY19 Incentive
Premium Efficiency Motors:	
Fractional (< 1 HP) Electronic Commutated Motors (ECM)	Up to $40 per ECM for replacement of existing shaded-pole motor in refrigerated/freezer cases New construction projects not eligible

Table 25: C&I Lighting Incentives

Technology Classification	FY19 Incentive
New Construction & Major Gut Renovation for Existing Buildings	
New Construction and Major Gut Renovation - Performance Based Lighting incentives for indoor and outdoor installations (attached to building)	Lighting projects must exceed ASHRAE 90.1-2013 lighting power density (LPD) standards Eligible incentive is the lesser of $30 per eligible fixture or $1/Watt over the LPD baseline per qualified area Available for New Construction and Existing Buildings. Areas within existing building eligible only if existing lighting completely removed. New construction additions (add-ons) to an existing building are eligible
Existing Buildings	
Prescriptive Lighting: For all prescriptive lighting, fixture or lamp must be listed by UL or other OSHA approved Nationally Recognized Testing Laboratory (NRTL) in accordance with applicable US standards. Incentives will be paid as a Prescriptive Measure based on specific eligibility requirements.	
LED Prescriptive Lighting – For incentive eligibility, LED equipment must be listed on the current ENERGY STAR or Design Lights Consortium qualified products list. Incentives will not be provided for: • LEDs replacing existing LED lamps/fixtures; • Installation of otherwise eligible screw-in/plug-in lighting measures that are (a) not hard-wired or not permanent (example - refrigerator, oven, floor/desk lamps) or (b) retail display lighting.	
Technology Classification	**FY19 Incentive**
LED Lamp (Integral/Screw-In)	Up to $1/lamp for all ENERGY STAR lamps
LED 4-Pin- G24q- and GX24q-base Lamp	Up to $5 per lamp when replacing a 4-Pin CFL with a 4-Pin LED
LED Refrigerated Case Lighting	Up to $30 per 4’ LED Fixture Up to $42 per 5’ LED fixture Up to $65 per 6’ LED fixture

LED Display Case Lighting	Incentive for replacement of fluorescent lighting system in medium or low temperature display cases. Technical requirements of this incentive are listed on the prescriptive lighting application. Up to $30 per display case
LED Shelf-mounted display and task lights	Up to $15 per foot
LED Portable Desk Lamps	Up to $5 per fixture
LED Wall-wash Lights	Up to $30 per fixture
LED Stairwell and Passageway Luminaires	Up to $40 per fixture
LED Outdoor Pole/Arm-Mounted Area and Roadway Luminaires	Up to $100 per fixture; new and retrofit
LED Outdoor Pole/Arm-Mounted Decorative Luminaires	Up to $50 per fixture; new and retrofit
LED Outdoor Wall-Mounted Area Luminaires	Up to $100 per fixture
LED Parking Garage Luminaires	Up to $100 per fixture
LED Track or Mono-point Directional Lighting Fixtures	Up to $30 per fixture
Large Outdoor Pole/Arm-Mounted Area and Roadway Retrofit	Up to $150 per fixture
LED high-bay and Low-bay fixtures for C&I Buildings	Incentive based on new LED fixture wattage ≤125W: Up to $50 per fixture >125W to ≤250W: Up to $75 per fixture >250W: Up to $150 per fixture
LED High-bay Aisle Lighting	Incentive based on new LED fixture wattage ≤125W: Up to $50 per fixture >125W to ≤250W: Up to $75 per fixture >250W: Up to $150 per fixture
LED Mogul (E39) Screw-Base Replacements for HID Lamps	Incentive based on new LED lamp wattage ≤125W: Up to $50 per lamp >125W to ≤250W: Up to $75 per lamp >250W: Up to $150 per lamp

LED Bollard Fixtures	Up to $50 per fixture
LED Linear Panels (Luminaires for Ambient Lighting of Interior Commercial Spaces)	Up to $15 per fixture for 1x4, 2x2 (new and retrofit) Up to $25 per fixture for 2x4 (new and retrofit)
LED Fuel Pump Canopy	Up to $100 per fixture
LED Architectural Flood and Spot Luminaries	Up to $50 per fixture
LED Linear Ambient Luminaires (Indirect, Indirect/Direct, Direct/Indirect, Direct)	Up to $20 per 2’ fixture Up to $30 per 3’ fixture Up to $45 per 4’ fixture Up to $60 per 6’ fixture Up to $75 per 8’ fixture
Retrofit Kit for LED Linear Ambient Luminaires (Indirect, Indirect/Direct, Direct/Indirect, Direct)	Up to $15 per 2’ fixture Up to $15 per 4’ fixture Up to $25 per 8’ fixture
LED Linear Lamps	Up to $3 per 2’ lamp Up to $5 per 3’, 4’ linear and U-bend lamp Up to $10 per 8’ lamp
LED Bath Vanity	Up to $5/fixture
LED Cove Mount	Up to $5/fixture
LED Decorative Candle: Other	Up to $5/fixture
LED Decorative: Other	Up to $5/fixture
LED Downlight Pendant	Up to $5/fixture
LED Bath Vanity	Up to $5/fixture
LED Downlight Solid State Retrofit	Up to $5/fixture
LED Downlight Surface Mount	Up to $5/fixture
LED ENERGY STAR: Other	Up to $5/fixture
LED Outdoor Porch Wall Mount	Up to $5/fixture
LED ENERGY STAR Outdoor Post-Mount	Up to $5/fixture
LED Porch (wall mounted)	Up to $5/fixture
LED Torchiere	Up to $5/fixture

LED Ceiling Mount	Up to $5/fixture
LED Close to Ceiling Mount	Up to $5/fixture
LED Decorative Pendant	Up to $5/fixture
LED Inseparable SSL - Other	Up to $5/fixture
LED ENERGY STAR Security	Up to $5/fixture
LED ENERGY STAR Wall Sconces	Up to $5/fixture
LED Wrapped Lens	Up to $5/fixture
LED categories and products qualified by ENERGY STAR or Design Lights Consortium not identified above as prescriptive will be considered for incentives through the Custom measure path.	

Table 26: C&I Lighting Controls Incentives

Technology Classification	FY19 Incentive
Lighting Controls:	**Wireless and Hard-Wired Only**
Occupancy Sensors (Turning fixtures off in Existing facilities only) (e.g. ceiling) Wall Mounted Remote Mounted	 Up to $20 per control Up to $35 per control
Day Lighting Dimmers – All facilities Fluorescent, HID or LED Fixtures	For both fluorescent fixtures, HID or Fluorescent Hi-Bay, and LED controls - $45 per fixture controlled. New construction projects not eligible unless exceeding code requirement under ASHRAE 90.1-2013
Hi-Low Controls - All facilities: Fluorescent, HID or LED Fixtures	For all Hi-Low Controls, $35 per fixture controlled New construction projects not eligible unless exceeding code requirement under ASHRAE 90.1-2013
Advanced Lighting Control Systems (ALCS)	Incentives will be provided through the Custom program. To be eligible, ALCS must be listed on the current Design Lights Consortium qualified products list.

Table 27: C&I Food Service Incentives

Technology Classification	FY19 Incentive
Refrigeration Controls: *Door heater and electric defrost controls not eligible for new construction projects unless equipment purchased prior to March 21, 2016 or providing sufficient code permit documentation under former energy code (ASHRAE 90.1-2007)*	
Door Heater Control	$50 per control
Electric Defrost Control	$50 per control
Novelty Cooler Shutoff	$50 per control
Evaporator Fan Control	$75 per control
Refrigeration Doors/Covers:	
Energy-Efficient Doors for open Refrigerated Doors/Covers	$100 per door
Aluminum Night Curtains for Open Refrigerated Cases	$3.50 per linear foot
Commercial Dishwashers: Equipment must be qualified by the current version* of ENERGY STAR or CEE*[28]	
Under Counter	$400 per unit
Door Type	$700 per unit
Single Tank Conveyor	$1,000 per unit
Multiple Tank Conveyor	$1,500 per unit
Commercial Combination Oven/Steamer (Electric): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below. o ASTM Criteria: o Must meet the idle energy rate requirements in the Electric Combination Oven/Steamer Table, utilizing American Society for Testing and Materials (ASTM) F2861. o Must have a cooking energy efficiency of 50 percent or greater in steam mode and 70 percent cooking energy efficiency or greater in convection mode, utilizing (ASTM) F2861. o Combination oven/steamer pan capacity based on the maximum capacity of full-size 2 1/2-inch deep hotel pans. This must be consistent with the number of pans used to meet the energy-efficiency qualifications per ASTM F2861.	

* Version in place at time of application submittal

Pan Capacity Less than 15 pans 15-28 pans Greater than 28 pans	$1,000 per oven
Commercial Combination Oven/Steamer (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below. o ASTM Criteria: o Must have a cooking energy efficiency of 38 percent or greater in steam mode and 44 percent or greater in convection mode, utilizing ASTM F2861. o Must meet the idle energy rate requirements in the Gas Commercial Combination Oven/Steamer Table, utilizing ASTM F2861. o Combination oven/steamer pan capacity on based on the maximum capacity of full-size 2 1/2-inch deep hotel pans. This must be consistent with the number of pans used to meet the energy-efficiency qualifications per ASTM F2861.	
Pan Capacity Less than 15 pans 15-28 pans Greater than 28 pans	$750 per oven
Commercial Convection Oven (Electric): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below. o ASTM Criteria: o Must have a tested heavy load (potato) cooking energy efficiency of 70 percent or more, utilizing ASTM F1496. o Full-size electric ovens must have a tested idle energy rate of 1.6 kW or less, utilizing ASTM F1496. o Half-size electric ovens must have a tested idle energy rate of 1.0 kW or less, utilizing ASTM F1496.	
Commercial Convection Oven (Electric)	$350 per oven
Commercial Convection Oven (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below. o ASTM Criteria: o Must have a tested heavy load (potato) cooking energy efficiency of 44 percent or greater and an idle energy rate of 13,000 Btu/h or less, utilizing ASTM F1496.	
Commercial Convection Oven (Gas)	$500 per oven

Commercial Rack Oven (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested baking energy efficiency of 50 percent or greater, utilizing ASTM F2093.

Commercial Rack Oven Single (Gas)	$1,000 per single oven
Commercial Rack Oven Double (Gas)	$2,000 per double oven

Commercial Conveyor Oven (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested baking energy efficiency of 42 percent or greater, utilizing ASTM F1817.
  - Small conveyor ovens with total conveyor width 25 inches or less must have a tested idle energy rate that is 29,000 Btu/h or less, utilizing ASTM F1817.
  - Large conveyor ovens with total conveyor width greater than 25 inches must have a tested idle energy rate that is 57,000 Btu/h or less, utilizing ASTM F1817.
  - Multiple-deck oven configurations are paid per qualifying oven deck.

Commercial Conveyor Oven – Small (Conveyor width 25in. or less, Gas)	$500 per deck
Commercial Conveyor Oven – Large (Conveyor width greater than 25in., Gas)	$750 per deck

Commercial Fryer (Electric): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested heavy load cooking energy efficiency of 80 percent or greater and an idle energy rate of 1.0 kW or less, utilizing ASTM F1361.
  - Multiple vat configurations are paid per qualifying vat.

Commercial Fryer (Electric)	$200 per vat

Commercial Fryer (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must meet a tested heavy load cooking energy efficiency of 50 percent or greater and an idle energy rate of 9,000 Btu/h or less, utilizing ASTM F1361.
  - Multiple vat configurations are paid per qualifying vat.

Commercial Fryer (Gas)	$749 per vat

Commercial Large Vat Fryer (Electric): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested heavy load (French fry) cooking energy efficiency of 80 percent or greater, utilizing ASTM F2144.
  - Multiple vat configurations are paid per qualifying vat.

Commercial Large Vat Fryer (Electric)	$200 per vat

Commercial Large Vat Fryer (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested heavy load (French fry) cooking energy efficiency of 50 percent or greater, utilizing ASTM F2144.
  - Multiple vat configurations are paid per qualifying vat.

Commercial Large Vat Fryer (Gas)	$500 per vat

Commercial Griddle (Electric): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested heavy load cooking energy efficiency of 70 percent or greater and an idle energy rate of 355 watts per square foot of cooking surface or less, utilizing ASTM F1275.

Commercial Griddle (Electric)	$300 per griddle

Commercial Griddle (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below.

- ASTM Criteria:
  - Must have a tested heavy load cooking energy efficiency of 38 percent or greater and an idle energy rate of 2,650 Btu/h per square foot of cooking surface or less, utilizing ASTM F1275.

Commercial Griddle (Gas)	$125 per griddle

Commercial Steam Cooker (Electric): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below. o ASTM Criteria: o Must have a tested heavy load (potato) cooking energy efficiency of 50 percent or greater, utilizing ASTM F1484.	
Commercial Steam Cooker (Electric)	$1,250 per steamer
Commercial Steam Cooker (Gas): Equipment must be qualified by the current version of ENERGY STAR, CEE or ASTM criteria defined below. o ASTM Criteria: o Must have a tested heavy load (potato) cooking energy efficiency of 38 percent or greater, utilizing ASTM F1484.	
Commercial Steam Cooker (Gas)	$2,000 per steamer
Insulated Holding Cabinets: o Must meet CEE Tier II specification. o Does not include cook and hold equipment. o All measures must be electric hot food holding cabinets that are fully insulated and have solid doors.	
Insulated Holding Cabinet, Full Size	$300 per unit
Insulated Holding Cabinet, ¾ Size	$250 per unit
Insulated Holding Cabinets, ½ Size	$200 per unit
Commercial Glass Door Refrigerators: o The refrigeration system must be built-in (packaged). o Cases with remote refrigeration systems do not qualify. o Must meet ENERGY STAR Version 2.0 specification.	
ENERGY STAR Glass Door Refrigerators – Internal volume <15 ft^3	$75 per unit
ENERGY STAR Glass Door Refrigerators – Internal volume 15 ft^3–29.9 ft^3	$100 per unit
ENERGY STAR Glass Door Refrigerators – Internal volume 30 ft^3–49.9 ft^3	$125 per unit
ENERGY STAR Glass Door Refrigerators – Internal volume ≥ 50 ft^3	$150 per unit

Commercial Solid Door Refrigerators: o The refrigeration system must be built-in (packaged). o Cases with remote refrigeration systems do not qualify. o ENERGY STAR specification Version 1.0 refrigerators do not qualify. o Must meet ENERGY STAR Version 2.0 specification.	
ENERGY STAR Solid Door Refrigerators – Internal volume <15 ft^3	$50 per unit
ENERGY STAR Solid Door Refrigerators – Internal volume 15 ft^3–29.9 ft^3	$75 per unit
ENERGY STAR Solid Door Refrigerators – Internal volume 30 ft^3–49.9 ft^3	$125 per unit
ENERGY STAR Solid Door Refrigerators – Internal volume ≥ 50 ft^3	$200 per unit
Commercial Glass Door Freezers: o The refrigeration system must be built-in (packaged). o Cases with remote refrigeration systems do not qualify. o Must meet ENERGY STAR Version 2.0 specification.	
ENERGY STAR Glass Door Freezers – Internal volume <15 ft^3	$200 per unit
ENERGY STAR Glass Door Freezers – Internal volume 15 ft^3–29.9 ft^3	$250 per unit
ENERGY STAR Glass Door Freezers – Internal volume 30 ft^3–49.9 ft^3	$500 per unit
ENERGY STAR Glass Door Freezers – Internal volume ≥ 50 ft^3	$1,000 per unit

Commercial Solid Door Freezers:

- The refrigeration system must be built-in (packaged).
- Cases with remote refrigeration systems do not qualify.
- ENERGY STAR specification Version 1.0 freezers do not qualify.
- Must meet ENERGY STAR Version 2.0 specification.

ENERGY STAR Solid Door Freezers – Internal volume <15 ft^3	$100 per unit
ENERGY STAR Solid Door Freezers – Internal volume 15 ft^3–29.9 ft^3	$150 per unit
ENERGY STAR Solid Door Freezers – Internal volume 30 ft^3–49.9 ft^3	$300 per unit
ENERGY STAR Solid Door Freezers – Internal volume ≥ 50 ft^3	$600 per unit

Commercial Ice Machines:

- Ice machines must be tested in accordance with the Air Conditioning and Refrigeration Institute (ARI) Standard 810.
- Includes machines generating ice cubes that are 60 grams (2 oz.) or lighter. It also includes flaked, crushed and fragmented ice makers.
- Only air-cooled machines (self-contained, ice making heads, or remote condensing) qualify.
- The entire ARI tested ice making system must be purchased.
- Remote machines must be purchased with qualifying remote condenser or remote condenser/compressor unit.
- The efficiency specifications for the two qualifying tiers are equivalent to ENERGY STAR or Super-Efficient.

ENERGY STAR Ice Machine (101–200 lbs./day)	$50 per unit
ENERGY STAR Ice Machine (201–300 lbs./day)	$50 per unit
ENERGY STAR Ice Machine (301–400 lbs./day)	$75 per unit
ENERGY STAR Ice Machine (401–500 lbs./day)	$75 per unit
ENERGY STAR Ice Machine (501–1000 lbs./day)	$125 per unit
ENERGY STAR Ice Machine (1001–1500 lbs./day)	$200 per unit
ENERGY STAR Ice Machine (greater than 1500 lbs./day)	$250 per unit
Super-Efficient Ice Machine (101–200	$100 per unit

lbs./day)	$100 per unit
Super-Efficient Ice Machine (201–300 lbs./day)	$150 per unit
Super-Efficient Ice Machine (301–400 lbs./day)	$150 per unit
Super-Efficient Ice Machine (401–500 lbs./day)	$250 per unit
Super-Efficient Ice Machine (501–1000 lbs./day)	$400 per unit
Super-Efficient Ice Machine (1001–1500 lbs./day)	$500 per unit
Super-Efficient Ice Machine (greater than 1500 lbs./day)	

Note: The incentives identified above may be reduced with the approval of the Office of Clean Energy.

Appendix C: Distributed Energy Resources Incentives and General Rules

Extension Policies

Many programs include deadlines for submittal of information. For example, some programs require the submittal of a final application within six months or one year from the date of the letter approving the initial application. NJCEP provides for extensions of deadlines provided certain conditions are met. Program Managers in general are authorized to approve first and, in some cases, second extensions. Additional standards and guidelines for approving extensions and/or reinstatements within individual programs are set out in the relevant sections of the FY19 Compliance Filings and in the Guidelines established for each program. The Program Administrator, with the approval of OCE Staff, may approve up to two extensions beyond the extensions the Program Managers are authorized to approve.

CHP Incentives

Table 28: CHP Technology and Incentive Levels

Eligible Technology	Size (Installed Rated Capacity)	Incentive ($/Watt)	% of Total Cost Cap per project	$ Cap per project
Powered by non-renewable or renewable fuel source, or a combination[4] Gas Internal Combustion Engine Gas Combustion Turbine Microturbine Fuel Cells with heat recovery	≤500 kW[1]	$2.00	30-40%[2]	$2 million
	>500 kW – 1 MW[1]	$1.00		
	>1 MW – 3 MW[1]	$0.55	30%	$3 million
	>3 MW[1]	$0.35		
Waste Heat to Power (WHP)[3] Powered by non-renewable fuel source. Heat recovery or other mechanical recovery from existing equipment utilizing new electric generation equipment (e.g. steam turbine)	≤1 MW[1]	$1.00	30%	$2 million
	>1 MW[1]	$0.50	30%	$3 million

(1) Incentives for CHP and WHP are tiered which means the incentive levels vary based upon the installed rated capacity, as listed in the chart above. For example, a 4 MW CHP system would receive $2.00/watt for the first 500 kW, $1.00/watt for the second 500 kW, $0.55/watt for the next 2 MW and $0.35/watt for the last 1 MW (up to the caps listed).

(2) The maximum incentive will be limited to 30% of total project. This cap will be increased to 40% where a cooling application is used or included with the CHP system (e.g. absorption chiller).

(3) Projects installing CHP with WHP will be eligible for incentives shown above, not to exceed the lesser of percent per project cap or dollars per project cap of the CHP. Minimum efficiency will be calculated

based on annual total electricity generated, utilized waste heat at the host site (i.e. not lost/rejected), and energy input.

(4) CHP systems fueled by a Class 1 renewable fuel source are eligible for a 30% incentive bonus. If the fuel is mixed, the bonus will be prorated accordingly. For example, if the mix is 60/40 (60% being a Class 1 renewable), the bonus will be 18%. This bonus will be included in the final partial payment, based on system performance and fuel mix consumption data.

(5) CHP systems located at Critical Facility and incorporating blackstart technology are eligible for a 10% bonus (additional to the incentives calculated in accordance with the table immediately above, but still subject to the project Cap in that table). For this program, a Critical Facility is any (a) public facility, including any federal, state, county, or municipal facility, (b) non-profit and/or private facility, including any hospital, police station, fire station, water/wastewater treatment facility, school, multifamily building, or similar facility that (A) is determined to be either Tier 1 or critical infrastructure by the Office of Emergency Management or the Office of Homeland Security and Preparedness or (B) could serve as a Shelter during a power outage. A Shelter is a facility able to provide food, sleeping arrangements, and other amenities to its residents and the community.

Appendix D: Multifamily Decision Tree

Figure 1: Multifamily Decision Tree

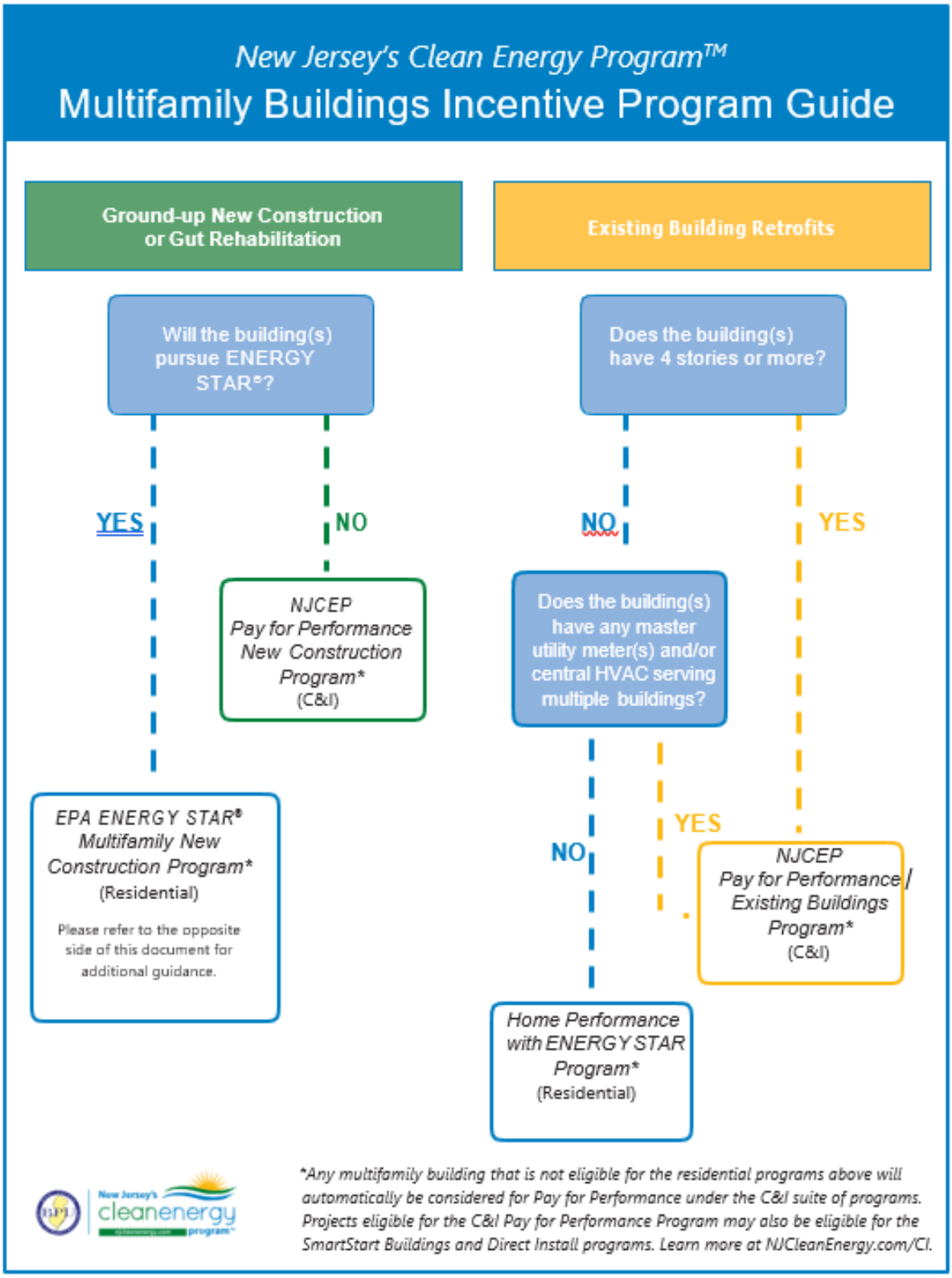


Figure 2: ENERGY STAR Multifamily Guidelines (Legacy)

EPA ENERGY STAR
Residential Multifamily New Construction Programs

What qualifies as Residential?

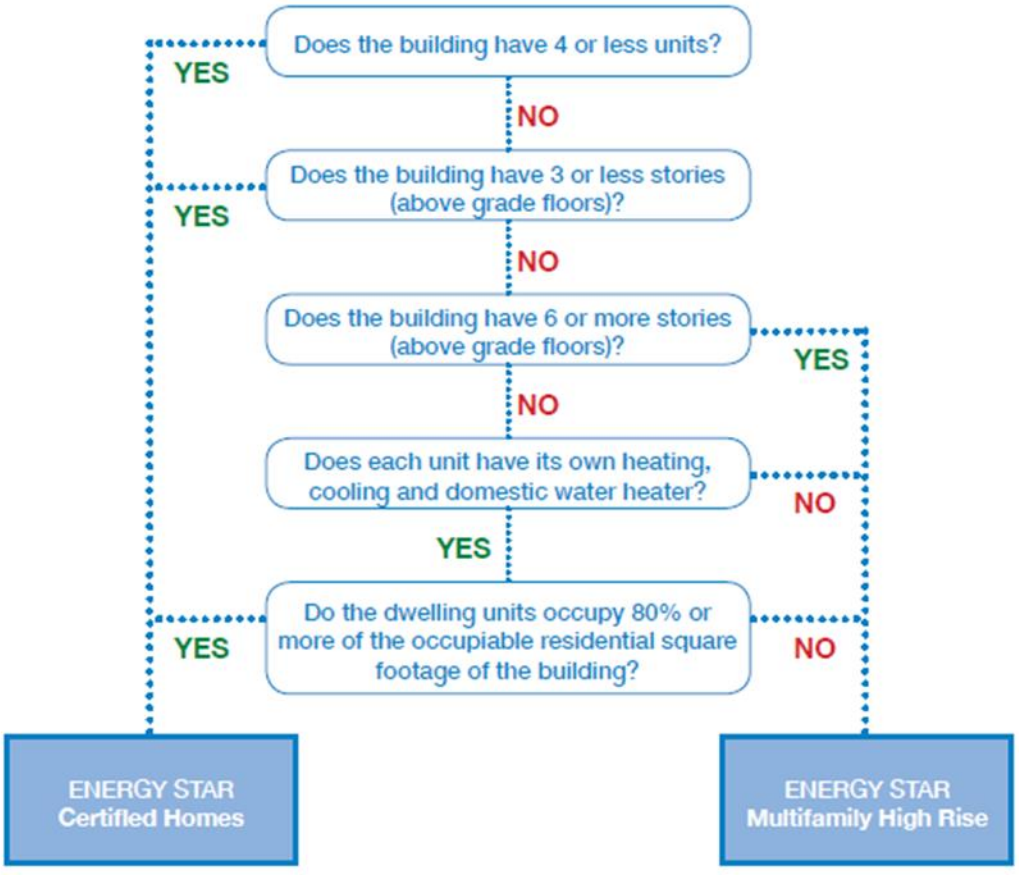
The primary use of the building must be for residential purpose, i.e. the residential and residential associated common area must occupy more than 50% of the building's occupiable square footage. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, and residential recreation rooms. This also includes offices used by building management, administration or maintenance and all special use areas located in the building to serve and support the residents such as day-care facilities, gyms, dining halls, etc. It does not include garage spaces.

What qualifies as New Construction?

New Construction projects can include significant gut rehabilitations when defined as a change of use, reconstruction of a vacant structure, or when construction work requires that the building be out of service for at least 30 consecutive days. The primary use of the building must be for residential purpose, i.e. the residential and residential associated common areas must occupy more than 50% of the building's occupiable square footage. For mixed used buildings, exclude the retail/commercial area when determining the square footage of the building.

New construction of motels/hotels, nursing homes, assisted living facilities or dormitories, are considered commercial facilities and do not qualify under the Residential Multifamily New Construction program. Learn more about the ENERGY STAR new construction program for commercial buildings at: *www.energystar.gov/DesignToEarn*. For more information about ENERGY STAR in existing commercial buildings visit the ENERGY STAR Buildings and Plants page at *www.energystar.gov/buildings*.

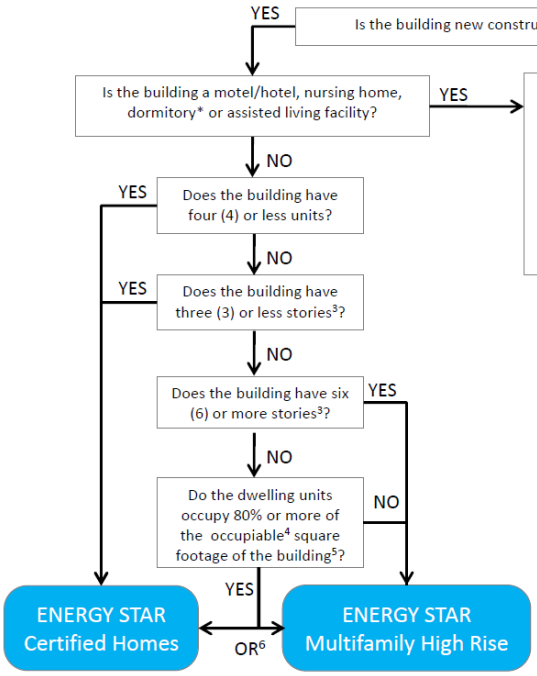
If your multifamily building qualifies as *both* New Construction *and* Residential, the following decision tree can help you determine which ENERGY STAR program is right for you.



1/2015

Figure 3 ENERGY STAR Multifamily Guidelines Version 1.3

EPA ENERGY STAR Multifamily New Construction Program Decision Tree, Version 1.3



NOTES:

1. New construction can include significant gut rehabilitations when defined as a change of use, reconstruction of a vacant structure, or when construction work requires that the building be out of service for at least 30 consecutive days.
2. The primary use of the building must be for residential purpose, i.e. the residential and residential associated common area must occupy more than 50% of the building's occupiable[4] square footage. A garage is not considered 'occupiable'. Common area includes any spaces within the building that serves a function in support of the residential part of the building that is not part of a dwelling unit. This includes spaces used by residents, such as corridors, stairs, lobbies, laundry rooms, exercise rooms, and residential recreation rooms. This also includes offices used by building management, administration or maintenance and all special use areas located in the building to serve and support the residents such as day-care facilities, gyms, dining halls, etc.
3. Any above-grade story with 20% or more occupiable[4] space, including commercial space, shall be counted towards the total number of stories for the purpose of determining eligibility. An above-grade story is one for which more than half of the gross surface area of the exterior walls is above-grade.
4. Per ASHRAE 62.2-2010, occupiable space is any enclosed space inside the pressure boundary and intended for human activities or continual human occupancy, including, but not limited to, areas used for living, sleeping, dining, and cooking, toilets, closets, halls, storage and utility areas, and laundry areas.
5. For mixed-use buildings, exclude the retail/commercial area when determining the square footage of the "building".
6. Either certification program may be used for this building type. For a project with a central heating, cooling, or hot water system that chooses ENERGY STAR Certified Homes, use of the *RESNET Guidelines for Multifamily Energy Ratings* for modeling the specified central system(s) is recommended.

Updated February 21, 2017

Appendix E: FY19 Program Budgets

TBD

Appendix F: FY19 Program Goals and Performance Metrics

NJCEP FY19 Energy Savings Goals: Portfolio Summary

Energy Efficiency	Annual MWH Savings FY19	Lifetime MWH Savings FY19	Annual MW Savings FY19	Annual Therm Savings FY19	Lifetime Therm Savings FY19
RES-HVAC	5,332	81,700	3.9	3,148,358	60,787,739
RES-New Construction	9,331	186,621	4.3	1,352,882	27,057,794
RES-Energy Efficient Products	65,958	741,775	8.2	1,019,745	11,434,132
RES-HPwES	3,616	66,754	0.9	1,144,176	24,812,093
RESIDENTIAL TOTAL	**84,238**	**1,076,850**	**17.3**	**6,665,161**	**124,091,758**
C&I-New Construction	10,794	161,113	2.0	106,941	2,096,458
C&I-Retrofit	145,528	2,277,572	27.0	647,244	11,617,644
C&I-Pay-for-Performance NC	6,362	103,257	5.5	82,744	1,332,251
C&I-Pay-for-Performance	13,002	208,464	3.0	1,647,228	33,257,056
C&I-Local Govt Energy Audit	0	0	0.0	0	0
C&I-Direct Install	54,749	819,608	11.4	1,393,910	23,602,974
C&I-Large Energy Users	5,262	94,711	0.5	59,815	1,076,670
C&I-Pilot-Customer Tailored	9,022	134,276	1.6	164,222	3,160,476
C&I TOTAL	**244,719**	**3,799,002**	**51.0**	**4,102,102**	**76,143,528**
Multifamily	**2,503**	**41,965**	**1.0**	**284,296**	**5,771,522**
DER TOTAL	**33,536**	**670,648**	**4.1**	**16,166**	**323,329**
PORTFOLIO TOTAL	**364,995**	**5,588,465**	**73.3**	**11,067,725**	**206,330,138**

Appendix G: Cost-Benefit Analysis

Cost-effectiveness analysis compares the costs and benefits of energy efficiency and renewable energy measures, programs and portfolios of programs. Estimates of both costs and benefits are relative to those that would otherwise have been incurred had "baseline" or "standard" equipment, building systems and/or energy using practices been purchased or remained in place. A measure, program, or portfolio is considered cost-effective if the benefit-cost ratio is 1.0 or greater.

TRC, in collaboration with the Center for Green Building of the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, conducted a cost-benefit analysis (CBA) of fiscal year (FY) 2019 for residential, commercial, and industrial New Jersey Clean Energy Program (NJCEP) energy efficiency programs.

I. Cost-Benefit Tests

Benefit cost ratios for each of the five traditional cost effective tests were developed. The five tests are: Participant Cost Test, Program Administration Cost Test, Ratepayer Impact Measure Test, Total Resource Cost Test and Societal Cost Test.[29]

Participant Cost Test: The measure of the quantifiable benefits and costs to the customer attributed to participation in a program. The participant benefits are equal to the sum of any participant incentives paid, any reductions in bills, and any federal or state tax deductions or credits. Participant costs include any out-of-pocket costs associated with the program.

Program Administrator Cost Test: The costs of a program as a resource option based on the costs incurred by the program administrator (including incentive costs), excluding any costs incurred by the participant. The benefits are the avoided supply costs of energy and demand and the reduction in capacity valued at marginal costs for the periods when there is a load reduction. The costs are the program costs incurred by the administrator, the incentives paid to the customers, and the increased supply costs for the periods in which load is increased.

Ratepayer Impact Measure Test: Measure of what happens to customer bills or rates due to changes in revenues and operating costs caused by the program. The benefits equal the savings from avoided supply costs, including the reduction in capacity costs for periods when load has been reduced and the increase in revenues for periods in which load has increased. The costs are the program costs incurred by administration of the program, the incentives paid to the participant, decreased revenues for any periods in which load has been decreased and increased supply costs for any periods when load has increased.

Total Resource Cost Test: The costs of a program as a resource option based on the total costs of the program, including both the participants' and the utility's costs. This test represents the combination of the effects of a program on both the participating and non-participating customers. The benefits are the avoided supply costs, federal tax credits, and the reduction in

[29] California Standard Practice Manual. Economic Analysis of Demand-Side Programs and Projects. (October 2001).

generation and capacity costs valued at marginal cost for the periods when there is a load reduction. The costs are the program costs paid by the utility and participants plus the increase in supply costs for the periods in which load is increased.

Societal Cost Test: Attempts to quantify the change in the total resource costs to society as a whole rather than only to the utility and its ratepayers. Costs include all consumer, utility and program expenses. Benefits associated with the societal perspective include avoided power supply costs, capacity benefits, avoided transmission and distribution costs, and emissions savings. It has been assumed that wholesale electricity prices account for the national sulfur dioxide and nitrogen oxide allowance Therefore, the societal cost test includes only emissions savings accrued from carbon dioxide. Federal tax credits are not included.

The table below includes the results of the benefit cost modeling.

Cost-Benefit Analysis Results

Sector	Program	PCT	PACT	RIM	TRC	SCT
C&I	New Construction	14.4	5.0	0.3	3.3	7.7
	Retrofit	5.1	4.6	0.3	1.6	3.3
	Direct Install	4.0	1.3	0.3	1.2	2.3
	P4P NC	6.7	1.5	0.3	1.6	2.6
	P4P EB	6.4	2.4	0.2	1.1	1.8
	LEUP	3.2	1.5	0.3	0.8	1.7
	Customer Tailored	10.5	2.9	0.2	1.7	3.1
	C&I Sector	**5.3**	**2.5**	**0.3**	**1.4**	**2.8**
Res	New Construction	3.2	1.5	0.4	1.0	1.5
	HPwES	1.1	0.5	0.2	0.2	0.3
	HVAC	4.5	3.0	0.4	1.8	2.2
	EE Products	4.6	2.0	0.3	1.0	2.1
	Res Sector	**2.9**	**1.5**	**0.3**	**0.8**	**1.3**
Multifamily		**5.3**	**1.4**	**0.2**	**0.9**	**1.4**
Energy Efficiency Portfolio		**3.6**	**2.2**	**0.4**	**1.2**	**2.7**
Distributed Energy Resources (DER)		**2.4**	**2.9**	**0.3**	**0.7**	**1.5**