



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 2**

June 22, 2018

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Table of Contents

Introduction.....	4
Table References	5
Residential Energy Efficiency Programs.....	6
General Overview	6
Residential New Construction Program.....	7
Existing Homes Program	8
Energy Efficient Products Program	13
Commercial and Industrial Energy Efficiency Programs	14
General Overview	14
Local Government Energy Audit Program.....	16
Direct Install Program.....	17
C&I Buildings Program	18
Building and Systems Evaluation Program	21
Multifamily Program	25
Distributed Energy Resources	29
Combined Heat and Power-Fuel Cell	29
Renewable Electric Storage Program	30
Renewable Energy.....	31
Solar Renewable Energy Certificate Registration Program.....	31
State Energy Program	32

Introduction

This 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*TM (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 this 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 this 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).

The changes contained in this Volume 2 in significant part are designed to implement some of the more complex recommendations contained in *New Jersey's Clean Energy Program FY19-FY22 Strategic Plan (Strategic Plan)*. For example, the new programs are designed to promote flexibility by giving applicants the ability to implement bundled or combination measures, rather than being forced to choose between implementing single measures versus comprehensive, whole-building measures. They are also designed to reduce the transactional costs applicants currently can incur in analyzing which program(s) are the best fit for them. Finally, the success of the new programs will depend heavily on the enhanced outreach and marketing strategies that the *Strategic Plan* recommends.

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

N/a.

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 will build capacity and capability of market participants for safely and effectively upgrading the efficiency of existing homes through its new Existing Homes Program (which, as discussed below, includes, among other things, most of the incentives available through its predecessor *WARM/COOL* Advantage and Home Performance with ENERGY STAR® programs). This Compliance Filing provides program descriptions, goals, and budgets for the residential energy efficiency programs as they are expected to be merged and revised over the course of FY19:

- Residential New Construction Program
- Existing Homes Program
- Energy Efficient Products Program

Detailed information regarding each of these programs follows.

Residential New Construction Program

No change from Volume 1.

Existing Homes Program

Program Purpose and Strategy Overview

In early 2019, *WARM/COOL*Advantage and Home Performance with ENERGY STAR® (HPwES) programs would be merged into a new “umbrella” Existing Homes program. The Existing Homes Program is intended to provide opportunities for owners of existing homes to reduce their energy usage by making energy efficiency improvements to the structure and mechanical systems of their homes. In recent years, these opportunities have been provided through two distinct program offerings at the two ends of the spectrum of residential retrofits, specifically prescriptive single measure mechanical upgrades (i.e., *WARM/COOL*Advantage) and comprehensive whole-house projects (i.e., HPwES). Some homes’ energy efficiency improvement needs may fall between the two, which is a significant barrier to participation for both homeowners and contractors and, if left unresolved, a lost opportunity for savings.

The goal is to offer a fully flexible program allowing homeowners to participate at a level that meets their needs to make their homes more energy efficient and connecting them with contractors that can operate within their “sweet spot” or current business model. This approach will also permit homeowners to address their homes’ immediate needs and to also incorporate additional upgrades in phases over time. The desired outcome for the NJCEP is increased participation (by both homeowners and contractors) resulting in increased energy savings, by allowing participation in a full range of projects at varying levels of incentives, rather than just the lowest and highest. The new program will also include projects where bundling mechanical upgrades with complementary envelope upgrades will enhance comfort and savings and capture lost opportunities. The program’s intent is to continue participation in the nationally recognized Department of Energy’s HPwES program while expanding the NJ market share. Contractors will be able to offer different pathways such as single measure, bundled measures, or comprehensive projects under the new program. They will be able to choose a prescriptive pathway, with no energy modeling, or a performance pathway, with energy modeling, or a combination of both. The new program will reduce administrative costs for all parties and will also create a basic entry level for insulation contractors to install attic air sealing and insulation measures following a prescriptive approach with associated incentives. This approach will expand prescriptive measure offerings to cover many of the current HPwES eligible measures and incorporate new technologies that become available in the market as part of both prescriptive and modeled projects. The new program allows for a customer-centric approach to the program where they are afforded the flexibility to install one or a few energy-saving measures and return in the future to install more measures.

Overall, this new approach moves toward maximizing savings for NJCEP dollars spent by increasing participation at all levels, especially in the bundled measure pathway, where currently there is no ability to capture the additional savings opportunities associated with envelope upgrades that occur when a homeowner upgrades his or her mechanical systems.

Target Market and Customer Eligibility

The program is designed to serve existing New Jersey households across all income categories particularly the broad market not eligible for low-income program services. The program targets customers served by investor-owned utilities and residing in existing one- to four-family homes (either attached or detached). In addition, limited funding may be available from the U.S.

Department of Energy for a State Energy Program (SEP) grant that would allow fuel oil, propane, and municipal and cooperative electric utility customers (in other words, customers of non-investor owned electric and gas companies) to participate in the program. The new program will now allow any duly licensed contractors, whether non-BPI, BPI Certified, or BPI GoldStar to participate at some level of the program.

Program Offering and Incentives

The Existing Homes Program will expand offerings of single measure projects, and it will create offerings for bundled measure packages, i.e., a package bundling an HVAC measure with a building envelope or ductwork measure. The program will also offer a prescriptive pathway at the comprehensive level. Non-BPI contractors will be able to deliver HVAC, air sealing, and/or insulation upgrades with prescriptive rebates as an entry level into the program. Customers will be offered the flexibility to purchase upgrades based on their needs and purchasing ability, ranging from a single appliance upgrade all the way up to whole-house comprehensive projects.

The customer incentive pathways that will be offered are as follows:

- Single measure
- Bundled complementary measures (envelope + mechanical/HVAC)
- Comprehensive projects

Single Measure Pathway

Residential rebate programs tend to capture the reactive market, i.e., homeowners who are reacting to an immediate need such as a broken furnace. The single measure prescriptive customer incentives will include incentives for furnaces, boilers, air conditioners, heat pumps, water heaters, air sealing, and insulation.

Bundled Complementary Measure Pathway

The new bundled measure pathway bridges the gap between single measure and full whole-house comprehensive projects, thus reducing cost barriers for customers whose needs or available funds do not meet the most comprehensive level of home energy efficiency upgrades. To maximize energy savings, projects should make cost-effective efficiency upgrades to systems as well as complementary components. For example, a customer pursuing this pathway could receive an incentive bonus for installing at least one HVAC system and proceeding with an envelope and/or ductwork measure.

Comprehensive Pathway

All comprehensive projects must include at least an energy assessment and air sealing, and all must be performed by BPI GoldStar contractors.

The incentives offered would be as follows:

- Customer incentives and low-interest financing to make home retrofit projects more affordable encouraging greater customer participation and energy savings.
- Incentives to encourage contractor participation and deliver projects that provide energy savings and comfort, as well as healthy and safe homes.

Further, customer 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. Contractors are also rewarded for promoting a comprehensive set of recommendations.

The program's intent is to coordinate with utility offerings and align enhanced incentives, determine financing/on-bill financing, and facilitate cross promotion.

Program Delivery

The program will open new pathways for both contractors and customers to participate. This new program will incorporate prescriptive single and bundled multi measures of mechanical and building envelope upgrades, which can be performed by non-BPI GoldStar contractors, along with a prescriptive and modeled pathway to full comprehensive HPwES projects completed by BPI GoldStar contractors. Rather than asking customers to choose between different programs, NJCEP's intent is to provide clear guidance within a single "umbrella" program so that customers can find support for the level of investment that they are able to make, without being asked to sort through a confusing set of potentially competing programs. With these changes, the program will provide a wider range of retrofit efficiency measures enabling more New Jersey customers to participate.

All contractors will need to meet prerequisite requirements. There will be varying levels of requirements for contractors to participate in each pathway of the program, and some contractors will have to use the program's modeling tool.

Following are the high-level program participation requirements:

- This version of the program will maintain the same eligibility criteria of the currently existing programs (Volume I).
- All installs will be required to be completed by duly licensed contractors.
- The program will provide the list of participating contractors via the NJCleanEnergy.com website.
- There will be an online application process, which will be hosted on NJCleanEnergy.com.
- All participation pathways will include reasonable expiration deadlines.
- All paperwork will be reviewed by the program staff and an appropriate percentage of projects will be field inspected.
- Program management will, with stakeholder and public input, assess the transition to the adoption of the BPI 1200 standard, which would be supported with and accompanied by contractor trainings.

For all contractors participating in the single or bundled, or both, measure pathways, the program will require a one-time contractor participation acknowledgement that the contractor understands the rules and requirements of the program and agrees to abide by those rules. For contractors signing the acknowledgement, the program will provide webinars, sales and other technical trainings, listing on the NJCEP website, and access to program support staff and cooperative advertising.

To initiate participation under the single and bundled pathways, customers will select a participating contractor, who will then submit an application and all required documentation through the portal.

To initiate participation under the comprehensive pathway, a customer requests an assessment performed by a HPwES-participating, BPI GoldStar contractor. The assessment includes recommendations for appropriate energy efficiency improvements relevant to the home, and, in addition, checks for related health and safety issues. Contractors are trained to promote the installation of comprehensive energy efficiency improvement measures, which may be eligible for cash and/or financing incentives based upon the percentage of energy savings estimated for the recommended work scope or upon a fixed payment per measure (i.e., prescriptive incentives).

Participating contractors must employ properly trained staff and must allow random inspections of work to be performed by program management to ensure that all measures are properly installed, and safety precautions are observed. For those participating in the comprehensive pathway, the BPI GoldStar requirements 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 recommendations are 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.

The enhanced outreach team will work with HVAC and insulation manufacturers and distributors to reach and recruit future contractors. They will also continue to promote the programs and work hand in hand with other marketing efforts. Technical field representatives will continue to inspect a percentage of projects while account managers will work with their contractors to ensure they are entering program completion data accurately and coaching them on how to promote their business. In addition, the program will build on existing partner relationships such as utilities, lenders, NJIT, Sustainable Jersey and others.

Quality Control Provisions

The program will encourage its participating contractors to continuously improve by providing feedback based on its reviews of energy modeling, submitted documents, and/or field inspections of completed projects. The program will perform Quality Assurance inspections of a percentage of all jobs completed. 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 help minimize overall Program administration costs.

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

Energy Efficient Products Program

No change from Volume 1, except as described below. As indicated in Volume 1, the Retail Lighting component of this Program is expected to reopen during FY19, possibly with modifications.

Online Marketplace

After July 1, 2018, an Online Energy Efficiency Store would, through various types of public announcement, be made available to all residential customers. It would offer energy efficient products incentivized through the NJCEP's portfolio of energy efficiency programs, creating a "one-stop shop" for many energy efficiency needs. Among other things, this would allow for cross-promotion of the NJCEP's Energy Efficiency programs via re-marketing to customers who purchase products through the Online Energy Efficiency Store. Implementation of the marketplace would be coordinated with any utility offerings to ensure that there is neither redundancy nor market confusion.

Commercial and Industrial Energy Efficiency Programs

General Overview

New Jersey's 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. This Volume 2 provides program descriptions, goals, and budgets for the C&I energy efficiency programs as they are expected to be merged and revised over the course of FY19 into four individual programs: 1) Local Government Energy Audit (LGEA), 2) Direct Install, 3) C&I Buildings, and 4) Building and Systems Evaluation (BASE).

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, designers, and other market participants 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 efficient practices 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 perceived risk-taking involved with specifying technologies less familiar to the local design community, despite the proven reliability of efficient technologies and designs; and,
- Incentive structures and priorities for engineers, designers and contractors, which often do not align with energy efficiency considerations.

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

- Program emphasis on intervention by trained, expert outreach specialists 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 efficiency and 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 measure incentives for more complex and aggressive measures to permanently raise the efficiency levels of standard equipment.
- Whole-building incentive offerings that emphasize building operation and performance in addition to the efficiency of installed equipment.
- Audit and evaluation incentives that allow customers and designers to make informed decisions when it comes to energy improvements.
- Providing information and technical support to customers and designers to facilitate compliance with New Jersey's new commercial energy code as well as future upgrades to that code.
- Offering 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 new construction, applicants to any of the NJCEP C&I Programs must be contributors to the Societal Benefits Charge 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.

Local Government Energy Audit Program

No change from Volume 1.

Direct Install Program

No change from Volume 1.

C&I Buildings Program

Program Purpose and Strategy Overview

This Program will provide financial rebates and incentives to New Jersey's businesses for installation of energy efficient equipment. Through these incentives businesses can reduce their utility costs and improve the environment, while remaining successful in their industries and promoting future growth.

The program's primary goals are to encourage C&I customers to choose high efficiency equipment rather than standard efficiency equipment when making purchase or design decisions and when replacing aging, standard equipment in existing buildings.

The program paths detailed below are meant to streamline participation by removing participation barriers to put customers on the right path based on their needs. The different program paths ensure all scopes of work, from simple to complex, have a method for receiving financial support.

Target Market

Customers eligible for incentives are defined as non-residential electric and/or gas customers of one of New Jersey's regulated electric or gas utilities who contribute (or will contribute, in the case of new construction) to the Societal Benefits Charge fund. Projects include retrofits of existing buildings, new construction, and major renovation.

Program Offerings and Incentives

The Program will include fixed, per unit, rebate amounts (Rebates) for prescriptive technologies, as well as savings-based incentives, i.e., \$/kWh, \$/MMBtu, or \$/therm (Incentives), for custom technologies and whole-building improvements.

The Program will establish several incentive caps, including: percent of project cost cap, maximum incentive per project, and maximum incentive per entity (in a given Fiscal Year).

Program Delivery

The Program will provide financial incentives through different paths, with each path determined by a customer's scope of work and desired level of engagement. Customers will have the opportunity to consult on their project with the Program's Technical Outreach staff who can provide a high-level facility assessment and help guide them to the best program path. Applications can be submitted by a customer or a customer's designated representative (e.g., contractor, engineer). Rebates are typically reviewed and paid after the work is completed, whereas savings-based incentives typically require approvals before work commences. All Rebates and Incentives are available for existing buildings, renovations, and new construction.

- A. Path A: Single and Multi-Measure Rebates – Fixed value rebates for the most popular energy efficiency measures, including Lighting, HVAC, Water Heating, VFDs, Food Service equipment, and Refrigeration. These rebates are best suited for customers looking for a simple and rapid application process requiring a minimal amount of effort. An application is submitted to the Program Manager upon project completion, with requisite supporting documentation (e.g. invoice, tax documentation, equipment specs, etc.). After

completion, a project may be inspected for verification. Once approved, the determined rebate value is paid to the Applicant or other designated company. Rebates can be applied for within 12 months of equipment purchase. Applicants also have the option to submit their Application prior to completing the work and receive a pre-approval notice. Applications in this path will accommodate multi-site projects and multi-measure projects, and the program will allow for separate payments as separate measures are completed.

- B. Path B: Custom Measure Incentives – Technologies that fall outside of the prescribed Rebate list (e.g., building automation systems, VFD on industrial motors, process chillers) or projects requiring more detailed energy analysis (e.g., new construction lighting design), can pursue an Incentive through the Custom Measure path. Custom Measure incentives are paid based on \$/kWh and \$/MMBtu (or therm) of projected savings. For retrofit projects, a base incentive rate will be paid for proposed equipment that meets code, and will scale up for equipment that exceeds code. An Application is submitted to the Program Manager prior to work starting and must contain all required information, including energy savings estimates and calculations, project cost, etc. The Program Manager will then perform a technical review of the Application and may also conduct a pre-construction inspection before issuing a pre-approval notice with the determined Incentive amount. Once the project is installed, the Applicant submits evidence of completion, such as invoices, after which a project may be inspected for verification. Once approved, the determined incentive value is paid to the Applicant. Applications in this path will accommodate multi-site projects and progress payments as measures are completed.

The cost to perform custom measure evaluations may be offset through the NJ BASE program described below in this Volume 2 of this Compliance Filing.

In addition, a performance-based incentive pilot will be investigated for this path. Many custom projects are not regulated by code; therefore, establishing baselines to be used to calculate energy savings and related incentives for such projects is difficult. Through a pilot program, retrofit projects could be incentivized to meter equipment energy use before and after retrofit and to collect incentives based on actual metered savings.

- C. Path C: Whole Building Performance Incentives – Customers looking to evaluate all potential energy saving measures within their facility/site, irrespective of whether they are prescriptive or custom, could pursue incentives under the whole-building path. Due to the complexity of this path, customers must work with a pre-approved contractor certified to provide services under this path. Together, the contractor and customer will evaluate the project building and identify all potential energy efficiency measures. The contractor will use a building energy simulation program (e.g. eQuest, Trane TRACE, etc.) to calculate estimated energy savings from each measure. Together they will determine which measures they should pursue based on energy savings, cost savings, payback, and/or whatever metric is deemed important to the customer. Incentives under this path are paid based on \$/kWh and \$/MMBtu (or therm) of projected savings, but are

strategically higher than what is provided under Path A and B. Therefore, in order to access these higher incentives, projects must have a comprehensive scope of work that (a) assesses the cost-effectiveness of installing energy conservation measures in each of the following areas: (i) lighting, (ii) heating systems, (iii) cooling systems, (iv) ventilation systems, (v) domestic hot water systems, and (vi) building envelopes, and (b) implements all cost-effective energy conservation measures identified through the foregoing assessment. If any such measures not implemented, the applicant must demonstrate why such implementation would not be practicable. The complete set of recommendations is submitted to the Program Manager prior to work starting and must contain all required information including energy savings estimates and calculations, project cost, etc. The Program Manager will perform a technical review of the submittal, and may also conduct a pre-construction inspection before issuing a pre-approval notice with the determined incentive amount. Once the project is installed, the Applicant submits evidence of completion, such as invoices, after which a project may be inspected for verification. Once approved, the determined incentive value is paid to the Applicant or designated representative.

The cost to perform whole-building evaluations may be offset through the NJ BASE program.

- D. Add-On: Optional Savings Verification – Projects going through Path B or Path C, will have the option to garner additional incentives by completing whole-building savings verification. For existing buildings, this is accomplished by comparing pre-retrofit weather-normalized utility bills to those for the first post-retrofit year to demonstrate actual project energy savings. For new construction, this is accomplished by achieving ENERGY STAR Certification through EPA’s Portfolio Manager Program. This allows the program to collect verified savings, as well as demonstrate a project’s persistence of savings and/or excellence in building operations.

Large Energy Users

Customers that are defined as Large Energy Users are able to take advantage of all program paths above. A large customer is defined as those paying at least \$5 million in annual electric and natural gas costs across all of their facilities contributing to the Societal Benefits Charge. For Path B (Custom) and C specifically, these customers will receive a higher rate of incentive up to the maximum cap of 3% total annual energy cost (equivalent to NJCEP contribution), not to exceed total project cost (or incremental cost in the case of new construction). Large Energy Users will be allowed to bank their contribution for up to 2 years.

Building and Systems Evaluation Program

Program Purpose and Strategy Overview

The new NJ Building and Systems Evaluation Program (NJ BASE) will be part of the larger C&I program. It is a unique opportunity to provide a new offering to customers in the C&I sector. The goal of this program is to offer building-specific technical assistance that guides customers to a clear and informed energy improvement decision, which ultimately results in the implementation of energy conservation measures. Customers will work with a pre-approved Program Energy Consultant (PEC) to apply for incentives that offset the cost of the proposed scope of work.

This program addresses several key market barriers that prevent customers from implementing energy conservation measures and strategies, including:

- The cost required to perform a facility specific technical energy assessment.
- Lack of understanding with regards to energy usage and how to begin the process of developing energy saving strategies.
- Lack of appreciation for the benefits of both short-term and long-term energy reduction approaches and how they impact a business's bottom line.

While NJCEP offers a free audit program to local governments and municipalities, the private sector has not been provided an incentivized opportunity to perform site specific objective analysis of facilities and systems. This program will fill that gap and capture savings opportunities by helping customers who know they want to improve their energy use, but do not have the technical knowledge, in-house staff, or financial incentive to take the first step. NJ BASE will enlist a group of approved PECs to work with the customer to provide services such as:

- Basic energy audits.
- Retro-commissioning studies and designs.
- Peak load reduction strategies.
- Energy efficiency analyses for industrial processes and data centers.
- More complex feasibility studies for energy efficiency and renewable energy technologies. such as combined heat and power generation, energy storage, and geothermal.
- Planning and design review for new construction.

By providing the program incentives on a cost-share basis, customers will have a financial stake in the results and be more inclined to move forward with implementation based on the findings of the analysis. It will also allow NJCEP Staff to better vet larger or more complex projects earlier in their decision-making process, leading to more reliable energy savings. Due to the high rate of project implementation that results from this cost-share model, this program is expected to achieve deeper savings at an increased participation rate. NJ BASE also addresses a hidden corner of the NJCEP market, which will provide additional energy savings. This approach will help maximize savings by capturing hidden energy efficiency opportunities and incentivizing customers to implement measures through other NJCEP programs.

Target Market

This program will aim to serve private commercial and industrial facilities in New Jersey, which will include, among other things, office buildings, industrial facilities, retail, health care facilities, private institutions or schools, and data centers. Public entities will be directed to the Local Government Energy Audit Program. Facilities must be a customer of an NJ Investor Owned Utility that pays into the Societal Benefits Charge (SBC). Eligibility will be determined by requiring utility bill verification of SBC payments having been made within the past 12 months. For new construction planning and assistance, we will require notification of new account setup with a utility that pays into SBC.

Program Offerings and Incentives

Eligible projects will receive a 50% cost-share incentive, not to exceed \$100,000 in most cases. Higher caps may be considered where multiple, high-energy-consuming properties are involved. Pricing will be based on pre-approved, competitively-bid rates for the PECs performing the work.

Program Delivery

The NJ Building and Systems Evaluation program will focus on providing customers the customized and site specific technical analysis they need to implement energy projects.

Key Design Features of the program include:

- Delivery through a group of pre-approved PECs, who will execute projects on behalf of the program.
- Customized technical services including, but not limited to:
 - Complex/advanced/emerging technology feasibility studies.
 - ASHRAE Level II and III audits.
 - Strategic Energy Management plans.
 - Industrial and process efficiency analysis.
 - Data center efficiency analysis.
 - Water/Wastewater Treatment efficiency analysis.
 - Peak load reduction.
 - CHP generation feasibility.
 - Energy Storage feasibility.
 - Retro-commissioning evaluation.
 - New construction early design intervention, plan/design review, net zero analysis.
- Coordination with Program Technical Outreach staff to maintain customer engagement and provide guidance on equipment incentive programs where applicable.

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

- Develop a network of PECs through the issuance of an RFP, reviewing qualifications, and approving rate schedules.

- Work with customers interested in having their facilities assessed and match them with a PEC that has relevant experience based on the facility type and the customer's needs and expectations.
- Review and approval of project scopes of work before any work or studies commence. The purpose of this review is to ensure (1) the scope of work clearly details where potential energy efficiency opportunities exist and why a study or technical assistance is needed, and (2) total cost of the scope of work is determined in accordance with agreed upon rates, reasonable hours, and appropriate staff levels.
- Review final reports/results provided by the PEC and ensure it is in line with the approved scope of work.
- Review PECs' invoices and ensure they are in line with the approved scope of work. Invoices must contain total study costs, non-labor costs, individual staff titles with hourly rates, and dates and hours of each task. Requests may also be made to provide a copy of customer's canceled check to the energy consultant showing the total study cost and customer payment portion. Upon Program approval, the Program will issue payment to the PEC for the Program's share of the invoices, i.e., 50% of the actual cost or of the approved scope of work cost, whichever is less.

PECs will be responsible for the following program elements:

- Completion of regular renewal of qualification requirements as determined by the Program Manager.
- Work with the customer and NJ BASE Program Technical Outreach (where applicable) to understand their needs and overall goals for identifying energy saving opportunities and strategies.
- Provide objective technical analysis and expertise, develop scope of work, time line for execution, and agreed upon customer share of the costs.
- Provide proposed scopes of work to the Program Manager for review and approval, revise as needed.
- Execute the scope of work within the allotted time frame (e.g. 1 year).
- Provide Final Reports to the Program Manager that includes overall project summary sheet, background, project description, project results/recommendations, economic analysis, and benefits. Reports will also include itemized project implementation costs, cost estimates, and estimated energy savings calculations. Revise reports as requested by Program Manager.
- Provide invoices to the Program Manager for payment processing and revise as needed.
- Assist customers with implementation of scopes of work and applications to NJCEP programs.

Quality Control Provisions

Documented policies and procedures provide guidelines to ensure consistency in the processing and quality control for all 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 incentive qualification and 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.

Multifamily Program

Program Purpose and Strategy Overview

Historically, NJCEP has provided energy efficiency incentives to multifamily projects through a variety of Residential and C&I programs, with the choice of program being dependent on the size and construction details of the multifamily housing in question and on the energy efficiency opportunities present. While this approach has resulted in energy efficiency improvements for many multifamily properties, the criteria for choosing the “right” program can create some confusion for applicants, creating the potential for missed savings opportunities.

Therefore, a new Multifamily (MF) Program will be introduced to advance the following objectives:

- Align with the proposed program design and delivery structure outlined in the Strategic Plan by consolidating multiple MF energy efficiency program offerings into a single program entry point with “tiered” program paths.
- Simplify participation through consolidated program delivery thus eliminating the need for customers to navigate multiple MF program offerings, as well as provide dedicated technical outreach and assistance.
- Improve access for segments of MF housing that have been unable to participate because current MF offerings have not been a good fit.
- Streamline program administration.
- Increase participation and maximize savings for incentive dollars spent.

Target Market

- Multifamily buildings will be defined as having three (3) or more independent resident housing units² and a single owner or management entity as the participant (e.g., building owner, developer, management company, homeowners’ association).
 - Applicants will be building owners, managers, and developers. Individual residents will be ineligible for the Multifamily program but will be directed instead to potentially applicable Residential Programs.
 - Single family homes, two-family homes, and townhomes designed as single family homes will be ineligible but may be directed to potentially applicable Residential Programs.
- Certain types of multifamily housing, such as shelters, dormitories, independent living facilities, and other similar housing types that more resemble single-room occupancy (SRO) rather than multiple “dwelling units”³ are also eligible, but with reduced

² N.J. Stat. § 55:13A-3 (k) and 2015 NJ International Building Code definition for Residential Group R-2.

³ 2015 NJ International Building Code definition: “Dwelling unit” a single unit providing complete, independent living facilities for one or more persons living as a single housekeeping unit, including permanent provisions for living, sleeping, eating, cooking, and sanitation.

incentives that are scaled to the considerably smaller living area typical of these SRO-type housing as compared to that of conventional apartments.

- Energy efficiency measures will be considered both in-unit and within associated common areas, regardless of whether there are residential and/or commercial utility accounts.
- Multifamily properties will no longer be eligible for incentives under other Residential or Commercial program such as Home Performance with ENERGY STAR, ENERGY STAR Homes, Warm/Cool Advantage, Pay for Performance, SmartStart, or Direct Install, but will instead participate in equivalent program paths within the Multifamily Program. There will be an appropriate, probably approximately three- to six-month, transition period between the old programs and the new Multifamily Program.

Program Offerings and Incentives

The new MF Program will include several program paths and associated incentive levels. Incentives will include fixed, per unit of equipment, rebate amounts (Rebates) for Prescriptive technologies, as well as savings based incentives, \$/kWh, \$MMBtu, or \$/therm, for custom technologies, and \$/residential unit (e.g., per individual apartment) incentives for whole-building improvements.

Program Delivery

- NJCEP Outreach Team members will work to build relationships with stakeholders within the multifamily market through proactive engagement with large multifamily owners and management organizations, as well as applicable associations and membership organizations. Particular attention will be paid to affordable-rate housing, including working with NJ Housing and Mortgage Finance Agency and Comfort Partners, to facilitate and promote participation. Technically trained outreach staff will identify potential customers for this program, as well as offer walk-through assessments to get a sense of the potential scale of the savings opportunity, provide the owner with an understanding of the potential benefits and costs to participate, and help identify the program path most-suited to the owner's level of interest and opportunity.
- More in-depth energy analysis, including ASHRAE Level II audits, may qualify a participant for a technical assistance, cost share incentive through the new NJ BASE Program.
- The program will continue to leverage the resources and expertise within the professional market by utilizing pre-approved energy services companies, contractors, raters, and builders to deliver energy efficiency improvements to the MF sector. Companies from the existing lists of Home Performance with ENERGY STAR contractors, Residential New Construction raters and builders, and Pay for Performance partners will have an opportunity to qualify to serve this program. Because technical opportunities and requirements will differ between high-rise and low-rise structures, and between existing buildings and new construction, the program may recognize different levels of certifications (e.g., Building Performance Institute (BPI), ASHRAE Building Energy

Modeling Professional) for these energy advisors and contractors. Training will be needed for participating contractors.

The MF program will include several program paths based on the needs and scope of each project. This approach will reward projects that achieve comprehensive savings, but will also provide a less challenging prescriptive path for projects that do not have comprehensive savings opportunities and building owners that are unwilling or unable to make the required comprehensive investment. The program will strive to engage prescriptive-level participants to see the NJCEP as a resource for future projects and to urge them to think of energy efficiency as an ongoing process rather than a one-off program.

- 1) Path A: Single and Multi-measure Prescriptive: Fixed value Rebates for popular energy efficiency measures, including Lighting, HVAC, Water Heating, and Appliances.
- 2) Path B: Custom Measures: Technologies that fall outside of the prescribed Rebate list (e.g., building automation systems, VFD on industrial motors, process chillers) or projects requiring more detailed energy analysis (e.g., new construction lighting design), can pursue an Incentive through the Custom Measure path.
- 3) Path C: Whole-Building: The property will undergo a comprehensive energy audit, or, in the case of new construction, a thorough review of project plans, and will bundle multiple measures into a single application with the goal of meeting minimum scope of work requirements defined in the program and/or obtaining applicable certifications (e.g., ENERGY STAR). Incentives under this path will be designed to be more attractive than those available through Path A and B. Additionally:
 - a. Projects will be required to demonstrate that they meet program requirements through energy modeling.
 - b. Savings will be achieved on a whole-building basis (total combined energy for units and common areas/systems), and incentives will increase with higher savings projections.
 - c. Incentives will be paid on a per residential unit (e.g., per individual apartment) basis so that the potential incentive is immediately transparent to the owner/developer.
 - d. Savings thresholds and incentive amounts may be different for new construction than for existing buildings due to differing code baselines.
- 4) Add-On: Optional Savings Verification: Projects going through Path B or Path C, will have the option to garner additional incentives by completing whole-building savings verification. For existing buildings, this is accomplished by comparing weather-normalized utility bills pre-retrofit to those for the first post-retrofit year to demonstrate actual project energy savings. For new construction, this is accomplished by achieving ENERGY STAR Certification through EPA's Portfolio Manager Program. This allows the program to collect verified savings, as well as demonstrate a project's persistence of savings and/or excellence in building operations.

Additional design considerations of the MF program include the following:

- We will leverage the existing appliance recycling contractor to offer bulk pick-up for eligible appliances. Being able to pick up a large volume of appliances at a single multifamily building location may offer the program cost savings while expanding program benefits.
- We will investigate the level of interest in providing resident leave-behind kits, whether as part of a Level-1/walkthrough audit or as part of Path C, in each case, for existing buildings projects. The program achieve savings for each kit, while also educating residents on how to easily save energy in their homes.
- During program design, we will explore modified incentives for affordable housing, defined by income eligibility requirements,⁴ in recognition of the significant financial barriers faced by affordable housing owners when contemplating energy efficiency upgrades.
- Program participation agreements will continue to provide that building owners are responsible for complying with all federal, state and local applicable laws and regulations and for assuring occupant health and safety. For low-rise buildings, new construction, and any buildings participating under federal programs, specific health and safety requirements—such as mechanical ventilation— may continue to be required.
- EPA and DOE Federal Program recognition (for Path C):
 - New construction buildings participating in the multifamily program that achieve applicable program certification (i.e. ENERGY STAR, ZERH, MFHR) will continue to follow steps to meet the EPA or DOE requirements and standards to meet the proper certificate/label.
 - Existing low-rise building projects meeting all Home Performance with ENERGY STAR requirements will be counted towards national DOE’s HPwES participation levels and their contractors will be eligible for consideration for EPA’s Century Awards.

Multifamily projects interested in CHP, fuel cells, energy storage, SRECs, or Renewable Energy initiatives will be directed to the appropriate existing program within the NJCEP portfolio. These technologies will not be integrated into the MF Program at this time.

We will continue to analyze and consider the possibility of adding an incentive that would consist of subsidized financing for the participant’s share of the cost of the measures eligible for this program.

⁴ It is assumed that multifamily properties that meet Comfort Partners eligibility criteria (225% of federal poverty level and less than 14 units) will receive services through that program.

Distributed Energy Resources

Combined Heat and Power-Fuel Cell

No change from Volume 1.

Renewable Electric Storage Program

No change from Volume 1. However, the Program Administrator and Board Staff during FY19, will seek input from stakeholders and the public regarding the Program.

Renewable Energy

Solar Renewable Energy Certificate Registration Program

No change from Volume 1.

State Energy Program

No change from Volume 1 (other than to conform the names of the subject NJCEP programs to reflect changes discussed elsewhere in this Volume 2).

Appendices for New Programs and Components

Detailed incentive and rebate amounts, and other details, will be developed and submitted to the Board for review and approval during the course of FY19.