



New Jersey SmartStart Buildings[®]
Program Guide
May 7, 2016

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PREFACE

New Jersey SmartStart Buildings[®] is a statewide energy efficiency program administered by the New Jersey Board of Public Utilities' Office of Clean Energy and delivered by the Commercial/Industrial Program Manager, TRC Energy Services.

The incentives, technical assistance, and other services described in this Program Guide are available to qualified commercial, industrial, institutional, government or agricultural customers in the state who are planning to construct, expand, renovate, or remodel a facility, or to replace electric or gas equipment. It also provides incentives to local governmental entities to conduct investment grade audits of their facilities as well as professional services to help guide customers through designing and planning phases. Projects must be located within the service territory of at least one of the following New Jersey Utilities:

1. Atlantic City Electric
2. Jersey Central Power & Light
3. New Jersey Natural Gas
4. Elizabethtown Gas
5. Public Service Electric and Gas
6. Rockland Electric Company
7. South Jersey Gas

Projects located in areas where electricity is provided by a municipal utility are eligible for only those portions of the program that address the energy efficiency of natural gas equipment. Customers planning to construct or expand a building are eligible for services and incentives under this program.

Please note: pre-approval is required for Lighting, Lighting Controls and Custom measures. This means you must submit an Application Form and receive an approval letter before any equipment is installed.

SECTION I - PROGRAM OVERVIEW

A. Program Eligibility

The New Jersey SmartStart Buildings Program is available to qualified non-residential customers, including commercial, industrial, educational, institutional, government, and agricultural operations who are constructing, expanding, renovating facilities, or replacing equipment. Projects located in areas where electricity is provided by a municipal utility are eligible for only those portions of the program that address the energy efficiency of natural gas equipment. Customers who have not contributed to the Societal Benefits Charge of the applicable New Jersey Utility are not eligible for incentives offered through this program. The type of service electric and/or gas must correlate to the applicable application type.

Customers planning to construct or expand a building are eligible for services and incentives under this program.

Please note: pre-approval is required for Lighting, Lighting Controls and custom measures. This means you must submit an Application Form and receive an approval letter before any equipment is installed.

Pre-approval is not required for the following technologies; Electric Chillers, Gas Cooling, Electric Unitary HVAC Equipment, Ground Source Heat Pumps, Gas Heating, Variable Frequency Drives, Gas Water Heating, Refrigeration Doors/Covers, Refrigeration Controls, Food Service Equipment, Refrigerator/Freezer Case Premium Efficiency Motors (ECM).

However, any customer and/or agent who purchases and installs equipment without Program Manager Approval does so at his/her own risk.

B. Program Delivery

This program is delivered using consistent statewide eligibility criteria and measure lists, plus a single set of program application forms. Clients can be assured that the services and incentives available through the program will be the same everywhere in New Jersey.

C. “Market-Driven” Program

The primary goal of New Jersey SmartStart Buildings is to target the customer-initiated construction events. Incentive and service offerings are tailored to influence market-driven events by acknowledging the customer’s own initiative and the time-sensitive nature of these events.

- **New Construction and Additions** During new construction and addition

projects, critical decisions, from an energy perspective, are made regarding building design and components, including: 1) the building form and configuration; 2) lighting systems; 3) heating, ventilation, and cooling systems (HVAC); 4) industrial process; and 5) other energy-using equipment.

- **Renovations** Renovation projects typically entail the wholesale “gutting” of a building, the replacement of the HVAC and lighting systems and, often, major modifications to the building shell.
- **Remodels** Remodeling is an appearance upgrade that may include: 1) lighting changes (soft remodel); 2) a new configuration of internal space or alteration in

mechanical/electrical systems to update appearance; 3) reconfiguration of space for a tenant; and/or 4) major configuration or system changes for safety/security or other reasons (hard remodel).

- **Equipment Replacement** Although equipment (e.g., lighting fixtures, motors, HVAC units, compressors, pumps, fans, etc.) is often replaced at times of remodeling or renovation, it is also replaced at other times, i.e., if the equipment fails, becomes prohibitively expensive to maintain, provides inadequate service, or becomes inappropriate for new uses.

D. Summary of Program Components

The following provides a summary of the services and incentives available through the New Jersey SmartStart Buildings Program. Complete details are found in subsequent sections of this Program Guide. These offerings are subject to revision as the program evolves and in response to changes in the Commercial and Industrial (C&I) construction market. Consult program representatives before beginning a project.

The New Jersey SmartStart Buildings Program has several participation options, depending on the building's status in the construction or renovation schedule and the owner's wishes. There are also several specialized services and options to address unique efficiency opportunities.

Customers can participate in the Program via two distinct avenues:

1. **Prescriptive Measures** – allows customers to choose equipment from a pre-qualified list of measures and receive an incentive.
2. **Custom Measures** – allows customers to request technical assistance to qualify unique measures of their choosing that are not on the prescriptive list, and may receive an incentive.

Projects with a contract threshold of \$15,444 are required to pay no less than prevailing wage rate to workers employed in the performance of any construction undertaken in connection with Board of Public Utilities financial assistance, or undertaken to fulfill any condition of receiving Board of Public Utilities financial assistance, including the performance of any contract to construct, renovate or otherwise prepare a facility, the operations of which are necessary for the receipt of Board of Public Utilities financial assistance. By submitting an application, or accepting program incentives, applicant agrees to adhere to New Jersey Prevailing Wage requirements, as applicable.

SECTION II - PROGRAM SERVICES, INCENTIVES, & REQUIREMENTS

A. Basic Program

1. Program Measures and Incentives

a. Prescriptive Measures

Overview

Prescriptive Measures allow customers to choose equipment from a pre-qualified list of energy-efficiency measures and receive a fixed incentive. This path is designed for customers who have projects that are beyond the design phase. These may include new construction, renovation, remodeling, and equipment replacement projects.

New Jersey Energy Code:

On September 21, 2015, and effective as of March 21, 2016, the State of NJ adopted the ASHRAE 90.1-2013 energy code for all commercial and industrial buildings, in regards to energy conservation. Since the energy code change occurs mid-program year and current program efficiencies/designs are based on former code (ASHRAE 90.1-2007), short term modifications are required to sustain the program through FY16. Please refer to specific technology descriptions and applications for more details.

Eligibility and Incentives

Commercial and industrial customers of any size are eligible for measures found in the prescriptive measure lists. Prescriptive measures are those technologies where energy savings can be predicted with reasonable accuracy across all applications. These technologies include: Electric Chillers, Gas Cooling, Electric Unitary HVAC Equipment, Ground Source Heat Pumps, Gas Heating, Variable Frequency Drives, Gas Water Heating, Refrigeration Doors/Covers, Refrigeration Controls, Food Service Equipment, Refrigerator/Freezer Case Premium Efficiency Motors (ECM), Lighting and Lighting Controls.

A summary of the range of technologies and incentives is listed below. Full Eligible Measure and Incentive Tables, as well as technical and minimum requirements relating to specific prescriptive measures, are appended to this Program Guide.

Projects with a contract threshold of \$15,444 are required to pay no less than prevailing wage rate to workers employed in the performance of any construction undertaken in connection with Board of Public Utilities financial assistance, or undertaken to fulfill any condition of receiving Board of Public Utilities financial assistance, including the performance of any contract to construct, renovate or otherwise prepare a facility, the operations of which are necessary for the receipt of Board of Public Utilities financial assistance. By submitting an application, or accepting program incentives, applicant agrees to adhere to New Jersey Prevailing Wage requirements, as applicable.

SmartStart Energy Code Modification:

Existing Buildings

- For application technologies that currently meet or exceed the new code, customers will be able to apply for those incentives with no change to the process.
- For select application technologies that do not meet the new code (e.g. Central DX systems), customers may only apply for these incentives by being “grandfathered” through either (a) proof of purchase or (b) complete building permit application(s) submitted to local permitting agency, in each case prior to the code change cut-off (March 21, 2016). Program Manager will have discretion to accept other forms of documentation on a case-by-case basis.

New Construction

- For application technologies that currently *meet or exceed* the new code, customers will be able to apply for those incentives so long as their proposed equipment **exceeds** the new code. Exceptions will be made for applicants that can demonstrate proof of approval under old code (per above), in which case proposed equipment needs only to **meet** application requirements. Program Manager will be provided discretion to accept other forms of documentation on a case-by-case basis. For select application technologies that do not meet the new code – the same guidance as Existing Buildings will be followed.

b. Custom Measures

Overview

Custom Measures are designed to encourage measures that are innovative and more energy efficient than today's standards, and have not yet been adopted as a prescriptive technology. This path allows customers to request an assessment of measures of their own choosing that are not on the prescriptive list. The Custom Measures option allows for consideration of projects that are more complex than the Prescriptive measures, but involve less than a whole building design.

Eligibility, Services, Requirements, and Incentives

Custom measures are more complex projects that do not lend themselves to, or have not yet been adopted as, prescriptive projects, and yet involve less than a comprehensive building design. Often the savings generated by these measures are site- and end-use specific, and thus a detailed analysis is required to qualify them for incentives. Custom Measures may include HVAC systems, refrigeration measures, and a variety of industrial process end-uses.

Project viability, eligibility, and incentives are assessed on a case-by-case basis and may be determined as part of a technical study, which details energy and demand savings and project costs. The study is conducted according to specified procedures and is subject to our review and approval. Consult the appendix of this document for a guide to elements needed for a technical study proposal. In other cases, custom measure applications may contain all of the information necessary for processing without the need for a formal technical study.

To be eligible, a proposed custom project must offer a minimum first-year energy savings of 75,000 kWh for electric projects or 1,500 therms for gas projects. This requirement may be waived by the Market 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.

The baseline standard practice against which energy savings for each proposal will be judged is to be determined on a case-by-case basis, using such resources as: current New Jersey baseline studies and other market research; the program experience of the Commercial/Industrial Market Manager; and experience of the New Jersey utilities or utility/public program experience from other comparable jurisdictions.

The established incentive cap will be the lesser of a set value of \$0.16/kWh and \$1.60/therm based on estimated annual savings, 50% of the total installed incremental project cost, or a buy down to a one year payback based on incremental savings and project cost. The baseline for retrofit projects will be existing conditions. Custom measures for retrofit projects must exceed ASHRAE 90.1-2013¹ standards by at least 2% where specific standards exist. Where ASHRAE guidelines do not apply, measures will be required to exceed industry standards as determined by the Consortium for Energy Efficiency (CEE), EPA's ENERGY STAR[®], and/or others. New construction and complete "gut-rehab" projects will use ASHRAE 90.1-2013² as the baseline for estimating energy savings. For new construction and major gut/rehab projects, baseline

^{1,2} Project efficiency must exceed ASHRAE 90.1-2013 by 2% unless confirmation of grandfathering under former code (ASHRAE 90.1-2007) is provided

measure costs will be determined on a case-by-case basis, using the Market Manager's measure cost research, program experience, and technical judgment.

We reserve the right to limit funding on a per project or customer basis, based on the availability of funds and other program considerations.

SECTION III - PROCESS TO EVALUATE POTENTIAL TECHNOLOGIES OR MEASURES

Guidelines for Qualifying Technologies as Potential Prescriptive Measures in the New Jersey SmartStart Buildings Program

The purpose of this document is to assist vendors on how technologies or measures can be included in the New Jersey SmartStart Buildings (NJSSB) program's prescriptive list for incentives. This document defines, in general terms, how energy efficient technologies and conservation measures can be added to the prescriptive list and identifies the process steps.

Conservation measures and energy efficient technologies that are on the present prescriptive list have established performance and reliability characteristics that lend them to well-defined outcomes for energy savings and long life of use.

For energy efficient technologies and conservation measures that are not on the present prescriptive list, a custom path in the program has been developed for the purpose of evaluating their performance and potential energy savings characteristics. This path allows for new or unknown technologies and measures to become eligible for incentives and be tested at customer locations within the State. If these custom measures satisfy the requirement of predictability of energy savings and the general procedure below, they may move forward and be adopted onto the prescriptive list.

General Procedure for evaluating new potential measures

Step A. Screening Criteria

The energy efficient technology or measure must meet the following screening criteria:

- Cannot be 'standard practice' Definition: A 'standard practice' measure is already being widely purchased and installed in New Jersey without incentives (e.g., insulation). This may be a partially subjective determination based on the professional judgment of program representatives.
- Cannot void end use equipment manufacturer's warranty. The vendor must document that the product will not impact OEM warranty or void any safety certification of impacted equipment.
- Must be safety tested and certified by a nationally recognized testing lab (NRTL).
- Must meet codes (all applicable local, state, and federal codes).
- Must be commercially available in the marketplace from two or more manufacturers.
- Energy performance evaluation must be conducted by a nationally recognized independent testing lab including any negative impact on performance of host equipment.

- Should not be a maintenance measure or a substitute for maintenance activities. This may be a partially subjective determination based on the professional judgment of program representatives.
- Should have substantial market potential based on the judgment of program representatives.

First pass the 8 screening criteria above, then;

Step B.

Demonstrate at least three (3) installations within the custom path, with product in use at several customer locations within New Jersey. This requirement will be determined by program representatives on a case-by-case basis. Metering of some installations may be required to satisfy steps C, D and E below.

Step C.

New measures will be evaluated using a custom measure-screening process including third-party case studies or laboratory reports may be used to support energy savings figures and provide a thorough description of the unique technology. The program representatives may determine additional necessary information required for the evaluation of new technologies.

Step D.

Savings should be predictable enough to establish an incentive that meets confidence of energy savings as other prescriptive measures do.

Step E.

Costs should be sufficiently constant to establish a prescriptive incentive.

After above steps have been met, and the technology evaluated, the program representatives will present the technology and a recommended incentive to the Energy Efficiency Committee at their monthly meeting. After committee presentation and the opportunity to community, a recommendation is sent to the NJ Board of Public Utilities' Office of Clean Energy to adopt the technology as a prescriptive measure in the program. If the Office of Clean Energy agrees with the findings, this technology or measure will become part of the program.

APPENDIX - Specific Requirements

New Jersey SmartStart Buildings Program Custom Measure Opportunities

Requires pre-approval

Application or Energy End Use	Current Design Practice Or Baseline Practice	Possible Energy-Efficiency Improvements
Window and Skylight Glazing	<p>0.78 for windows 10% or less of total wall area</p> <p>0.59 for windows between 10% and 30% of total wall area</p> <p>0.52 for windows greater than 30% of total wall area</p> <p>0.46 in curtain walls, atrium and skylights</p>	<p>0.51 for windows 10% or less of total wall area</p> <p>0.44 for windows between 10% and 30% of total wall area</p> <p>0.41 for windows greater than 30% of total wall area</p> <p>0.35 in curtain walls, atrium and skylights</p>
Air Distribution in all building types	Constant volume distributed HVAC systems	VAV Distribution Systems
Fume hood exhaust systems (Not for kitchen hoods)	VAV and VFD supply and exhaust distributed HVAC systems	Improvements above this baseline
Water Source Heat Pump Systems	<p>Constant flow water loop</p> <p>Forced draft cooling tower with constant speed centrifugal fan</p>	<p>Variable flow water loop with VFD</p> <p>Cooling tower with VFD or evaporative cooling tower with or without VFD</p>
Chilled Water Plant (new and existing)	<p>Chiller water reset based on return water temp</p> <p>Primary/Secondary pumping with constant speed pump</p> <p>Cooling towers with multiple fans or dual fans with single speed.</p> <p>Constant flow condenser water pump system</p> <p>Chiller sequencing controls on load</p> <p>No heat-x-changers</p> <p>No thermal storage</p>	<p>Chilled water reset based on building HVAC loads and discharge air temps</p> <p>VFD's on pumps or multiple sequenced high efficiency pumps on secondary distribution system</p> <p>VFD's on condenser water pump system</p> <p>Optimization chiller sequencing controls based on load and overall operation kW/ton</p>

Building Controls	No EMS (EMS is defined as an energy management system that controls multiple technologies.)	<p>Controls on more than one technology and must have a central controller.</p> <p>Additional eligibility requirements may be required. Typically, HVAC and lighting are common systems to be controlled.</p> <p>Control systems must achieve a more comprehensive level of control than required by ASHRAE 90.1-2007.</p> <p>Basic temperature setback and occupancy/time clock based lighting management will not be considered as a custom measure.</p>
Boiler equipment (greater than 1500 MBH)	Single operation burners	Modulating Burners
Package Humidification	Electric resistance steam generators	Ultrasonic humidification
Retail display refrigeration	<p>Multiplexed refrigeration racks</p> <p>Constant speed on lead compressors</p> <p>Plate and frame sub-coolers</p> <p>Floating head pressure controls</p> <p>T8's for case lights</p> <p>Air cooled condensers</p> <p>Screw compressors</p> <p>Case doors with anti-sweat heat controls</p> <p>Humidity controls with reheat</p> <p>Refrigeration heat recovery for DHW</p> <p>Self contained TEV (thermal expansion valves)</p> <p>Rack type refrigeration comp.</p>	<p>VFD on lead compressor</p> <p>Evaporative condensers VFD's on condenser fans</p> <p>Scroll compressors</p> <p>Heat pipe on HVAC unit with coil bypass</p> <p>Low temperature air distribution</p> <p>Electronic controlled TEV</p> <p>Distributed refrigeration systems (no pumps, smaller diameter pipes)</p>
Other commercial or Industrial refrigeration	<p>Evaporative cooled condensers</p> <p>Standard size evaporative coils and controls</p> <p>Single-stage compressor system</p> <p>Floating head pressure controls, electric defrost control, and sub coolers</p> <p>Standard design cooling equipment and controls sequences</p>	<p>Oversized evaporative condensers with VFD's on evaporative condenser fans</p> <p>Oversized/lower fan HP evaporative coils</p> <p>Multi-stage compressor systems</p> <p>Oversized cooling equipment with thermal shifting capacity</p> <p>Gas engine driven compressors</p> <p>Desiccant dehumidification not covered in prescriptive</p>

Waste water treatment and fresh water plants	Fine bubble aeration with multi-stage centrifugal blower and constant speed motors, VFD's on all pumps 25 HP and larger, constant speed on all pumps 25 HP or less, VFD's on ID fans and fume control system	
Ice Rinks	Low E ceilings Water-cooled electric chiller Multi-stage brine pump (smart drive)	Gas engine driven compressors Desiccant dehumidification not covered in prescriptive Ice temperature reset based on occupancy/use
Plastic Injection Molding Machines	Enhanced hydraulic operated with VFD's on motor	All electric machine, but may include an upgrade to existing chilled water plant (50-400 ton units excluded).
Interior lighting	See Performance Lighting Approach	
Exterior Lighting	See Performance Lighting Approach	
Lighting controls	Only measures in present program will receive an incentive. See building controls for custom	

Ice Rinks	Low E ceilings Water-cooled electric chiller Multi-stage brine pump (smart drive) Floating head pressure controls down to 75 deg F	Gas engine driven compressors Desiccant dehumidification not covered in prescriptive Ice temperature reset based on occupancy/use
Plastic Injection Molding Machines	Enhanced hydraulic operated with VFD's on motor	All electric machine, but may include an upgrade to existing chilled water plant (50-400 ton units excluded).
Interior lighting	See Performance Lighting Approach	
Exterior Lighting	See Performance Lighting Approach	
Lighting controls	Only measures in present program will receive an incentive. See building controls for custom	

SmartStart Prescriptive Incentives
Please see specific application for additional technical requirements.

Electric Chillers Efficiency Levels and Incentives

Path A – Constant Speed Units
Path B – Variable Speed Units

For new construction projects, proposed equipment must exceed minimum program efficiency requirements for Path A (constant speed) IPLV and Path B (variable speed) Full Load.

Minimum Qualifying Efficiencies									
Type	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					10.3	13.7	9.7	16.12
Air Cooled	tons ≥ 150					10.3	14	9.7	16.42
Water Cooled, Positive Displacement	tons < 75	0.735	0.6	0.78	0.49				
Water Cooled, Positive Displacement	75 ≤ tons < 150	0.706	0.56	0.75	0.48				
Water Cooled, Positive Displacement	150 ≤ tons < 300	0.647	0.54	0.68	0.431				
Water Cooled, Positive Displacement	300 ≤ tons < 600	0.598	0.52	0.625	0.402				
Water Cooled, Positive Displacement	tons ≥ 600	0.549	0.5	0.585	0.372				
Water Cooled, Centrifugal	tons < 150	0.598	0.55	0.695	0.431				
Water Cooled, Centrifugal	150 ≤ tons < 300	0.598	0.55	0.635	0.392				
Water Cooled, Centrifugal	300 ≤ tons < 400	0.549	0.52	0.595	0.382				
Water Cooled, Centrifugal	400 ≤ tons < 600	0.549	0.5	0.585	0.372				
Water Cooled, Centrifugal	tons ≥ 600	0.549	0.5	0.585	0.372				

Incentives*					
Type	Capacity	Constant Speed		Variable Speed	
		Base \$/ton	Performance* \$/ton	Base \$/ton	Performance* \$/ton
Air Cooled	tons < 150	\$20.00	\$3.50	\$90.00	\$4.00
Air Cooled	tons ≥ 150	\$20.00	\$2.75	\$92.00	\$4.00
Water Cooled, Positive Displacement	tons < 75	\$13.00	\$2.25	\$40.00	\$2.50
Water Cooled, Positive Displacement	75 ≤ tons < 150	\$20.00	\$2.00	\$43.00	\$2.00
Water Cooled, Positive Displacement	150 ≤ tons < 300	\$17.00	\$2.00	\$43.00	\$2.00
Water Cooled, Positive Displacement	300 ≤ tons < 600	\$15.00	\$2.25	\$37.00	\$2.00
Water Cooled, Positive Displacement	tons ≥ 600	\$30.00	\$2.00	\$44.00	\$2.00
Water Cooled, Centrifugal	tons < 150	\$24.00	\$2.25	\$12.00	\$4.00
Water Cooled, Centrifugal	150 ≤ tons < 300	\$10.00	\$2.00	\$30.00	\$2.50
Water Cooled, Centrifugal	300 ≤ tons < 400	\$8.00	\$2.00	\$20.00	\$2.00
Water Cooled, Centrifugal	400 ≤ tons < 600	\$8.00	\$2.00	\$25.00	\$2.00
Water Cooled, Centrifugal	tons ≥ 600	\$8.00	\$2.00	\$25.00	\$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.

Gas Cooling Equipment Efficiency Levels and Incentives

Gas Absorption Chillers			Regenerative Desiccant Units
Size Range	Indirect-Fired (Incentive & Efficiency Threshold)	Direct-Fired (Incentive & Efficiency Threshold)	Incentive per CFM (based on process airflow)
<100 tons	≥ 1.1 F.L. COP \$450/ton	≥ 1.1 F.L. COP \$450/ton	\$1.00 per CFM
100 to 400 tons	≥ 1.1 F.L. COP \$230/ton	≥ 1.1 F.L. COP \$230/ton	Eligible when matched with core gas or electric cooling equipment
>400 tons (only two-stage chillers)	≥ 1.1 F.L. COP \$185/ton	≥ 1.1 F.L. COP \$185/ton	

Electric Unitary HVAC Efficiency Levels and Incentives

Unitary HVAC/Split Systems	
< 5.4 tons	14.0 SEER \$92/ton
≥ 5.4 to < 11.25 tons	11.5 EER \$73/ton
≥ 11.25 to < 20 tons	11.5 EER \$79/ton
≥ 20 to 30 tons	10.5 EER \$79/ton
Air-to-Air Heat Pump Systems*	
< 5.4 tons	14.0 SEER & 7.8 HSPF \$92/ton
≥ 5.4 to < 11.25 tons	11.5 EER \$73/ton
≥ 11.25 to < 20 tons	11.5 EER \$79/ton
≥ 20 to 30 tons	10.5 EER \$79/ton
Packaged Terminal Systems	
< 9000 BTUH	12.0 EER \$65/ton
≥ 9,000 BTUH to 12,000 BTUH	11.0 EER \$65/ton
> 12,000 BTUH	10.0 EER \$65/ton
A/C Economizing Controls	
≤5 tons	\$85/Unit
> 5 tons	\$170/Unit

Water Source Heat Pumps	
≤ 5.4 tons	14.0 EER \$81/ton
> 5.4 tons	14.0 EER \$81/ton

Central DX AC Systems	
> 30 to 63 tons	≥ 9.5 EER \$40/ton
> 63 tons	≥ 9.5 EER \$72/ton

Dual Enthalpy Economizer Controls	
ALL	\$250/Unit

Occupancy Controlled Thermostats (for Hospitality/Institutional facilities)
\$75 per occupancy controlled thermostat

*For Air to Air Heat Pump, Unitary HVAC and Split systems, new construction equipment must exceed ASHRAE 90.1-2013 code requirements.

For Dual Enthalpy Economizers new construction not eligible unless equipment purchased or complete building permit application(s) submitted to local permitting agency (if applicable), in each case prior to March 21, 2016.

Central DX AC systems not eligible for existing buildings unless equipment purchased or complete building permit application(s) submitted to local permitting agency, if applicable, in each case prior to March 21, 2016.

Ground Source Heat Pump Equipment Efficiency Levels and Incentives

Ground Loop & Ground Water Heat Pumps		
Type	Qualifying Efficiency Level	Incentive
Closed Loop ≥ 16 EER	≥ 16 EER	Up to \$450/ton
	≥ 18 EER	Up to \$600/ton
	≥ 20 EER	Up to \$750/ton

Variable Frequency Drive Incentives

Centrifugal Fan Applications on Variable Air Volume HVAC Systems			
Cumulative Motor HP Controlled by Each VFD		Incentive \$/Cumulative HP Controlled	
5 to <10 hp 10 to <20 hp 20+ hp		\$155 per hp \$120 per hp	
Centrifugal Fan Applications on Constant Volume HVAC Systems:			
All sizes		\$80 per VFD rated hp, maximum \$6,000 per VFD	
Cooling Tower Fan Systems			
≥ 10 hp		\$60 per VFD rated hp	
Chilled Water Pump Motors for HVAC Systems			
20+ hp		\$60 per VFD rated hp	
Rotary Screw Air Compressors			
25 to 29 hp		Up to \$5,250	
30 to 39 hp		Up to \$6,000	
40 to 49 hp		Up to \$7,200	
50 to 59 hp		Up to \$8,000	
60 to 199 hp		Up to \$9,000	
200 to 249 hp		Up to \$10,000	
≥ 250 hp		Up to \$12,500	
Boiler Motor Systems			
Boiler Fans	HP	Incentive Amount	
<ul style="list-style-type: none"> • Airfoil/Backward Incline Fan • Forward Curve Fan 	≥ 5 to < 10	\$155/hp	
	≥ 10 to < 20	\$120/hp	
	≥ 20	\$65/hp	
Boiler Feed Water Pumps	HP	Incentive Amount	
	≥ 5 to < 10	\$155/hp	
	≥ 10 to < 20	\$120/hp	
	≥ 20	\$60/hp	
Commercial Kitchen Hood			
New Hood		Retrofit	
hp of motor	\$/hp	hp of motor	\$/hp
0-4.99	\$250	0-4.99	\$300
5-9.99	\$200	5-9.99	\$200
10-14.99	\$150	10-14.99	\$160
15-19.99	\$125	15-19.99	\$125
20-24.99	\$105	20-24.99	\$95
25-29.99	\$90	25-29.99	\$80
30-50	\$55	30-50	\$55

Gas Water Heating Efficiency Levels and Incentives¹

Gas-Fired Water Booster Heaters		Gas Water Heaters ≤ 50 Gallons²		
Capacity – MBH	Incentive	Capacity – MBH	Incentive	
≤ 100 MBH	\$35 per MBH	0.67 or better Energy Factor	\$50 per water heater	
> 100 MBH	\$17 per MBH	Size limit: ≤ 50 gallons		
Tankless Water Heaters (Instantaneous)		Gas Water Heaters > 50 Gallons		
Minimum Efficiency	Incentive	< 300 MBH	85% AFUE	\$2.00 per MBH, not less than \$50/unit
☐ 82% energy factor, 90% Thermal Efficiency	\$300 per tankless water heater	≥ 300 – 1500 MBH	85% AFUE	\$1.75 per MBH
		> 1500 - ≤ 4000 MBH	84% AFUE	\$1.00 per MBH

1. This incentive is only available for the replacement of existing, free-standing water heaters.

2. For tankless water heaters and water heaters less than or equal to 50 gallons, new construction sites not eligible unless equipment purchased or complete building permit application(s) submitted to local permitting agency (if applicable), in each case prior to March 21, 2016.

Gas Heating Equipment Efficiency Levels and Incentives

Gas Fired Boilers					
Boiler Type	Size Category (MBh input)	Non-Condensing		Condensing	
		Efficiency Requirement	Incentive	Efficiency Requirement	Incentive
Hot Water	< 300	85% AFUE	\$0.95/MBh Minimum \$400/unit	93% AFUE	\$2.00/MBh Minimum \$1000/unit
Hot Water	≥ 300 to 1,500	85% Et	\$1.75/MBh	91% Et	\$2.20/MBh Minimum \$1000/unit
Hot Water	> 1,500 to 2,500	85% Et	\$1.50/MBh	91% Et	\$2.20/MBh
Hot Water	> 2500 to 4,000	85% Ec	\$1.30/MBh	93% Ec	\$2.00/MBh
Steam, all except natural draft	< 300	82% AFUE	\$1.40/MBh Minimum \$400/unit		
Steam, all except natural draft	≥ 300 to 1500 MBH	81% Et	\$1.20/MBh		
Steam, all except natural draft	> 1500 to 2500 MBH	81% Et	\$1.20/MBh		
Steam, all except natural draft	> 2500 to 4000	81% Et	\$1.00/MBh		
Steam, natural draft	< 300	82% AFUE	\$1.40/MBh Minimum \$300/unit		
Steam, natural draft	≥ 300 to 1500 MBH	79% Et	\$1.00/MBh		
Steam, natural draft	> 1500 to 2500 MBH	79% Et	\$0.90/MBh		
Steam, natural draft	> 2500 to 4000	79% Et	\$0.70/MBh		
All types	> 4000 MBH	Evaluated through the Custom measures path			
Et = Thermal Efficiency Ec= Combustion Efficiency MBh = 1,000 Btuh					
Gas Furnaces – Minimum Efficiency ≥ 95% AFUE, ≥ 2.0% Fan Efficiency, ENERGY STAR®			Boiler Economizing Controls		
			Capacity	Incentive	
Capacity	Incentive		≤ 800 Mbh	\$1,200	
No size/capacity limitation	\$400 per furnace		>800 MBh - <1,600 MBh	\$1,500	
Low Intensity Infrared Heating with reflectors (indoor only)			≥1,600 MBh- <3,000 MBh	\$1,800	
Capacity	Incentive		≥3,000 MBh- <3,500 MBh	\$2,100	
≤100 MBh	\$500/unit		≥3,500 MBh- < 4,000 MBh	\$2,400	
>100 MBh	\$300/unit		≥ 4,000 MBh	\$2,700	

Prescriptive Lighting Measures and Incentives

Linear Fluorescent Lighting - New Fixture			
Type of Existing Fixture	Wattage of Existing Fixture	Proposed Fixture	Incentive
HID	> 750 Watts	T-5, T-8	\$150/fixture
HID	400 - 750 Watts	T-5, T-8	\$100/fixture
HID	250 - 399 Watts	T-5, T-8	\$50/fixture
HID	< 250 Watts	T-5, T-8	\$25/fixture
Linear Fluorescent Lighting - Retrofit of Existing Fixture			
Measure			Incentive
For retrofit or replacement of T-8 fixtures by permanent de-lamping & new reflectors - Electronic ballast replacement required for all eligible de-lamped fixtures. - Incentives for replacement/retrofit of T12 systems are not available			\$10 per fixture
Retrofit or replacement of existing 32 watt T-8 system to reduced wattage (28w/25w 4') (new or retrofit) - Requires lamp and ballast replacement. - Incentives for replacement/retrofit of T12 systems are not available			\$5 per fixture (1-4 lamps)
Induction Lighting Incentives			
Measure			Incentive
HID (≥100w) fixture replaced with a new induction fixture. - Replacement unit must use 30% less wattage per fixture than existing HID system.			\$70 per fixture
HID (≥100w) fixture retrofitted with induction lamp power coupler and generator - Replacement unit must use 30% less wattage per fixture than existing HID system.			\$50 per fixture

LED LIGHTING INCENTIVES	
LED Categories Incentive rate is determined by the approved fixture category per DLC or EnergyStar®. See Specific Program Requirement #7.	
LED Architectural Flood and Spot luminaires	\$50 per fixture
LED Bollard Fixtures	\$50 per fixture
LED display case lighting	\$30 per display case
LED Fuel Pump canopy	\$100 per fixture
LED High-Bay and low-Bay Fixtures for commercial & industrial Buildings	\$150 per fixture
LED High-Bay-Aisle lighting	\$150 per fixture
LED linear Ambient luminaires (indirect, indirect/direct, direct/indirect, direct)	2' fixtures - \$20/fixture
	3' fixtures - \$30/fixture
	4' fixtures - \$45/fixture
	6' fixtures - \$60/fixture
	8' fixtures - \$75/fixture
LED Linear Replacement Lamps (2' & 4' only)	\$5 per lamp
LED Luminaires for Ambient lighting of interior commercial Spaces (1x4, 2x2, 2x4) - Incentive rates apply to both New fixtures and Retrofit Kits	1x4 LED (new or retrofit kit) - \$15/fixture
	2x2 LED (new or retrofit kit) - \$15/fixture
	2x4 LED (new or retrofit kit) - \$25/fixture
LED Outdoor Pole/Arm-mounted Area and Roadway luminaires (New or Retrofit)	\$100 per fixture
LED Outdoor Pole/Arm-mounted decorative luminaires (New or Retrofit)	\$50 per fixture
LED Outdoor wall-mounted Area luminaires	\$100 per fixture
LED Parking garage luminaires	\$100 per fixture
LED Retrofit Kits for Large Outdoor Pole/Arm-Mounted Area and Roadway Luminaires	\$150 per fixture
LED Refrigerated/Freezer case lighting: incentive for replacement of fluorescent lighting systems in medium or low temperature display cases	\$30 per 4' fixture
	\$42 per 5' fixture
	\$65 per 6' fixture
LED Shelf-mounted display and task lights	\$15 per linear foot

LED Stairwell and Passageway luminaires	\$40 per fixture
LED Track or mono-Point directional lighting Fixtures	\$30 per fixture
LED Wall-wash lights	\$30 per fixture
LED Wrapped Lens	\$10 per fixture

EnergyStar® Commercial Lighting Fixtures		EnergyStar® Screw- and Pin-Based Bulbs	
Bath Vanity	\$5.00 per fixture	PAR30	\$5.00 per lamp
Cove Mount	\$5.00 per fixture	PAR30L	\$5.00 per lamp
Decorative Candle: Other	\$5.00 per fixture	PAR38	\$5.00 per lamp
Decorative: Other	\$5.00 per fixture	R30	\$5.00 per lamp
Downlight Pendant	\$5.00 per fixture	B10	\$5.00 per lamp
Downlight Recessed	\$5.00 per fixture	CA10	\$5.00 per lamp
Downlight Solid State Retrofit	\$5.00 per fixture	F10	\$5.00 per lamp
Downlight Surface Mount	\$5.00 per fixture	G16.5	\$5.00 per lamp
Other	\$5.00 per fixture	G25	\$5.00 per lamp
Outdoor Porch Wall Mount	\$5.00 per fixture	MR16	\$5.00 per lamp
Outdoor Post-Mount	\$5.00 per fixture	PAR16	\$5.00 per lamp
Porch (wall mounted)	\$5.00 per fixture	PAR20	\$5.00 per lamp
Portable Desk Task Light	\$5.00 per fixture	R20	\$5.00 per lamp
Torchiere	\$5.00 per fixture	A15	\$10.00 per lamp
Ceiling Mount	\$10.00 per fixture	A19	\$10.00 per lamp
Close to Ceiling Mount	\$10.00 per fixture	A21	\$10.00 per lamp
Decorative Pendant	\$10.00 per fixture	BR30	\$10.00 per lamp
Inseparable SSL - Other	\$10.00 per fixture	BR40	\$10.00 per lamp
Security	\$10.00 per fixture	R40	\$10.00 per lamp
Wall Sconces	\$10.00 per fixture	B13	\$10.00 per lamp
Wrapped Lens	\$10.00 per fixture	BA10	\$10.00 per lamp
		F15	\$10.00 per lamp
		MRX16	\$10.00 per lamp

Lighting Control Incentives
Requires pre-approval

Control Device Type Wireless/hard wired units	Incentive per Unit
OSW – Occupancy Sensor Wall Mounted (Existing facilities only)	\$20 per control
OSR – Occupancy Sensor Remote Mounted (Existing facilities only)	\$35 per control
DDC - Daylight Dimming Controls	\$45 per fixture controlled
OHLC - Occupancy-Based High-Low Dimming Control ¹	\$35 per fixture controlled
OSRH – Occupancy Sensor Remote Mounted (Existing facilities only)	\$35 per control

* For Occupancy-Based High-Low Dimming and Daylight Dimming Controls, new construction projects not eligible unless grandfathered under former ASHRAE 90.1-2007 code or exceeding code requirement under ASHRAE 90.1-2013.

Performance Lighting Incentives (requires pre-approval)

Indoor Lighting Outdoor Lighting (attached to building only)	\$1.00 per watt per square foot below program incentive threshold
Maximum Incentive	\$30 per qualified fixture
Baseline	New Jersey Code (ASHRAE 90.1-2007 or 2013 depending on code permit)
Incentive Threshold New Construction Major Renovation	5% more energy-efficient than applicable ASHRAE energy code (2007 or 2013)
Minimum Lighting Levels- Applicant shall be responsible for confirming light levels	Lighting installed under the performance incentive path should comply with the following minimum lighting levels: <ul style="list-style-type: none"> ■ Lighting level requirements as specified by New Jersey's non-residential construction code, or ■ For publicly supported schools, minimum lighting levels as specified in the New Jersey Administrative Code Title 6-NJAC 6:22-5.4, g1-h1.

Refrigeration Covers/Doors Incentives

Type	Incentive
Energy Efficient Doors for Installation on Open Refrigerated Cases	\$100 per door
Aluminum Night Curtains for Installation on Open Refrigerated Cases	\$3.50 per linear foot

Refrigeration Controls Incentives*

Type	Incentive
Door Heater Control	\$50 per control
Electric Defrost Control	\$50 per control
Evaporator Fan Control	\$75 per control
Novelty Cooler Shutoff	\$50 per control

* Door heater and electric defrost controls not eligible for new construction projects unless equipment purchased prior to March 21, 2016 or proof of local permitting agency's receipt of a complete building permit prior to that date.

Food Service Equipment Incentives

Commercial Rack Oven (Natural Gas)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or • ASTM: <ul style="list-style-type: none"> • Must have a tested baking energy efficiency of 50 percent or greater, utilizing ASTM F2093. 	
Description	Incentive/Unit Measure
Commercial Rack Oven Single (Natural Gas)	\$1,000/single oven
Commercial Rack Oven Double (Natural Gas)	\$2,000/double oven

Commercial Conveyor Oven (Natural Gas)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or • ASTM: <ul style="list-style-type: none"> • 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. 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • Multiple-deck oven configurations are paid per qualifying oven deck. 	
Description	Incentive/Unit Measure
Commercial Conveyor Oven — Small (Conveyor width 25-in. or less) (Natural Gas)	\$500/deck
Commercial Conveyor Oven — Large (Conveyor width greater than 25-in) (Natural Gas)	\$750/deck

Commercial Fryer (Electric)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or • ASTM: <ul style="list-style-type: none"> • 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. 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • Multiple vat configurations are paid per qualifying vat. 	
Description	Incentive/Unit Measure
Commercial Fryer (Electric)	\$200/vat

Commercial Fryer (Natural Gas)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or • ASTM: <ul style="list-style-type: none"> • 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. 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • Multiple vat configurations are paid per qualifying vat. 	
Description	Incentive/Unit Measure
Commercial Fryer (Natural Gas)	\$749/vat

Commercial Large Vat Fryer (Electric)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or • ASTM: <ul style="list-style-type: none"> • Must have a tested heavy load (French fry) cooking energy efficiency of 80 percent or greater, utilizing ASTM F2144. 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • Multiple vat configurations are paid per qualifying vat. 	
Description	Incentive/Unit Measure
Commercial Large Vat Fryer (Electric)	\$200/vat

Commercial Large Vat Fryer (Natural Gas)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or • ASTM: <ul style="list-style-type: none"> • Must have a tested heavy load (French fry) cooking energy efficiency of 50 percent or greater, utilizing ASTM F2144. 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • Multiple vat configurations are paid per qualifying vat. 	
Description	Incentive/Unit Measure
Commercial Large Vat Fryer (Natural Gas)	\$500/vat

Commercial Griddle (Electric)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • ASTM: <ul style="list-style-type: none"> • 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. 	
Description	Incentive/Unit Measure
Commercial Griddle (Electric)	\$300/griddle

Commercial Griddle (Natural Gas)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • ASTM: <ul style="list-style-type: none"> • 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. 	
Description	Incentive/Unit Measure
Commercial Griddle (Natural Gas)	\$125/griddle

Commercial Steam Cooker (Electric)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • ASTM: <ul style="list-style-type: none"> • Must have a tested heavy load (potato) cooking energy efficiency of 50 percent or greater, utilizing ASTM F1484. 	
Description	Incentive/Unit Measure
Commercial Steam Cooker (Electric)	\$1,250/steamer

Commercial Steam Cooker (Natural Gas)	
REQUIREMENTS - Equipment must meet either of the following criteria: <ul style="list-style-type: none"> • Be listed on the current Energy Star qualified product list; or • CEE qualified; or 	
ADDITIONAL DETAILS: <ul style="list-style-type: none"> • ASTM: <ul style="list-style-type: none"> • Must have a tested heavy load (potato) cooking energy efficiency of 38 percent or greater, utilizing ASTM F1484. 	
Description	Incentive/Unit Measure
Commercial Steam Cooker (Natural Gas)	\$2,000/steamer

Commercial Solid Door Refrigerators

REQUIREMENTS:

- The refrigeration system must be built-in (packaged).
- Be listed on the current Energy Star qualified product list.

Exclusions:

- No cases with remote refrigeration systems.

Description	Incentive/Unit Measure
ENERGY STAR Solid Door Refrigerators Internal volume less than 15 ft ³	\$50/unit
ENERGY STAR Solid Door Refrigerators Internal volume 15 ft ³ –29.9 ft ³	\$75/unit
ENERGY STAR Solid Door Refrigerators Internal volume 30 ft ³ –49.9 ft ³	\$125/unit
ENERGY STAR Solid Door Refrigerators Internal volume 50 ft ³ or greater	\$200/unit

Commercial Solid Door Refrigerators

REQUIREMENTS:

- The refrigeration system must be built-in (packaged).
- Be listed on the current Energy Star qualified product list.

Exclusions:

- No cases with remote refrigeration systems.

Description	Incentive/Unit Measure
ENERGY STAR Solid Door Refrigerators Internal volume less than 15 ft ³	\$50/unit
ENERGY STAR Solid Door Refrigerators Internal volume 15 ft ³ –29.9 ft ³	\$75/unit
ENERGY STAR Solid Door Refrigerators Internal volume 30 ft ³ –49.9 ft ³	\$125/unit
ENERGY STAR Solid Door Refrigerators Internal volume 50 ft ³ or greater	\$200/unit

Refrigerator/Freezer Case Premium Efficiency Motors

Type	Incentive
Electronic Commutated Motors (ECM) less than 1 HP – for replacement of existing shaded-pole motor	\$40 per ECM motor

*New construction not eligible unless equipment purchased or complete building permit application(s) submitted to local permitting agency (if applicable), in each case prior to March 21, 2016

CUSTOM GAS AND ELECTRIC EQUIPMENT INCENTIVES

- To be eligible, projects must have a minimum first-year energy savings of 75,000 kWh for custom electric measures or 1,500 therms for custom gas measures.
- Established incentive caps will be the lesser of 1) a set value of \$0.16/kWh and \$1.60/therm based on estimated annual savings, 2) 50% of the total installed incremental project cost or 3) "buy down" to a one-year payback based on incremental cost and savings.
- Custom Measure applicants will be provided with program spreadsheets to be used for reporting measure savings and project payback (with and without incentives).
- Retrofit projects must exceed ASHRAE 90.1-2013³ standards by at least 2% compared to existing conditions where specific guidelines exist. Where ASHRAE guidelines do not apply, measures will be required to exceed industry standards as determined by the Consortium for Energy Efficiency (CEE), EPA's ENERGY STAR[®], and/or others. New construction and complete "gut-rehab" projects will use ASHRAE 90.1-2013 as the baseline for estimating energy savings.
- A complete application package should include the following: - Application completed and signed by the customer, cost and energy savings calculations information referenced in the application package, project summary describing existing conditions/equipment and proposed custom technology, W9 form from the payee, 12 months of electric and/or gas utility bills including any third party supplier invoices, equipment manufacturer specifications documents.

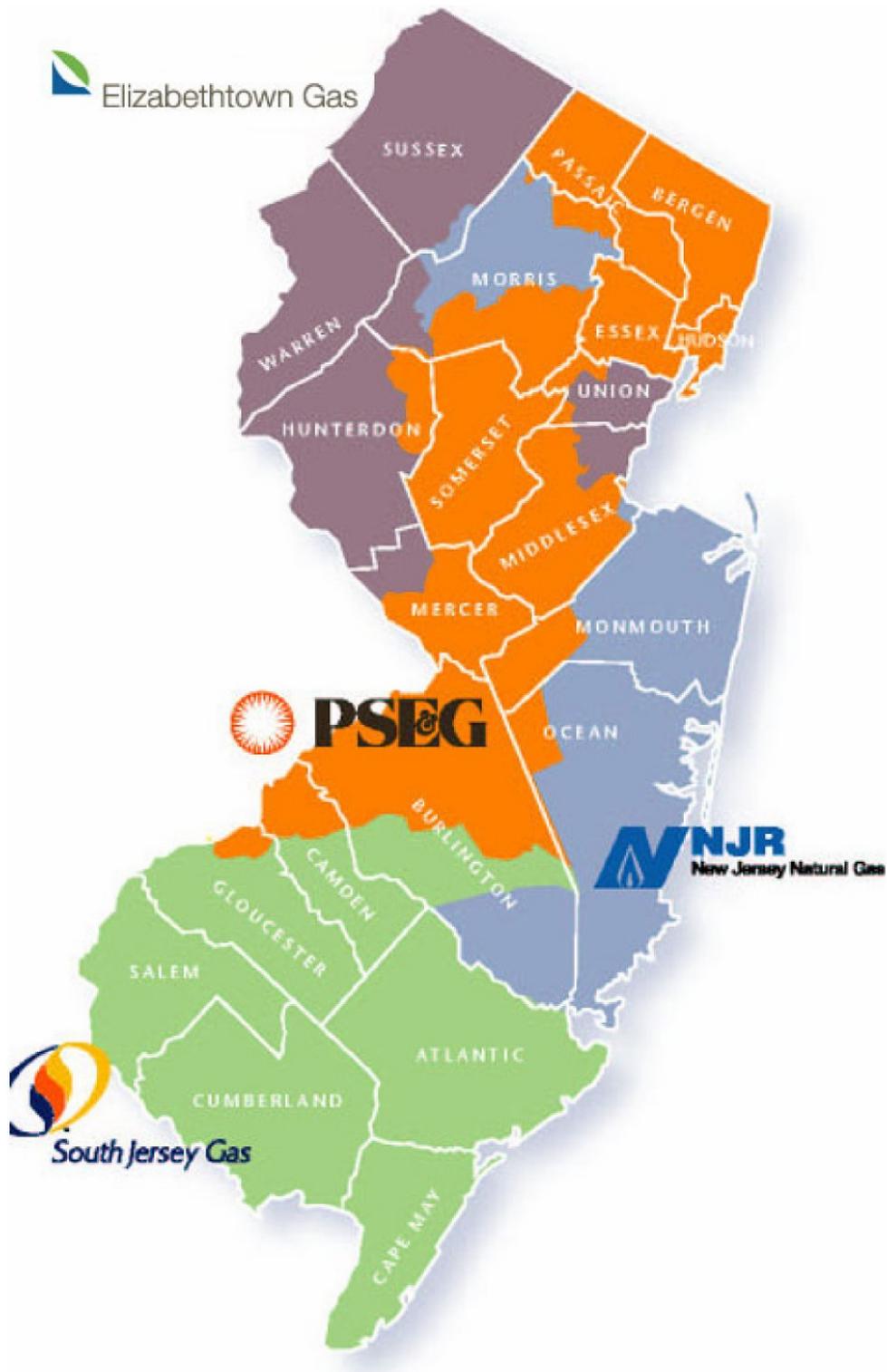
³ Project efficiency must exceed ASHRAE 90.1-2013 by 2% unless confirmation of grandfathering under former code (ASHRAE 90.1-2007) is provided

ELECTRIC UTILITIES TERRITORY MAP



Atlantic City Electric Company is now known as Atlantic City Electric

GAS UTILITIES TERRITORY MAP



For more information, please visit the program website
NJCleanEnergy.com/SSB