



**New Jersey's Clean Energy Program
2012 Program Descriptions and Budget**

**Commercial & Industrial
Energy Efficiency Programs
Managed by TRC as C&I Market Manager**



**2012 Program & Budget Filing
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New Jersey's Clean Energy Program 2012 Commercial & Industrial Programs Descriptions and Budget

Introduction

This 2012 Filing provides program descriptions and budgets for programs managed by TRC, the Commercial and Industrial (C&I) Energy Efficiency Market Manager who took over management of the C&I Programs from the seven electric and natural gas utilities effective April 1, 2007.

The following are program descriptions, marketing plans and program budgets for 2012. Included in the program descriptions are annual goals for each program and planned program implementation activities.

Appendix A - 2012 12-Month Marketing Activity Plan

Appendix B - C&I Market Manager Budgets

2012 C&I Programs

General Overview

New Jersey's Commercial & Industrial (C&I) Energy Efficiency Program, which is marketed as *New Jersey SmartStart Buildings*, is the umbrella name for nine individual program components for targeted commercial and industrial market segments: 1) New Construction, 2) Retrofit, 3) Pay for Performance New Construction, 4) Pay for Performance, 5) Local Government Energy Audit, 6) Direct Install, 7) Combined Heat and Power (CHP), 8) Large Energy Users Program, 9) Retro-commissioning, and Multi-family Financing Pilot. (collectively "*SmartStart* Programs" or "Programs").

The C&I New Construction and C&I Retrofit components offer prescriptive and custom efficiency measure incentives plus technical support. For budget purposes, these are shown as two different programs, but they offer similar services as described under Program Offerings and Customer Incentives below.

The Pay for Performance components, for both existing building and new construction, uses a "whole building approach" to energy efficient construction and offers incentives based on the level of savings achieved.

The *SmartStart* Programs are designed to:

- Capture lost opportunities for energy efficiency savings that occur during customer-initiated construction events (i.e., when customers normally construct buildings or purchase building systems equipment).
- Achieve market transformation by helping customers and designers make energy efficient equipment specification, building/system design, lighting design, and commissioning part of standard business practices.
- Stimulate commercial and industrial customer investments in energy efficiency measures.
- Facilitate effective implementation of New Jersey's new commercial energy code as well as future upgrades to that code.

The *SmartStart* Programs have been designed to address key market barriers to energy efficient building construction and design on the part of developers, designers, engineers, and contractors including:

- Unfamiliarity or uncertainty with energy efficient building technologies and designs;
- Bias toward lower first cost versus operating costs;
- 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 noted above, and to subsequently achieve market transformation in equipment specification, building/system design and lighting design. These include:

- Program emphasis on customer-initiated construction and equipment replacement events that are a normal part of their business practice.
- Coordinated and consistent marketing 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.

The C&I Programs have established maximum annual per-entity incentive caps which are in addition to individual program incentive caps. The caps are as follows:

Existing Program Incentive Caps:

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

Pay for Performance Program (P4P) - \$1 million per electric account and \$1 million per natural gas account per year, not to exceed \$2 million per project. Up to an additional \$1.5 million is available for entities that include a CHP system as part of their Energy Reduction Plan and installed measures.

A Pay for Performance project is defined as a single building owned by an entity, which has met Pay for Performance eligibility requirements and is, or will be, participating in the Pay for Performance. If a project possesses more than one electric account and more than one gas account, the multiple electric accounts will be treated as a single electric account and the multiple gas accounts will be treated as a single gas account, and the project will be held to the above mentioned cap.

Combined Heat and Power / Fuel Cell Program (CHP / FC) – The combination of utility incentives plus NJCEP incentives may equal up to \$2 million. However, “% of project cost” caps listed in the table under the Combined Heat & Power Program section of this filing will still apply.

Large Energy Users Pilot - \$ 1 million per eligible entity.

Direct Install – Project incentive cap of up to \$75,000. Direct Install participants will also be held to an annual entity cap of \$250,000 per entity. The signed Scope of Work Agreement will be the milestone used to determine proximity to the entity cap.

Local Government Energy Audit Program (LGEA) – LGEA participants will be held to an annual entity cap of \$100,000 per entity.

Program-Wide Entity Caps:

If an entity brings more than one project through the New Jersey Clean Energy Program in one calendar year in addition to the project caps defined above, they will be held to an annual entity cap. Application approval (Retrofit and New Construction), Energy Reduction Plan approval (Pay for Performance) and fully executed Scopes of Work (Direct Install) are the milestones used to determine the incentive. Therefore, those same milestones will be used in determining proximity to the entity cap.

Annual Entity Cap:

An annual entity cap of \$4 million per entity, per year, or \$5 million per entity, per year if the project(s) includes installation of a CHP project, shall be established through December 31, 2012. Projects developed by the State of New Jersey Office of Energy Services shall be exempt from any entity caps.

Entity Cap “year”:

The C&I Program will use a calendar 12-month period for tracking entity cap limits. Once the entity cap limit for applications has been reached, based on approved applications or Energy Reduction Plans, the earliest an entity may apply for subsequent incentive funding is January 1st of the following year.

Incentives received under all C&I Programs, except the Local Government Energy Audit, count toward the annual incentive cap.

Applicants to any of the C&I Program must be contributors to the Societal Benefits Charge fund.

In addition to the existing Commercial & Industrial Energy Efficiency Programs, the Board has approved a number of other initiatives including programs run by New Jersey’s investor-owned utilities as well as management of American Recovery and Reinvestment Act (ARRA) and SEP funding for Non Investor Owned Utility entities which will supplement existing Clean Energy Programs. TRC will process applications and provide general support for these initiatives that impact the Commercial & Industrial Energy Efficiency Programs and the fees associated with processing these applications will be paid with NJCEP funds.

New Construction and Retrofit Programs

Program Description

The C&I New Construction and C&I Retrofit Programs offer prescriptive efficiency measure incentives that provide fixed incentives for energy efficiency measures. The Programs also offer custom measures incentives.

Target Markets and Eligibility

The C&I New Construction and C&I Retrofit Programs target commercial, educational, governmental/institutional, industrial, and agricultural customers engaged in customer-initiated construction events including public schools construction, other new building construction within designated Smart Growth areas, renovations, remodeling, equipment replacement, and manufacturing process improvements. The Program offers incentives and technical support for both existing buildings and new construction. To be eligible, new construction projects must be located within Smart Growth areas as described in NJAC 14:3-8.2. Customers or their trade allies can assess if a location is in a designated growth area by using the Site Evaluator Tool available from the [HMFA website](http://sgl.state.nj.us/hmfa/hmfa_locator.htm): http://sgl.state.nj.us/hmfa/hmfa_locator.htm to locate the property. In addition, the Program offers incentives for new construction in areas where the cost of a service extension may be allowed, as provided for in NJAC 14:3-8.8. “Exemptions from cost limits on areas not designated for growth” as these rules now specify or as they may be amended in the future. In addition, the Program may be used to address economic development opportunities and transmission and distribution system constraints.

Program Offerings and Customer Incentives for the C&I New Construction and C&I Retrofit Programs

The Programs will include the following program offerings for the various market segments:

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

- Gas Furnaces
 - Variable Frequency Drives
 - Gas Fired Water Heating
 - Gas Fired Water Booster Heating
 - Tankless Water Heaters
 - Premium Efficiency Motors
 - Compressed Air Systems
 - Prescriptive Lighting
 - Performance Based Lighting
 - Kitchen Hood Variable Frequency Drives
 - Low Intensity Infrared Heaters
 - Boiler/AC Economizing Controls
 - Custom Measures
- Custom Measure Incentives for more complex and aggressive efficiency measures. The process for calculating custom measure incentives entails a performance-based approach for custom equipment with a set value of incentives for electric and gas energy savings projects which may include a commissioning component. Eligible electric and gas measures include lighting systems, HVAC systems, motor systems, large boiler systems, gas-engine driven chillers and other non-prescriptive measures proposed by the customer. More details regarding this process can be found later in this document in the section entitled “C&I Construction Program Incentives”.

Customers should submit an application for the type of equipment they have chosen to install. The application should be accompanied by a related worksheet, where applicable, a manufacturer's specification sheet for the selected equipment and one month of the most recent electric/natural gas utility bill for a prescriptive application or twelve months for a custom application. (Program representatives will then review the application package and approve it, reject it, and/or advise of upgrades to equipment that will save energy costs and/or increase the incentives.)

C&I New Construction

This Program component offers incentives and technical support for new construction projects within designated Smart Growth areas as defined in NJAC 14:3-8.2 or in areas where the cost of a service extension may be allowed as provided for in NJAC 14:3-8.8. “Exemptions from cost limits on areas not designated for growth” as these rules now specify or as they may be amended in the future. In addition, it offers incentives and technical support for construction specified in the Board Orders “In the matter of the New Jersey SmartStart Buildings Programs; Adoption of Revised Smart Growth Policy and Exemption Process to Allow Replacement Building for Existing Structures” signed April 3, 2006 and for any construction specifically allowed by Board Order outside of designated Smart Growth areas

Incentives for new construction are available only for projects in areas designated for growth in the NJ State Development and Redevelopment Plan.

Smart Growth Eligibility: Customers or their trade allies can assess if a location is in a designated growth area by using the Site Evaluator Tool available from the HMFA website: http://sgl.state.nj.us/hmfa/hmfa_locator.htm to locate the property. This Tool will report if a project is located in a Smart Growth area. A proposal has been circulated by Staff to change Smart Growth requirements making NJCEP incentives available state-wide. If the Board agrees with Staff’s recommendation in this regard, Smart Growth requirements will be modified accordingly.

The Smart Growth policies will be implemented consistent with Board Orders as described more fully in the C&I Operational Procedure Manual.

C&I Retrofit

The Retrofit component is offered to all C&I customers and provides incentives for replacing standard equipment with high efficiency alternatives. The Program also offers custom measure incentives.

Regional and National Initiatives

- *New Jersey SmartStart Buildings* has, and will continue to support efforts to upgrade efficiency standards and state building codes. Activities include technical support, dissemination of information, sponsorship of conferences/workshops on codes and standards, tracking of activities and monitoring developments, and review and modification of program designs to integrate changes to the standards and codes.

C&I New Construction and C&I Retrofit Program Incentives

The table below lists existing 2011 statewide incentives for the C&I New Construction, and C&I Retrofit program components and, where noted, changes that will take place for 2012. The incentives vary by size, technology and efficiency level and will be paid based on specific eligibility requirements. The program offers both prescriptive incentives and custom measure incentives.

Incentives are available for up to \$500,000 per electric account and \$500,000 per natural gas account per calendar year. A customer is defined as a utility account.

Custom Measure Incentives:

The Program provides a set level incentive for electric and gas savings. This process is more of a performance-based approach for custom equipment. Established incentive caps for the program are the lesser of a set value of \$0.16/kWh and \$1.60/therm based on estimated annual savings, 50% of total installed project cost or a buy down to a one-year payback. Eligible projects must have a minimum first year energy savings of 75,000 kWh for custom electric projects or 1,500 therms for custom gas projects. This requirement may be waived by the 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. A customized set of Microsoft Excel-based forms is required for all projects. These forms summarize the critical components of the custom measure including a detailed description of the technology, installed cost, and projected savings. Upon project completion, additional documentation is required to confirm that the measures were installed as proposed and that any changes during construction are reflected in the final savings values. As is clearly described in the Program forms, certain

measures may require post-installation metering, trending analysis, and/or the installing contractor's Statement of Substantial Completion. The evaluation of custom measure applications includes cost effectiveness calculations to assess Internal Rate of Return (IRR) and project payback with and without incentive. Baseline for custom retrofit projects are existing conditions, however the custom measure must exceed ASHRAE 90.1-2007 standards by at least 2% where specific guidelines exist. In cases where ASHRAE guidelines do not apply, the Program will require that custom measures exceed industry standards per the Consortium for Energy Efficiency (CEE), EPA Energy Star, and/or others. New construction/gut-rehab projects will use ASHRAE 90.1-2007 as the baseline for estimating energy savings. TRC will provide contractors with Program spreadsheets that include standard formats for reporting Program savings as well as standard incentive and IRR calculations.

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

Inspection protocols for custom measure projects in 2012 will require 100% pre & post inspections for projects with an estimated incentive equal to and above \$25,000. Inspections for projects with incentives below \$25,000 will be sampled at random.

On 9/7/10, the State of NJ adopted the ASHRAE 90.1-2007 for all commercial and industrial buildings, in regards to energy conservation. With the adoption of the new codes began a six month grace period to allow compliance with the previous codes, ASHRAE 90.1-2004 with minor amendments. For calendar year 2012, New Jersey's Clean Energy Program will continue to utilize this code, ASHRAE 90.1-2007 as reflected in the tables below.

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Custom Measure Incentives:		
Measures not covered by the prescriptive incentive tables	<p>Performance incentives of \$0.16/kWh and \$1.60/therm of first year savings, 50% of total installed project cost, or buy down to 1-year payback. Based on estimated savings - minimum of 75,000 kWh or 1,500 Therms saved annually required. Projects must have an IRR of 10% or greater</p> <p>Minimum savings requirements 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.</p>	No Change
Qualifying Equipment Incentives: (no incentive shall exceed the non-installed cost of the measure)		

Electric Chillers:

Note A - See application for changes in efficiency requirements to comply with ASHRAE 90.1-2007 Also, chiller full and part-load efficiencies are determined in accordance with A.H.R.I. Standard 550/590-2003. Refer to electric chiller incentives in table below.

Electric Chillers Efficiency Levels and Incentives*

Water-Cooled Chillers			Water-Cooled Chillers					Air-Cooled Chillers			
All Compressor Types	Incentives (<70 tons)		All Compressor Types	Incentives (150 to <300 tons)		Incentives (≥300 tons)		All Compressor Types	Incentives (<150 tons)		Incentives (≥150 tons)
	Full Load \$/Ton	Full Load \$/Ton		Full Load \$/Ton	(PLV) \$/Ton	Full Load \$/Ton	(PLV) \$/Ton		Full Load \$/Ton	Full Load \$/Ton	
0.75	\$16	\$25	0.56	\$16				1.20	\$14	\$8	
0.74	\$18	\$26	0.55	\$21				1.19	\$16	\$10	
0.73	\$20	\$27	0.54	\$26				1.18	\$18	\$12	
0.72	\$22	\$28	0.53	\$31				1.17	\$20	\$14	
0.71	\$24	\$30	0.52	\$36				1.16	\$22	\$16	
0.70	\$26	\$32	0.51	\$41				1.15	\$24	\$18	
0.69	\$28	\$34	0.50	\$46	\$16			1.14	\$26	\$20	
0.68	\$30	\$36	0.49	\$51	\$22			1.13	\$28	\$22	
0.67	\$32	\$38	0.48	\$56	\$29			1.12	\$30	\$24	
0.66	\$34	\$40	0.47	\$61	\$35	\$12		1.11	\$32	\$26	
0.65	\$36	\$42	0.46	\$66	\$41	\$14	\$12	1.10	\$34	\$28	
0.64	\$38	\$44	0.45	\$71	\$47	\$16	\$14	1.09	\$36	\$30	
0.63	\$40	\$46	0.44	\$76	\$54	\$18	\$16	1.08	\$38	\$32	
0.62	\$42	\$48	0.43	\$81	\$60	\$20	\$18	1.07	\$40	\$34	
0.61	\$44	\$50	0.42	\$86	\$66	\$25	\$20	1.06	\$42	\$36	
0.60	\$46	\$52	0.41	\$91	\$72	\$30	\$25	1.05	\$44	\$38	
0.59	\$48	\$54	0.40	\$96	\$79	\$40	\$30	1.04	\$46	\$40	
0.58	\$50	\$56	0.39	\$101	\$85	\$50	\$42	1.03	\$48	\$42	
0.57	\$52	\$58	0.38	\$106	\$91	\$60	\$53	1.02	\$50	\$44	
0.56	\$54	\$60	0.37	\$111	\$97	\$70	\$65	1.01	\$52	\$46	
			0.36	\$116	\$104	\$80	\$77				
			0.35	\$121	\$110	\$90	\$89				
			0.34	\$126	\$116	\$100	\$100				
			0.33	\$131	\$122	\$110	\$112				
			0.32	\$136	\$129	\$120	\$124				
			0.31	\$141		\$130					
			0.30			\$140					
			0.29			\$150					
			0.28			\$160					
			0.27			\$170					
			0.26								

Water Cooled Chillers	\$12 - \$170 per ton depending on size and efficiency	No Change
Air Cooled Chillers	\$8 - \$52 per ton depending on size and efficiency	No Change
Natural Gas Chillers:		Refer to Note A above
Gas Absorption Chillers	1.1 full load or part load Coefficient of Performance (COP)	No Change
< 100 tons	Up to \$450 per ton	No Change
100 to 400 tons	Up to \$230 per ton	No Change
> 400 tons	Up to \$185 per ton	No Change
Gas Engine Driven Chillers	Treated under Custom measure path (1.1 full or part load COP)	No Change
Desiccant Systems	Up to \$1.00 per cfm (gas or electric)	No Change

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Unitary HVAC Systems:		<i>Refer to Note A above</i>
Unitary AC and Split Systems < 5.4 tons ≥ 5.4 to < 11.25 tons ≥ 11.25 to < 20 tons ≥ 20 to 30 tons	14.0 SEER, Up to \$92/ton 11.5 EER, Up to \$73/ton 11.5 EER, Up to \$79/ton 10.5 EER, Up to \$79/ton	No Change
Air to Air Heat Pumps < 5.4 tons ≥ 5.4 to < 11.25 tons ≥ 11.25 to < 20 tons ≥ 20 to 30 tons	≥ 14.0 SEER & 7.8 HSPF, Up to \$92/ton 11.5 EER, Up to \$73/ton 11.5 EER, Up to \$79/ton 10.5 EER, Up to \$79/ton	No Change
Packaged Terminal AC & HP < 9,000 BTUH ≥ 9,000 to 12,000 BTUH > 12,000 BTUH	Up to \$65 per ton 12.0 EER, Up to \$65/ton 11.0 EER, Up to \$65/ton 10.0 EER, Up to \$65/ton	No Change
Dual Enthalpy Economizers	All Up to \$250/unit	No Change
Central DX AC Systems ≥ 9.5 EER	>30 to 63 tons, Up to \$40 per ton > 63 tons, Up to \$72 per ton Incentives for qualifying Central DX AC systems > 63 tons for existing buildings only. New construction ineligible.	No Change
Water Source Heat Pumps	Up to \$81/ton for qualifying equipment	No Change
Occupancy Controlled Thermostats for Hospitality / Institutional Facilities	Up to \$75/per occupancy controlled thermostat	No Change
Infrared Heating	Custom	Low Intensity Infrared Heater with Reflectors ≤100,000 btu/hr - \$300 per unit >100,000 btu/hr - \$500 per unit
A/C Economizing Control	Custom	≤5 tons - \$85 >5 tons - \$170

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive																
Open Loop & Closed Loop ≥ 16 EER	≥ 16 EER up to \$450 per ton ≥ 18 EER up to \$600 per ton ≥ 20 EER up to \$750 per ton Energy Star rated equipment only	No Change																
Gas Fired Boilers:																		
< 300 MBH ≥ 85% AFUE	\$2.00 per MBH but not less than \$300 per unit	No Change																
300 MBH - 1500 MBH ≥ 85% AFUE hot water boilers ≥ 84% AFUE steam boilers	Up to \$1.75 per MBH	No Change																
> 1500 MBH - 4000 MBH ≥ 84% AFUE for hot water boilers ≥ 83% AFUE for steam boilers	Up to \$1.00 per MBH	No Change																
> 4000 MBH	Treated under Custom Measure Path	No Change																
Gas Furnaces																		
≥ 90% AFUE	Up to \$300 per furnace	No Change																
≥ 92% AFUE, with ECM	Increase standard from ≥ 90% AFUE to ≥ 92% \$400 per furnace	No change																
Variable Frequency Drives (HVAC):																		
Variable Air Volume (add on to existing VAV HVAC systems only)	\$65 - \$155 per hp	No Change																
Chilled Water Pumps	Up to \$60 per hp	No Change																
Cooling Tower Fans	\$60/HP, Existing cooling tower Fan Motors Only > 10HP	No Change																
Air Compressors with VFD's	Incentives will be paid as a Prescriptive Measure based on specific eligibility requirements. Available incentives are to be paid in accordance with the information below: <table border="0"> <thead> <tr> <th>Installed HP</th> <th>Incentive</th> </tr> </thead> <tbody> <tr> <td>25 to 29</td> <td>Up to \$5,250</td> </tr> <tr> <td>30 to 39</td> <td>Up to \$6,000</td> </tr> <tr> <td>40 to 49</td> <td>Up to \$7,200</td> </tr> <tr> <td>50 to 59</td> <td>Up to \$8,000</td> </tr> <tr> <td>60 to 199</td> <td>Up to \$9,000</td> </tr> <tr> <td>200 to 249</td> <td>Up to \$10,000</td> </tr> <tr> <td>> 250</td> <td>Up to \$12,500</td> </tr> </tbody> </table>	Installed HP	Incentive	25 to 29	Up to \$5,250	30 to 39	Up to \$6,000	40 to 49	Up to \$7,200	50 to 59	Up to \$8,000	60 to 199	Up to \$9,000	200 to 249	Up to \$10,000	> 250	Up to \$12,500	No Change
Installed HP	Incentive																	
25 to 29	Up to \$5,250																	
30 to 39	Up to \$6,000																	
40 to 49	Up to \$7,200																	
50 to 59	Up to \$8,000																	
60 to 199	Up to \$9,000																	
200 to 249	Up to \$10,000																	
> 250	Up to \$12,500																	

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Kitchen Hoods	Custom	Draft Air Fans for Boilers ≥ 5 to < 10 HP - \$155/HP ≥ 10 to < 20 HP - \$120/HP ≥ 20 HP - \$65/HP Boiler Feed Water Pumps ≥ 5 to < 10 HP - \$155/HP ≥ 10 to < 20 HP - \$120/HP ≥ 20 HP - \$60/HP
Gas Fired Water Heating:		
≤ 50 gallons ≥ 0.67 energy factor	Up to \$50 per water heater $\geq 82\%$ energy factor	No Change
$\geq 82\%$ energy factor	Up to \$300 per tankless water heater	No Change
> 50 gallons; < 300 MBH $\geq 85\%$ AFUE	Up to \$2.00 per MBH, but not less than \$50/unit	No Change
300 MBH - 1500 MBH $\geq 85\%$ AFUE	Up to \$1.75 per MBH	No Change
> 1500 MBH - 4000 MBH $\geq 84\%$ AFUE	Up to \$1.00 per MBH	No Change
> 4000 MBH	Treated under Custom Measure Path	No Change

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Gas Fired Water Booster Heaters:		
≤ 100 MBH	Up to \$17 per MBH	No Change
> 100 MBH	Up to \$35 per MBH	No Change
Premium Efficiency Motors:		
Fractional (< 1 HP) Electronic Commutated Motors (ECM)	Up to \$40 per ECM for replacement of existing shaded-pole motor in refrigerated/freezer cases	No Change
Three phase motors	Follows the Regional MotorUp Program Incentive Schedule (below)	No Change

Regional MotorUp Program Incentive Schedule, Incentives for Three Phase Motors:

Qualifying Premium Motor Efficiencies and Incentives										
Premium Motor Incentives					Premium Motor Incentives					
Open Drip-Proof (ODP)					Totally Enclosed Fan-Cooled (TEFC)					
Size HP	Speed (RPM)			Custom Incentive (\$/Motor)	Size HP	Speed (RPM)			Custom Incentive (\$/Motor)	
	1200	1800	3600			1200	1800	3600		
NEMA Nominal Efficiency				NEMA Nominal Efficiency						
1	82.5%	85.5%	77.0%	\$45	1	82.5%	85.5%	77.0%	\$50	
1.5	86.5%	86.5%	84.0%	\$45	1.5	87.5%	86.5%	84.0%	\$50	
2	87.5%	86.5%	85.5%	\$54	2	88.5%	86.5%	85.5%	\$60	
3	88.5%	89.5%	85.5%	\$54	3	89.5%	89.5%	86.5%	\$60	
5	89.5%	89.5%	86.5%	\$54	5	89.5%	89.5%	88.5%	\$60	
7.5	90.2%	91.0%	88.5%	\$81	7.5	91.0%	91.7%	89.5%	\$90	
10	91.7%	91.7%	89.5%	\$90	10	91.0%	91.7%	90.2%	\$100	
15	91.7%	93.0%	90.2%	\$104	15	91.7%	92.4%	91.0%	\$115	
20	92.4%	93.0%	91.0%	\$113	20	91.7%	93.0%	91.0%	\$125	
25	93.0%	93.6%	91.7%	\$117	25	93.0%	93.6%	91.7%	\$130	
30	93.6%	94.1%	91.7%	\$135	30	93.0%	93.6%	91.7%	\$150	
40	94.1%	94.1%	92.4%	\$162	40	94.1%	94.1%	92.4%	\$180	
50	94.1%	94.5%	93.0%	\$198	50	94.1%	94.5%	93.0%	\$220	
60	94.5%	95.0%	93.6%	\$234	60	94.5%	95.0%	93.6%	\$260	
75	94.5%	95.0%	93.6%	\$270	75	94.5%	95.4%	93.6%	\$300	
100	95.0%	95.4%	93.6%	\$360	100	95.0%	95.4%	94.1%	\$400	
125	95.0%	95.4%	94.1%	\$540	125	95.0%	95.4%	95.0%	\$600	
150	95.4%	95.8%	94.1%	\$630	150	95.8%	95.8%	95.0%	\$700	
200	95.4%	95.8%	95.0%	\$630	200	95.8%	96.2%	95.4%	\$700	

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Prescriptive Lighting: For all prescriptive lighting, fixture or lamp must be listed by UL or other OSHA approved Nationally Recognized Testing Laboratory (NRTL) in accordance with applicable US standards		
T-5 and T-8 lamps with electronic ballast replacing T-12 lamps	<p>\$10 per fixture for T12 to T8/T5 (1-4 lamps) retrofit</p> <p>\$10 per fixture for T8 to reduced wattage T8 (28W/25W 4') (1-4 lamps) retrofit – requires lamp and ballast replacement</p> <p>No incentives for new construction or complete renovation. Electronic ballast replacement necessary for all eligible delamped fixtures.</p> <p>For retrofit to T8 lamps – requires High Performance (4' Only) or Reduced Wattage lamps (4' Only) and ballasts qualified by CEE</p> <p>Both incentives shown are Up to \$10 per fixture</p> <p>Eliminate 75 kW threshold for prescriptive lighting</p> <p>No incentives for new construction or complete renovation. Complete renovation is defined as 100% fixture replacement for the space involved.</p>	<p>No Change</p> <p>No Change</p>
Permanently De-lamp Fixtures and Add Reflectors as long as changing to a more efficient lighting system.	<p>Up to \$15 per fixture for the retrofit of T12 to T8 or T8 to T8 technology with permanent delamping and adding new reflectors.</p> <p>For retrofit to T8 lamps – requires High Performance (4' Only) or Reduced Wattage lamps (4' Only) and ballasts qualified by CE</p>	<p>No Change</p>

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Permanently De-lamp fixtures, continued	Up to \$20 per fixture for the retrofit of T12 to T8 technology with permanent delamping adding new reflectors For retrofit to T8 lamps – requires High Performance (4' Only) or Reduced Wattage lamps (4' Only) and ballasts qualified by CEE	No Change
T-5 and T-8 fixtures replacing T-12 fixtures < 250W	Up to \$25 per fixture (1-4 lamps) For retrofit to T8 lamps – requires High Performance (4' Only) or Reduced Wattage lamps (4' Only) and ballasts qualified by CEE	No Change
LED Exit Signs (New Fixtures Only)	Up to \$20 per fixture with facility demand less than 75 kW; Up to \$10 per fixture with facility demand greater than 75 kW	No Change
Hard-wired compact fluorescent surface mounted fixtures (New Fixtures Only). Must be pin based	Up to \$25 per 1 lamp fixture Up to \$30 per 2 or more lamp fixtures	No Change
Screw-in PAR 38 or PAR 30 Compact Fluorescent Lamp (CFL) with Aluminum Reflector replacing existing incandescent fixtures. Lamps must be warranted by the manufacturer for 8,000 hours, THD < 33% and BF > 0.9	Up to \$7 per lamp replaced	Must be ENERGY STAR qualified with GU24 based lamps
Hard-wired compact fluorescent recessed fixtures (New Fixtures Only, must be pin based technology with THD of < 33% and BF > 0.9)	Up to \$25 per 1 lamp fixture Up to \$30 per 2 or more lamp fixtures	No Change
Metal Halide w/ pulse start ballast, for fixtures > 150 watts	Up to \$25 per fixture	No Change

<p>T-5 and T-8 Fixtures replacing HID, 250 watt or greater T-12 fluorescent, or 250 watt or greater incandescent fixtures</p>	<p>Incentives will be paid as a Prescriptive Measure based on specific eligibility requirements.</p> <ul style="list-style-type: none"> • T-5 or T-8 fluorescent fixtures replacing 1000 Watt or greater HID, T-12 fluorescent, or incandescent fixtures: Up to \$200 per fixture removed. • T-5 or T-8 fluorescent fixtures replacing 400 - 999 Watt HID, T-12 fluorescent, or incandescent fixture: Up to \$100. per fixture removed. 	<p>No Change</p> <p>No Change</p>
<p>Technology Classification</p>	<p>Current 2011 Incentive</p>	<p>Proposed 2012 Incentive</p>
	<ul style="list-style-type: none"> • T-5 or T-8 fluorescent fixtures replacing 250 - 399 Watt HID, T-12 fluorescent, or incandescent fixture: Up to \$50. per fixture removed. 	<p>No Change</p>
<p>T-5 and T-8 Fixtures replacing 75 – 250 Watt HID fixture</p>	<ul style="list-style-type: none"> • T-5 or T-8 fluorescent fixtures replacing 175 to 249 Watt HID fixture: Up to \$43. per fixture removed. • T-5 or T-8 fluorescent fixtures replacing 100 to 174 Watt HID fixture: Up to \$30. per fixture removed. • T-5 or T-8 fluorescent fixtures replacing 75 to 99 Watt HID fixture: Up to \$16. per fixture removed. <p>The current requirement for one to one replacement will be eliminated</p> <p>Refer to Application and/or website for standards that apply to these measures</p>	<p>No Change</p> <p>No Change</p> <p>No Change</p>

New Construction and Complete Renovation	No prescriptive lighting incentives for new construction. Complete renovation of existing buildings eligible for prescriptive lighting incentives only.	No Change
	Up to \$50 per HID ($\geq 100W$) fixture retrofitted with induction lamp, power coupler and generator. Replacement unit must use 30% less wattage per fixture than existing HID system.	No Change
Induction Lighting Fixtures Retrofit of HID	Up to \$70 per HID ($\geq 100W$) fixture with a new induction fixture	No Change
Replacement of HID		No Change
LED Prescriptive Lighting – For incentive eligibility LED fixture must be listed on Energy Star or Design Lights Consortium qualified products list. For replacement of incandescent, fluorescent or HID only.		
Low Bay LED Parking Lot Lighting	Re-listed Under Parking Garage LED Incentive	No Change
LED Lamp (Integral/Screw-In)	\$20/lamp	No Change
LED Refrigerated Case Lighting	Custom Up to \$42 per 5' LED fixture Up to \$65 per 6' LED fixture Incentive for replacement of fluorescent lighting system in medium or low temperate display cases. Technical requirements of this incentive are listed on the prescriptive lighting application.	4' LED Strip Fixture - \$30 per fixture No Change for 5' and 6' fixture
LED Display Case Lighting	Up to \$30 per display case	No Change
LED Shelf-mounted display and task lights	Up to \$15 per foot	No Change
LED Portable Desk Lamps	Up to \$20 per fixture	No Change No Change

LED Wall-wash Lights	Up to \$30 per fixture	No Change
LED Recessed Down Lights	Up to \$35 per fixture	No Change
LED Outdoor Pole/Arm-Mounted Area and Roadway Luminaires	Up to \$175 per fixture	No Change
LED Outdoor Pole/Arm-Mounted Decorative Luminaires	Up to \$175 per fixture	No Change
LED Outdoor Wall-Mounted Area Luminaires	Up to \$100 per fixture	No Change
LED Parking Garage Luminaires	Up to \$100 per fixture	No Change
LED Track or Mono-point Directional Lighting Fixtures	Up to \$50 per fixture	No Change
LED high-bay and Low-bay fixtures for Commercial & Industrial Buildings	Up to \$150 per fixture	No Change
LED High-bay Aisle Lighting	Up to \$150 per fixture	No Change
LED Bollard Fixtures	Up to \$50 per fixture	Incentive to include 1' X 4' and 2' X 4' Panels
LED Linear Panels (2X2 Troffers Only)	Up to \$50 per fixture	No Change
LED Fuel Pump Canopy	Up to \$100 per fixture	
LED Retrofit Kits	No incentive offered	Incentive offered as a Custom measure. DLC qualified Outdoor Roadway Decorative Luminaries Four-foot linear replacement lamps

Technology Classification	Current 201 Incentive	Proposed 2012 Incentive
Lighting Controls:		
LED Traffic Signal Lamps (conversion of existing intersections only) 8 “ Lamp 12” Lamp	No incentive offered No incentive offered	No Change No Change
LED Pedestrian Signal Lamps (conversion of existing intersections only)	No incentive offered	No Change
Occupancy Sensors (Turning fixtures off in Existing facilities only) Wall Mounted Remote Mounted (e.g., ceiling)	Up to \$20 per control Up to 35 per control	No Change No Change
Day Lighting Dimmers – All facilities Fluorescent Fixtures HID or Fluorescent Hi-Bay controls	Up to \$25 per fixture controlled. For office applications only, increase to \$50 per fixture controlled Up to \$75 per fixture controlled (HID only)	No Change No Change
Hi-Low Controls - All facilities: Fluorescent Fixtures HID or Fluorescent Hi-Bay	Up to \$25 per fixture controlled Up to \$75 per fixture controlled (HID or Fluorescent Hi-Bay)	No Change No Change

Technology Classification	Current 2011 Incentive	Proposed 2012 Incentive
Performance Based Lighting incentives for indoor and outdoor installations (attached to building) – New Construction Only	Code changed to ASHRAE 90.1.2007 Available for New Construction Only. No longer available for Complete Renovation. Existing buildings, regardless of connected load, are eligible for Prescriptive Lighting incentives and are not eligible for Performance incentives	No Change
Performance Based Lighting incentives for indoor/outdoor installations (attached to building) – Existing Construction	Available for New Construction Only. No longer available for Complete Renovation.	No Change
Multiple Measure Bonus:		
	Multiple Measure Bonus is eliminated.	No Change

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

Delivery Methods

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

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

Goals:

- New Construction 125 completed jobs
- Existing Construction 2,750 completed jobs

Quality Control Provisions

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

A minimum of 10% of all incentive applications are selected for pre-installation and/or post-installation inspection by a Market Manager inspector (or one of its subcontractors). Inspections include a site visit to verify customer eligibility and energy efficient measure technical specifications that result in a verification of the incentive calculation. A field inspection report is prepared and maintained in the project file for future verification.

Budget

A detailed state-wide budget for all of New Jersey's Clean Energy Commercial & Industrial Programs is attached in Appendix B. The Program will be offered on a consistent program design and implementation basis to ensure consistency across the State.

Minimum Requirements for Program Administration

Not Applicable.

Local Government Energy Audit Program (LGEA Program)

Description:

The Program provides incentives to subsidize the cost of an energy audit for facilities owned by municipalities or other local government agencies (Agency) as well as New Jersey State Colleges and Universities. The LGEA Program is also open to select non profits. Select non profits include charitable organizations which refer to organizations that are exempt from taxation under Section 501 (c) (3) of the Internal Revenue Code.

The Program is implemented as follows:

1. New Jersey Department of the Treasury has established, based on its review of proposals received in response to its RFP, a list of qualified contractors that are available to contract directly with the participating Agencies to provide energy audit services. The list of contractors includes hourly rates for the provision of energy audit services.
2. The Market Manager intends to rebid this contract to solicit qualified contractors to provide energy audit services in 2012. A Request for Proposal (RFP) will be developed by TRC and approved by Board staff prior to release. Respondents to the RFP will be evaluated and selected based on a predetermined set of criteria. At the end of this process, the selected contractors will be under contract to and managed by the Market Manager.
 - a. In order to provide compatibility with the Energy Savings Improvement Plan (ESIP) Energy Savings Plans, the audit scope will be expanded to include demand response equipment and water conservation measures along with greenhouse gas reductions for the recommended measures. The contractors will also be encouraged to obtain their DPMC certification so that their audits are ESIP compliant.
 - b. With the prior approval of Staff, the Market Manager may change the pricing structure from an hourly rate to a flat price per square foot based on building type and usage, and include this flat pricing in the contract with the auditing firms. This will eliminate the need for the applicant to go through an RFP process, creating a more streamlined process.
3. The Applicant will submit applications to the Program identifying the building type, square footage, and energy usage information for each building to be audited.
4. The Market Manager will issue an approval letter to the Applicant to allow the Applicant to move forward to have an audit conducted by one of the prequalified, auditing firms, for a specified dollar incentive.

5. The auditing firm will submit a copy of the invoice for the audit work to the Market Manager. Payment will be made directly to the selected auditing firm. Within twelve months of audit approval, the entity is encouraged to install energy efficiency upgrades identified in the audit. The Market Manager will review requests for funding, including scope and cost, and issue incentive commitment letters to applicants that meet program requirements provided that sufficient funding remains available.
6. The Applicant will contract directly with the firm they have selected to perform the energy audit.

Upon completion of the audit, the Market Manager will review the energy audit report and, provided that all program requirements are met, the Program will issue the incentive to the Applicant, or designated auditing firm, for the total cost of the energy audit. Participants in the Local Government Energy Audit Program will be able to take advantage of incentives available under existing New Jersey Clean Energy incentive programs to implement specific measures recommended in the energy audit.

The LGEA Program will provide incentives up to \$100,000 per calendar year, per Agency to subsidize the cost of the energy audit.

Target Markets & Eligibility

This program offers qualifying municipalities and other government agencies, including New Jersey State Colleges and Universities and select non-profits, incentives to subsidize the cost of having an energy audit of their facilities performed. Select non-profits are those entities that are exempt from taxation under Section 501 (c) (3) of the Internal Revenue Code. Entities with peak monthly demand ≤ 150 kW will not be audited but will be moved to Direct Install. Market Manager will have the ability to grant exceptions in cases where the entity demonstrates interest in measures that are not available under the Direct Install Program, such as building shell measures and windows and/or participation in New Jersey's Energy Savings Improvement Program.

Goals and Energy Savings:

Goals:
Review and Process 400 Audits (Audit = One Building).

Energy Savings:
Not applicable

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all LGEA Program participants. All applications are reviewed upon receipt to verify adherence to eligibility requirements. **Technical**

information in the energy audit is also verified. Applicant supplied information is entered into the database, and files are created for all documents and ongoing project correspondence. On a random basis, on-site facility inspections are also conducted to verify building and audit data. The inspection rate is up to 20% of audits.

Direct Install Program

Background

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

Program Description

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

Target Market and Eligibility

The Direct Install Program is open to all commercial and industrial customers whose peak demand did not exceed 150 kW in any of the preceding twelve months. This peak demand threshold does not apply to local government entities that are also receiving ARRA funding through an Energy Efficiency and Conservation Block Grant or the SEP. Further, Market Manager has the discretion to approve applications that exceed the maximum monthly peak demand threshold of 150 kW by no more than 10%. The small business sector targeted by the Program tends to have a historical reluctance or inability to fund energy efficiency improvements. In addition, their small size tends to exclude them as beneficiaries of services from other energy service providers.

Program Offerings and Incentives

The Direct Install Program provides turn-key services and offers customers a single source of technical assistance, financial incentives and installation services. The Program will be delivered across the state by multiple regional Participating Contractors who have been selected via a Request for Proposal (RFP) process to deliver installation and related services. Participating Contractor services may be rebid in 2012.. At that time, the responsibility for conducting Energy Assessments to identify potential measures at customer facilities will shift from the Participating Contractor to the Market Manager. Further, it is anticipated with the rebid for Participating Contractor services that more firms will be selected to provide these services and the Program will move away from contractors serving a pre-defined geographic region (e.g., county) of New Jersey and/or

customer segment. Participating Contractors will still be responsible for promotion of the program and providing program installation services in addition to reporting to TRC on a regular basis. The Program has developed comprehensive listings of unit pricing for all eligible equipment. Eligible equipment categories include but may not be limited to:

- Energy efficiency lamps, ballast and fixtures including Super T8 and T5 Lamp and Ballast Retrofit
- LED Exit Signs
- Commercial CFL Fixtures
- Occupancy Sensors
- VFDs
- ENERGY STAR Programmable Thermostats
- ENERGY STAR Boilers and Furnaces (up to 500,000 Btuh)*
- High Efficiency Cooling Systems
- ENERGY STAR Products
- Refrigeration Measures
- Other measures may be added after evaluating by the Program

*In cases where the existing boiler or furnace is oversized, larger boiler and furnaces may be evaluated and considered for replacement as long as the replacement unit does not exceed 500,000 Btuh.

Customer incentives are offered to reduce the cost of installing energy efficient equipment and are based on the total installed cost of the retrofits. Qualifying C&I customers are eligible for incentives up to 70% of the installed cost of cost-effective, approved measures with a project incentive cap of \$75,000. Direct Install participants will also be held to an annual entity cap of \$250,000 per entity. Incentives are paid to the installation contractor and the contractor will invoice the customer for the remaining balance of the installation.

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

1. Marketing to eligible customers (marketing materials to be approved by the Market Manager OCE) *
2. Performing site visits and collecting all equipment and energy data, analyzing information and identifying opportunities for efficiency improvements, and making recommendations to the customer *;
3. Presentation of comprehensive recommendations to the customer, including costs and savings estimates, and obtaining customer agreement to proceed with installation. The customer agreement will be a standard agreement approved by the Program *;
4. Preparation and submission of completed customer incentive applications, including

- pre-implementation report to Market Manager for review and approval *;
5. Installation of eligible measures per customer agreement, including all appropriate permitting;
 6. Submission of post-implementation report, including payment request. The Market Manager will review all post-implementation reports and either forward to OCE as approved for payment or send back to the contractor with questions or issues
 7. Tracking and reporting on program activity including, but not limited to:
 - a. Customer name, address and contact person
 - b. Customer account number(s)
 - c. Project type (electric, gas, both)
 - d. Business type (SIC or NAICS code)
 - e. Inventory of equipment to be replaced, including quantity, type, location, hours of use
 - f. Estimates of energy (kWh &/or therms) and demand (kW) savings and total project costs
 8. Proper disposal of all removed equipment.
 9. Any reporting requirements identified by the Market Manager (e.g. ARRA reporting)

* Should Participating Contractor services be rebid in 2012, TRC will perform these activities.

Program Goals

Direct Install Program goals will include the following:

- **Market Transformation:** Expand the awareness and knowledge of energy efficiency among small business owners. Promote the financial and environmental benefits of reducing energy consumption with emphasis on a comprehensive, whole-building approach.
Goal: Expose up to 2,500 small businesses to the financial and environmental benefits of energy efficiency improvements.
- **Market Penetration/Cost Effectiveness:** Reach significant numbers of small commercial and industrial customers with comprehensive, cost effective scopes of work.
Goal: Complete more than 1,600 installation projects across the State.
- **Achieve Energy Savings:** Maximize total energy (electric and gas) efficiency opportunities while maximizing the diversity of equipment installed in completed project.
Goal: Annual savings equivalent to approximately 51,034 MWh
- **Expand the Contractor Network / Create Green Collar Jobs:** Program marketing, customer demand, and technical training opportunities will help to develop a workforce under the Participating Contractors of equipment installers who can offer quality installation services and associated technical assistance.
Goal: A network of contractors capable of serving all regions of the State.

External Evaluation

Ongoing evaluation services will be provided by the OCE through its external evaluation vendor.

Program Budget

A detailed state-wide budget is shown in appendix B.

Quality Control Provisions

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

Delivery Methods

The Direct Install Program will be managed by the C&I Market Manager and will be delivered by a competitively selected pool of subcontractors. The program will be offered on a consistent program design and implementation basis to ensure consistency across the state.

Direct Install Program – Local Government Entities

A Direct Install Program, specific to Local Government Entities was approved in 2011. The program is now closed to new applicants, and unless additional funding is provided, activity in 2012 will be related to processing existing applications through to project completion. This Program follows the same guidelines (e.g. eligible measures, rules, caps, etc.) as the Direct Install Program which was described in the previous section, but targets local government entities that are eligible for, and utilize the ARRA Energy Efficiency and Conservation Block Grants (EECBG). These entities were not limited to the 100 kW cap. Incentives, up to 60% of the installed cost of cost-effective, approved measures are paid by ARRA SEP funds rather than NJCEP funds. This program was available to entities that received and used an EECBG to fund the customer portion of the project cost

Pay for Performance

Program Description

The C&I Pay for Performance Program takes a comprehensive, whole building approach to energy efficiency in existing commercial and industrial buildings. Similar to performance contracting programs offered in other states, this Program links incentives directly to energy savings and includes a measurement and verification (M&V) component to ensure that the estimated savings levels are achieved. This market-based program relies on a network of Program Partners, selected through a Request for Qualifications process. Once approved, Partners provide technical services to program participants. Certain entities who have their own in house professional engineering expertise can become a Partner for their own facility. Their staff will be oriented through a fast-track process. This option is geared toward larger customers. This opportunity will be evaluated on a case-by-case basis by the Market Manager. All other Program requirements will be in effect. Partners are required to strictly follow program policy but will work under contract to owners, acting as their “energy expert”. Partners are required to develop an Energy Reduction Plan for each project. The Energy Reduction Plan includes the whole-building technical analysis component of a traditional energy audit along with a financial plan for funding the energy efficiency improvements and a construction schedule for installation. A set minimum energy reduction goal is required of all projects and is based on an approved whole-building energy simulation. The achievement of the energy reduction goal is verified using post-retrofit billing data and EPA Portfolio Manager methodology. For building types that are not addressed by EPA’s Benchmarking Tool, an alternative approach based on the Leadership in Energy and Environmental Design Existing Building (LEED) method will be followed.

Target Market and Eligibility

The C&I Pay for Performance Program is open to existing commercial and industrial buildings with peak demand in excess of 100 kW in any of the preceding twelve months. Market Manager reserves the right to approve projects that are within 10% of the minimum 100kW threshold. In addition, any multifamily facility which does not meet the eligibility requirements of the New Jersey Clean Energy Home Performance Program is eligible to participate in the Pay for Performance Program. Participants are required to work with an approved Pay for Performance Partner to develop the Energy Reduction Plan and facilitate installation of the recommended package of energy efficiency improvements. In order to receive the full suite of incentives offered in the Pay for Performance Program, the submitted Energy Reduction Plan must include a package of energy efficiency measures that achieve the minimum performance threshold or Energy Target (i.e., 15% of total building source energy consumption). A custom savings threshold is offered to customers whose annual energy consumption is heavily weighted to manufacturing and process loads. This approach will be reviewed on a case-by-case

basis. In order to be considered for a custom savings threshold (i.e., other than a 15% reduction in total building source energy consumption, the project must involve:

- A manufacturing facility, including such industries as plastics and packaging, chemicals, petrochemicals, metals, paper and pulp, transportation, biotechnology, pharmaceutical, food and beverage, mining and mineral processing, general manufacturing, equipment manufacturers and data centers.
- Manufacturing and/or process-related loads, including data center consumption, consume 50% or more of total facility energy consumption.
- Energy target for projects meeting the above criteria will be annual energy savings of 100,000 kWh, 350,000 MMBTU or 4% of total building source energy consumption, whichever is greater.

Market Manager, in collaboration with the Office of Clean Energy, reserves the right to consider alternative minimum threshold savings requirement in these types of situations. In addition, the Energy Reduction Plan must include a comprehensive mix of measures: e.g. lighting cannot make up more than 50% of the total projected savings. All other Pay for Performance Program rules apply.

The 15% minimum energy reduction will be based on source energy, which is consistent with EPA's Portfolio Manager benchmarking software. Pre-approval of the Energy Reduction Plan is required for all projects, which may include a site inspection. An Energy Reduction Plan must be approved by the program and an approval letter sent to the customer in order for incentives to be committed. Upon receipt of an Energy Reduction Plan, all project facilities must be pre-inspected. Measures installed prior to pre-inspection of the facility shall not be included as part of the ERP scope of work and will not be eligible for incentives. Measure installation undertaken prior to ERP approval, but after pre-inspection, is done at the customer's own risk. In the event that an Energy Reduction Plan is rejected by the program, the customer will not receive any incentives.

Projects that cannot identify efficiency improvements that meet the minimum performance level will be referred to the appropriate SmartStart Buildings Program(s).

The Pay for Performance Program offers two types of incentives which will be disbursed upon satisfactory completion of three Program milestones. The first incentive type is related to completion of the Energy Reduction Plan. The second incentive type is performance-based and is related to the installation of recommended measures. The performance-based incentive will be paid out in two phases – the first at the completion of installation of the recommended measures, the second upon submittal of a Post Construction Benchmarking Report that verifies the level of savings achieved. These incentives are explained below in more detail.

Definition of a Project

A project is defined as a single, detached commercial, industrial, or multifamily building. The entire building must be analyzed under the Program and achieve a 15% source energy reduction.

Campuses: The Program will also service campus-style facilities. A campus-style facility is one where ALL the following conditions apply:

- There are two or more P4P-eligible buildings that are located on adjacent properties
- Buildings are owned by a single entity
- Buildings are master-metered

Campus facilities are encouraged to participate in the C&I Sector Specific offering to assist in prioritizing each building for energy efficiency improvements. The Sector Specific offering will provide benchmarking services for all buildings and assist the building owner(s) in developing a multi-year plan for addressing the energy efficiency improvements across the campus. Through this plan, building owners can schedule major building improvement projects over several years to maximize energy efficiency as well as taking full advantage of Clean Energy Program incentives. Once a set of buildings within a campus is selected to be included in the P4P Program, they will be addressed in a single Energy Reduction Plan (ERP).

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

Multifamily Buildings: The Program will also accommodate certain types of multifamily buildings. Specifically, multifamily customers that fit the following description will be able to participate in the Pay for Performance program:

- High-rise/Mid-rise buildings
 - High-rise/Mid-rise apartment complexes are apartments, cooperative, and/or condominiums structures that are 4-stories or more above ground.
- Low-rise, garden-style buildings with central heating and/or cooling

- Garden-style apartment complexes consist of multiple low-rise apartments, cooperatives, condominiums and/or townhouses that are 3 stories or less, surrounded by landscaped grounds.
- Central heating and/or cooling means that each individual unit *does not* contain its own heating or cooling systems. The building must contain a central heating and/or cooling plant that serves multiple buildings and/or units.

Low-rise (and mid-rise where appropriate), garden-style complexes will be treated as one project under the Pay for Performance program. In other words, if there are 10 garden-style buildings that are part of one multifamily community, all 10 will be aggregated into one P4P application. The 100kW participation threshold will be met through this aggregation (including common area and in-unit billing). The 15% savings requirement (as well as all other program requirements) will be achieved in aggregate, as well. The same process will apply for affordable-rate housing, except for the fact that they will not need to meet the 100kW requirement to participate. Only one set of incentives will be paid per project, and all incentive caps apply. Please see logic tree at the end of this Pay for Performance section – page 44 - for guidance on Program eligibility. TRC will coordinate with the Residential Market Manager to make sure that multifamily customers are served by New Jersey’s Clean Energy Programs.

Multifamily complexes and campus-style facilities are viewed as a single entity that is eligible for Pay for Performance incentives subject to the annual incentive caps of \$1 million per electric account and \$1 million per gas account to the campus.

Program Offerings and Incentives

The Pay for Performance Program has developed a network of Program Partners who can provide the technical, financial, and construction-related services necessary for completing the Energy Reduction Plan. One of the goals of this program is to expand the network of energy efficiency firms that can provide these services in order to make this Program accessible for all eligible commercial and industrial customers. This market-based approach is a key component of market transformation by creating “green collar” jobs and helping to develop the workforce necessary to achieve ambitious long-term energy savings targets. The Program has enrollment periods during the year where firms that are interested in becoming Program Partners are required to submit an application, including case studies and resumes showing recent successful experience and expertise in C&I energy efficiency projects. Applications are reviewed by a technical evaluation panel who will determine if an applicant meets the criteria to become an approved program Partner. Once approved, Partners must attend a program orientation session before being able to bring projects into the Program.

Program incentives are performance-based and not specifically tied to the project cost or the recommended energy efficiency measures. Disassociating incentives from project

cost is a key program design decision as it streamlines program administration by eliminating the collection of bid documents, construction contracts and change orders. This incentive structure also provides the benefit of allowing Program Partners to estimate and explain incentives to prospective participants as part of the program sales process. The performance-based incentives are capped not to exceed 50% of the total estimated project cost.

Incentives, up to \$1,000,000 per electric and \$1,000,000 per gas utility account are available and will be released in phases upon satisfactory completion of each of three Program milestones, which are:

1. Submittal of a complete Energy Reduction Plan
2. Installation of all recommended measures per the Energy Reduction Plan
3. Completion of Post Construction Benchmarking Report.

Incentive #1 – Energy Reduction Plan – This incentive has been developed to offset the cost of services associated with the development of the Energy Reduction Plan. This incentive is based on the square footage of the building(s) and is paid at \$0.10/sq ft with a maximum incentive of \$50,000 and minimum of \$5,000. This incentive is capped at 50% of annual energy cost. This incentive cap assists in limiting incentives for facilities with large square footage but very low energy intensity (e.g. warehouses). Please note, for customers who have successfully participated in the Local Government Energy Audit Program, Incentive #1 related to the Energy Reduction Plan will be reduced by 50% to \$0.05 per square foot up to \$25,000 to recognize the value of the audit provided through the LGEA Program.

Incentive #2a – Installation of Recommended Measures – This incentive is based on the projected energy savings estimated in the approved Energy Reduction Plan. The performance-based incentives to be paid at completion of construction are as follows: (designed to be roughly 50% of the total performance-based incentive):

1. Projected first year electric savings from \$0.09/kWh for the minimum 15% savings up to \$0.11/kWh, based on \$0.005/kWh per additional 1% savings.
2. Projected first year natural gas savings from \$.90/therm for the minimum 15% savings up to \$1.25/therm based on \$0.05/therm per additional 1 % savings.

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

1. Develop whole building energy simulation using approved simulation tools. The list of approved tools will be based on the software requirements outlined in ASHRAE 90.1 2004Section 11 or Appendix G, or as approved by the Market Manager.
2. Calibrate simulation to match pre-retrofit utility bills
3. Model proposed improvements to obtain projected energy savings

4. Calculate percent energy reduction to demonstrate achievement of Energy Target.

Modeling methodology will be in general compliance with national programs such as LEED and EPA Federal Tax Deductions for Commercial Buildings, which will allow taking advantage of the expertise of a growing number of engineering and consulting firms involved in these programs.

Incentive #2b – Post Construction Benchmarking Report – Upon submittal of a Post Construction Benchmarking Report that verifies that the level of savings actually achieved by the installed measures meets or exceeds the minimum performance threshold, the performance-based incentive will be released. The performance-based incentives are as follows (designed to be roughly 50% of the total performance-based incentive):

1. Actual first year electric savings from \$0.09/kWh for the minimum 15% savings up to \$0.11/kWh, based on \$0.005/kWh per additional 1% savings.
2. Actual first year natural gas savings from \$.90/therm for the minimum 15% savings up to \$1.25/therm based on \$0.05/therm per additional 1 % savings.

The Post Construction Benchmarking Report will be based on the approved Energy Reduction Plan and will provide an accurate verification of savings while keeping the costs associated with M&V at a reasonable level. Specifics of the M&V requirements will be a critical component of the program and should be as simple as possible to reasonably verify savings while not overburdening the Partner or TRC. M&V requirements will follow the International Performance Measurement & Verification Protocol (IPMVP). Option D – Calibrated Simulation will be the required M&V approach for all projects. Options A – Partially Measured Retrofit Isolation, B – Retrofit Isolation, may be used as guidelines for data collection. The Post Construction Benchmarking Report must demonstrate savings over at least one year of post-construction consumption. The post-construction period may be extended to up to eighteen months.

To validate the savings and achievement of the Energy Target, the EPA Portfolio Manager will be used. The steps of this process are summarized below:

- Develop and document building energy baseline based on at least one full year of historical energy use data for the building.
- Document annual energy use during the post-retrofit period. Collect energy consumption data for the 12-month post-installation period.
- Perform weather-normalization and calculate Percent Reduction of Source Energy Use as the difference between baseline and post-retrofit energy consumption as a

percentage of the baseline energy consumption (baseline – post retrofit energy consumption / baseline).

Upon verified installation of all measures in the approved Energy Reduction Plan, 50% of the total performance-based incentive will be released. The remaining 50% of the performance-based incentive will be released upon completion of the Post Construction Benchmarking Report which reflects that the minimum performance threshold has been met or exceeded.

Incentive #2a and #2b combined will be capped not to exceed 50% of the total project cost, and Incentive #1, #2a, and #2b combined will not exceed \$2 million per project (if both electric and gas measures are implemented) whichever is less. Entity caps of \$4 million per calendar year (or \$5 million with CHP) also apply.

There will be no 100kW eligibility requirement for the following types of customers: hospitals, select non profits*, universities, government entities (including K-12) and affordable multi-family customers (“affordable” as defined as low income, subsidized, HUD, etc.). *Non profits are defined as organizations that are exempt for taxation under Section 501 (c) (3) of the Internal Revenue Code so that smaller entities in this customer class can take advantage of a whole building approach to energy efficiency.

For 2012, a new stand alone CHP-fuel cell program is proposed to replace the existing CHP and Fuel cell component of the Pay for Performance program. Please refer to the Combined Heat and Power and Fuel Cells Program description for program requirements and incentives.

Program Goals

The Pay for Performance Program goals and measures of effectiveness will include the following:

- **Market Penetration/Cost Effectiveness:** Reach significant numbers of commercial and industrial customers with comprehensive, cost effective scopes of work.
Goal: Approve at least 75 applications for the Program.
- **Energy Savings:** Maximize total energy (electric and gas) efficiency opportunities through the whole building approach.
Goal: Approve at least 50 Energy Reduction Plans that meet the minimum threshold for energy savings. Approve at least 4 Energy Reduction Plans that include CHP systems.
- **Create Green Collar Jobs:** Continue to expand the number of firms offering comprehensive energy services. Program orientation seminars and associated training opportunities will help to develop a network of Program Partners who can offer a full range of technical, financial, and construction-related services.

Program Deliverables

The Pay for Performance Program will provide the following services:

1. Maintain a pool of Program Partners that can offer Program services and publicize this list to potential participants.
2. Continue to develop new Program Partners as market demand warrants. Provide up to two (2) full-day Program Orientation seminars for Program Partners to introduce the Program and the Energy Reduction Plan development. OCE staff will also be invited.
3. Conduct Monthly Partner Conference Calls to present Program updates and discuss any issues that Partners may be encountering.
4. 100% Quality Control review of all submitted Energy Reduction Plans.
5. Pre and Post on-site inspections.

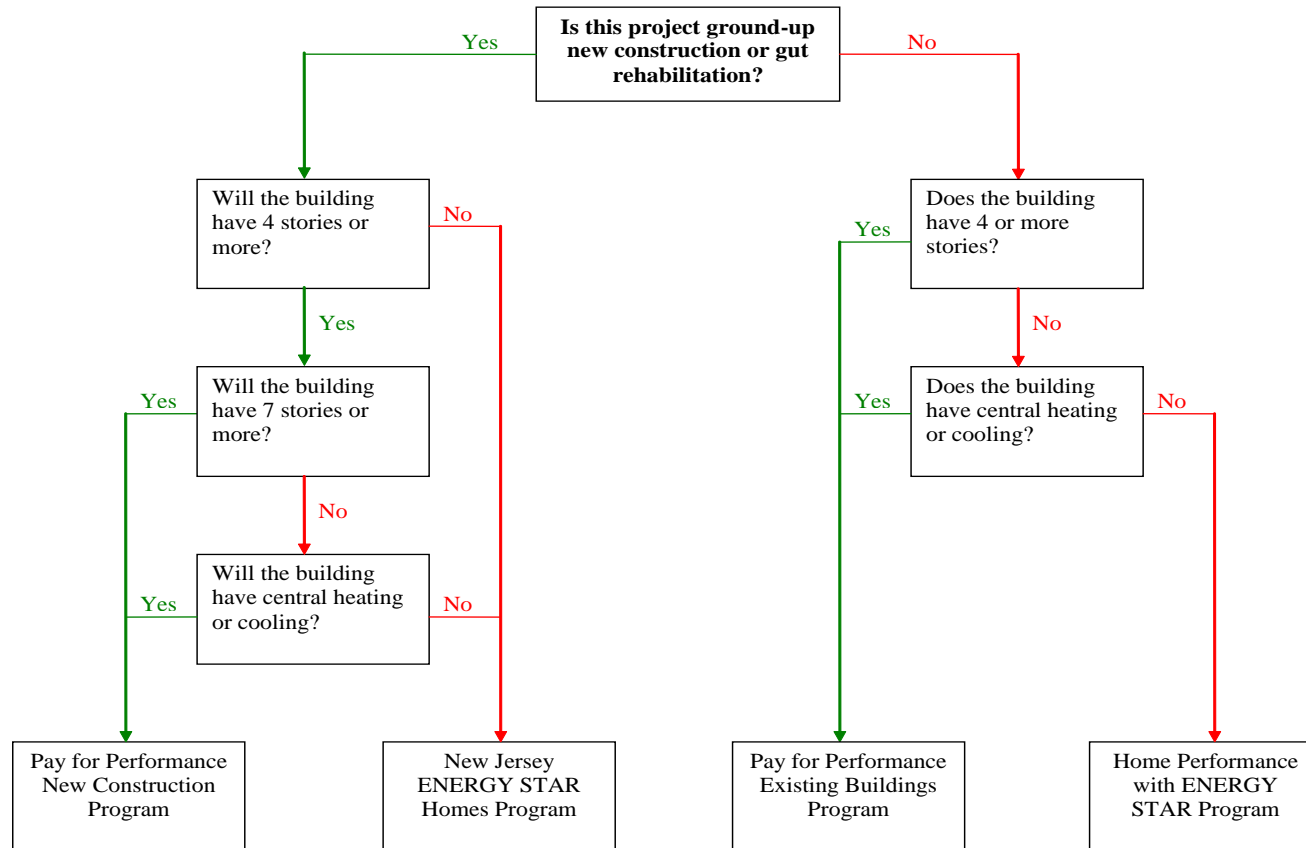
Quality Control Provisions:

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

Program Evaluation

Ongoing evaluation services will be provided by the OCE through its external evaluation vendor

Multifamily Buildings



If you have any questions, please contact the residential or commercial market manager at 866-NJSMART

Multifamily Financing Program

The Multifamily Financing Program (MFFP) is a pilot program that will provide multifamily building owners in the state of New Jersey with increased capital at competitive borrowing rates, in addition to program incentives to perform energy efficiency upgrades in their facilities.

Program Description

The Multifamily Financing Program adheres to all the guidelines and requirements of the Pay for Performance Program (P4P) offered through the C&I portion of the NJCEP. The MFFP is available to any multifamily customer with a peak demand greater than 100 kW¹. The program is delivered through the network of P4P partners, which consists of qualified engineering firms and ESCO's who are experts in performing comprehensive energy efficiency upgrades. The partners identify energy conservation measures (ECMs) through an energy audit, and then model these improvements in a DOE-2 compliant energy simulation programs such as eQuest and Trace 700 to estimate project savings. The project scope is refined to select cost effective measures that achieve a 10% internal rate of return (IRR) or greater, which the partner then uses to develop an Energy Reduction Plan (ERP), which is the basis for calculating program incentives. The Market Manager performs a thorough review of the ERP and the ASHRAE-compliant building energy simulation model for accuracy and compliance with program rules and guidelines.

The Multifamily Financing Program utilizes banks and other lenders to provide loans to multifamily building owners which are used to offset the un-incentivized portion of a project participating in MFFP. A customer participating in MFFP will seek out a Partner to perform an energy audit and model ECM's in an ASHRAE-approved simulation program, compiling the results in an Energy Reduction Plan. Once the ERP is approved, the building owner has the option to seek out lenders willing to provide a loan for the building upgrades. More details on the process are included in the "Program Offerings and Incentives" section of this filing.

By specifically targeting the multifamily sector, the Multifamily Financing Program will be able to streamline its processes due to the lack of variation between projects. Furthermore, a more qualified and industry-specific network of partners with unique multifamily experience will be developed to provide additional benefit to customers. The program will be directly marketed to multifamily building owners across the state and provide a solution specifically designed for multifamily buildings and owners.

¹ The 100 kW peak demand requirement is waived for affordable (low-income, subsidized, HUD)

Target Market and Eligibility

The Multifamily Financing Program is open to existing multifamily buildings with peak demand in excess of 100 kW in any of the preceding twelve months. Affordable multifamily customers (“affordable” as defined as low income, subsidized, HUD) are exempt from the 100 kW requirement. The 100kW peak demand is inclusive of tenant electric load, as well as the commercial load of a building.

Participants are required to work with an approved Pay for Performance Partner to develop the Energy Reduction Plan and facilitate installation of the recommended package of energy efficiency improvements. In order to receive the full suite of incentives offered in the Multifamily Financing Program, the submitted Energy Reduction Plan must include a package of energy efficiency measures that achieve the minimum performance threshold or Energy Target (i.e., 15% of total building source energy consumption).

The 15% minimum energy reduction will be based on source energy, which is consistent with EPA’s Portfolio Manager benchmarking software. Pre-approval of the Energy Reduction Plan is required for all projects, which may include a site inspection. Projects that cannot identify efficiency improvements that meet the minimum performance level will be referred to the appropriate SmartStart Buildings Program(s).

Definition of a Project

The Program is designed to accommodate certain types of multifamily buildings. Specifically, multifamily customers that fit the following description will be able to participate in the Multifamily Financing program: (Buildings with individually metered apartments may be eligible for the Multifamily Financing Program or the Home Performance Program, but cannot participate in both.)

- High-rise/Mid-rise buildings
 - High-rise/Mid-rise apartment complexes are apartments, cooperative, and/or condominiums structures that are 4-stories or more above ground.
- Low-rise, garden-style buildings
 - Garden-style apartment complexes consist of multiple low-rise apartments, cooperatives, condominiums and/or townhouses that are 3 stories or less, surrounded by landscaped grounds.
 - Central heating and/or cooling means that each individual unit *does not* contain its own heating or cooling systems. The building must contain a

central heating and/or cooling plant that serves multiple buildings and/or units.

Low-rise (and mid-rise where appropriate), garden-style complexes will be treated as one project under the Multifamily Financing Program. In other words, if there are 10 garden-style buildings that are part of one multifamily community, all 10 will be aggregated into one MFFP application. The 100kW participation threshold will be met through this aggregation (including common area and in-unit billing). The 15% savings requirement (as well as all other program requirements) will be achieved in aggregate, as well. The same process will apply for affordable-rate housing, except for the fact that they will not need to meet the 100kW requirement to participate. Only one set of incentives will be paid per project, and all incentive caps apply.

Multifamily complexes are viewed as a single entity that is eligible for Multifamily Financing Program incentives subject to the annual incentive caps of \$1 million per electric account and \$1 million per gas account to the campus, not to exceed \$2 million per project.

Program Offerings and Incentives

The Multifamily Financing Program will utilize the network of Pay for Performance Program Partners who can provide the technical, financial, and construction-related services necessary for completing the Energy Reduction Plan.

In addition to the incentives, which are described later in this section, MFFP will include a financing component to help multifamily building owners access capital to finance their energy saving project which will cover the non-incentivized portion of the project's cost.

. Steps to accessing the financing include:

- Upon receiving an approved Energy Reduction Plan through MFFP, a building owner who wishes to seek out a loan to help pay for an efficiency project will request a "Pre-approval for Energy Efficiency Measures" form from the Market Manager, which will be based on the results of the ERP, presenting eligible measures, costs, lifetimes, and Savings to Investment Ratio (SIR). (For the purposes of completing the loan form, individual measures, with the exception of health and safety measures, will be screened on SIR, not % IRR. SIR is the ratio of the present value of an energy saving stream with respect to the present value of the cost of making the energy efficiency improvements.)
- The building owner can then seek out any qualified lender in the state willing to finance the project to negotiate loan terms. Upon agreement of terms, a participation agreement is signed and submitted to the Market Manager for review and approval, along with the pre-approval form and a preliminary loan summary.

- Upon close of the loan, the NJCEP will pay 50% of the loan cost to the lender at 0% interest, which greatly reduces the risk incurred by the lender and will greatly incentivize lender participation in the program. As the loan is paid back by the customer over time, the lender will provide monthly payments to the NJCEP to pay off the 50% portion of its loan.
- The review of loan terms, program reporting, recording keeping, and payment coordination between the lender and the NJCEP will be the responsibility of a Master Loan Servicer or the Market Manager.

Lending and Payment Structure

The loan agreement between the lender and the customer will be based upon the approved “Pre Approval for Energy Efficiency Measures form.

- The value of the loan cannot exceed the cost of the non-incentivized portion of the EE measures listed on the pre-approval form.
 - In cases where the customer requires a loan for the total cost of the EE measures (e.g. where loan is needed up front to cover total cost of EE measures and customer cannot wait until Incentive #2 and #3 is paid), an agreement between customer, lender, and Market Manager will be drafted so that Incentive #2 and #3 are paid directly to the lender to buy down the principal.
 - In cases where the customer (1) does not want to pursue incentives past the Energy Reduction Plan approval (e.g. forfeit incentives #2 and #3), or (2) wishes to install only part of the approved work scope and falls below the 15% savings required by the program, the customer will be allowed to continue with just the loan portion of the MFFP.
- The maximum length of the loan term will be determined by the weighted average of the measure lifetimes included on the preapproval form. Loans cannot exceed ten (10) years.
- The participant and the lender will have 180 days upon approval to execute the loan and inform the NJCEP.
- The Master Loan Servicer, or the Market Manager, will provide final approval and authorize payment of 50% of the loan value to the lender within 30 business days.

Lenders

This program will provide an excellent opportunity for lenders in the State of New Jersey, and surrounding areas, to take on low-risk loans and promote energy saving projects for multifamily customers. Lenders will not have to be pre-approved to participate; instead, eligible lenders will be defined by:

- (1) a credit union insured by the New Jersey State Credit Union League, a Community Development Financial Institution, or any commercial bank, trust company, savings bank, savings and loan association, foreign bank credit union, or other financial institution authorized by Federal or State law to operate in the State of New Jersey which completes the Lender Participation Agreement, attached herein, with the NJ OCE;
- (2) a leasing subsidiary of a bank holding company or a leasing company owned by an eligible Lender.

MFFP Incentives

MFFP participants are also eligible for Pay for Performance program incentives and must adhere to Pay for Performance program requirements. Pay for Performance Program incentive details can be found in the Pay for Performance Program description.

Combined Heat and Power and Fuel Cells

For 2012, New Jersey's Clean Energy Program will be offering a stand-alone Combined Heat and Power (CHP) and Fuel Cell (FC) Program. Program participants are eligible to receive financial incentives for Combined Heat and Power and Fuel Cell installations to further enhance energy efficiency in their buildings through on-site power generation with recovery and productive use of waste heat, and reducing existing and new demands to the electric power grid. The Program offers financial incentives for both fuel cells with and without waste heat recovery.

By including CHP and Fuel Cell systems, participants will assist in reducing overall system peak demand, furthering the use of emerging technologies, reducing emissions and using distributed generation to provide reliability solutions for New Jersey.

Equipment Eligibility

To qualify for the incentive, customers must install equipment that is sized to meet all or a portion of their on-site load. Only CHP or Fuel Cell equipment installed on the customer side of the utility meter is eligible for program incentives. Only new commercially available permanently installed generating equipment qualifies for incentives.

The following applies to CHP systems, including fuel cells that utilize waste heat:

- The CHP system must achieve an annual system efficiency of at least 60%, based on total energy input and total utilized energy output. Mechanical energy may be included in the efficiency evaluation.
- Waste heat utilization systems or other mechanical recovery systems are required. Even though waste heat systems are produced with many configurations, they all perform the same task of capturing waste heat energy in the radiator or exhaust systems of a generator and delivering it to a heat load or cooling load. The captured energy is used in heating processes, such as water heating, pasteurizing, product preheating, etc. New electric generation equipment which captures waste heat or energy from existing systems is also allowed.

The following applies to Fuel Cells without waste heat utilization:

- Fuel Cell systems must achieve an annual electric system efficiency of at least 45%

An on-site power system should have the ability to island/disconnect from the utility in the event of substantial grid congestion or failure.

Non-Eligible Equipment

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

- Used, refurbished, temporary, pilot, demonstration, or portable equipment/systems.
- Back-Up Generators - systems intended for emergency or back-up generation purposes.
- Any system/equipment that uses diesel fuel, other types of oil and coal for continuous operation.
- Renewable fueled projects, including biodiesel and landfill gas, must be submitted through the CORE Program or other relevant renewable energy program under the CEP.

Incentives for CHP and Fuel Cell Systems

Incentives vary based on CHP or Fuel Cell technology, type, project size and total project cost. Table 1 summarizes the qualifying technologies and available incentives.

TABLE 1: CHP AND FUEL CELL TECHNOLOGY AND INCENTIVE LEVELS

Eligible Technology	Incentive (\$/Watt) (Up to \$2.0 Million) ₍₁₎	Maximum % of Project Cost	Maximum System Size
Level 1: •Fuel cells not fueled by Class I renewable fuel, utilizing waste heat	\$4.00/Watt	60%	1 MW
Level 1A: •Fuel cells not fueled by Class I renewable fuel, that <i>do not</i> utilize waste heat	\$3.000/Watt	60%	1 MW
Level 2: CHP Powered by Non-Renewable Fuel Source •Microturbines•Internal Combustion Engines •Combustion Turbines	\$2.00/Watt	30% ⁽²⁾	1 MW

Level 2A: CHP Powered by Class 1 Renewable Fuel Source ⁽³⁾	System Size (kw)		40% ⁽⁵⁾	None	
	Rebate ⁽⁴⁾				
	•Microturbines	<10			\$5.00
	•Internal Combustion Engines	10-99.9			\$3.75
	•Combustion Turbines	100-499.9			\$2.00
	500-1,000	\$.65			
Level 3: •Heat Recovery or Other Mechanical Recovery from Existing Equipment Utilizing New Electric Generation Equipment	\$1.00/Watt		30%	None	

⁽¹⁾For technology **Levels 1, 1A, 2 and 3**: The incentives shown above represent a combination of NJCEP and Utility incentives, up to a maximum of \$2,000,000. The portion of incentive payable by NJCEP is dependent upon the amount of utility incentive offered. Utilities offer incentives for CHP and Fuel Cells ranging from \$0 up to \$1,000,000. NJCEP’s incentive will bring the combined incentive up to the \$/Watt amount shown in the table above, up to the maximum amount of \$2,000,000. The “% of project cost” caps as listed in the table above will be maintained. Additionally, any facility successfully participating in Pay for Performance prior to applying for CHP or Fuel Cell incentives will be eligible for an additional \$0.25 per Watt from the NJCEP, not to exceed “% of project cost” caps listed in the table above, or a combined utility plus NJCEP incentive of \$2.5 million, whichever is less. **Level 2A**: Separate incentive cap applies for CHP Powered by Class 1 Renewable Fuel Source. Please refer to the 2012 Renewable Compliance Filing for available Level 2A incentives.

⁽²⁾ The maximum percentage of project cost will go to 40% where a cooling application is use or included with the CHP system.

⁽³⁾ New Jersey’s Renewable Energy Portfolio Standard N.J.A.C. 14:8 2.5 clearly defines what materials are considered to be Class 1 biomass materials; those materials which are not deemed Class 1 must go through sustainability determination by New Jersey Department of Environmental Protection (NJDEP) to qualify. All CHP or Fuel Cell applications fueled by Class 1 renewables will be directed through the appropriate Renewable Program Market Manager.

⁽⁴⁾Rebates are tiered; for example for a 20 kW project the first 10 kW is paid at \$5.00 per watt, and the second 10 kW at \$3.75 per watt.

⁽⁵⁾ Includes all capital equipment costs associated with: producing and refining biomass feedstock, generating electricity and heat recovery.

A minimum of twenty percent (20%) of the incentive related to the CHP/fuel cell system will be paid upon proof of purchase of equipment, sixty percent (60%) of the incentive will be paid upon project completion, review and acceptance of documentation and successful inspection. The remainder, up to twenty percent (20%) of the project incentive, will be paid one year after project inspection and acceptance and confirmation the project is achieving the minimum efficiency threshold.

Furthermore, for CHP or Fuel Cell application where utility matches are available, the incentive caps will be increased to \$2 million per project, but “% of project cost” caps as listed in the table above will be maintained. OCE incentives will subsidize utility matches to ensure a consistent incentive is paid throughout all New Jersey gas territories.

In 2012, New Jersey’s Clean Energy Program will continue to provide an incentive for projects fueled by Class 1 biopower resources eligible for RECs under New Jersey’s Clean Energy Renewable Program. These are systems that use a sustainable and renewable supply of organic material to produce electricity. Please refer to the 2012 Renewable Program Compliance Filing for requirements and funding details.

CHP and Fuel Cell Warranty Requirements

Systems installed must be covered by a warranty of 5 years or a 5-year service contract.

Eligible CHP and Fuel Cell Project Costs

For the purpose of determining the maximum incentive payment, the following costs may be included in total eligible project cost:

- Combined Heat and Power or fuel cell equipment capital cost
- Engineering and design costs
- Construction and installation costs, including commissioning costs
- Engineering feasibility study costs
- Interconnection costs
- Permitting costs
- Up to 5 years warranty or service contract costs
- Fuel line installation costs, limited to the following:
 - Costs associated with installing or upgrading a fuel line.
 - Customer’s cost for any evaluation, planning, design, and engineering costs related to enhancing/replacing the existing fuel service specifically required to serve the CHP or fuel cell equipment
- Air emission control equipment capital cost
- Primary heat recovery equipment, i.e. heat recovery equipment directly connected to the CHP system
- Heat recovery piping and controls necessary to interconnect primary heat recovery equipment to existing thermal load at the project Site

Not Eligible for CHP or Fuel Cell Incentives

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

- Used, refurbished, temporary, pilot, demonstration, or portable equipment/systems.

- Back-Up Generators - systems intended for emergency or back-up generation purposes.
- Any system/equipment that uses diesel fuel, other types of oil and coal for continuous operation.
- Renewable fueled projects, including biodiesel and landfill gas, must be submitted through the CORE Program or other relevant renewable energy program under the CEP.

Application Guidelines for CHP and Fuel Cell Projects

Prior to equipment installation:

- Participants must submit the required Application Form, Technical Worksheets, and Feasibility Analysis to the Market Manager. Upon review and approval of the Application, a commitment letter/letter of intent will be issued approving the eligibility of the system and reserving the incentive.
- The Application Form must include information demonstrating that the proposed system will meet all applicable technical and certification requirements as specified in the Technical Worksheet.
- Applicants must allow inspection of eligible systems. The Market Manager will inspect 100% of the installations prior to issuing the incentive.
- A minimum of twenty percent (20%) of the incentive related to the CHP or Fuel Cell system will be paid upon proof of purchase of equipment. Sixty percent (60%) of the incentive will be paid upon project completion, review and acceptance of documentation and successful inspection. The remainder, up to twenty percent (20%) of the project incentive, will be paid one year after project inspection and acceptance and confirmation the project is achieving the minimum efficiency threshold. Applicant must provide twelve (12) months of operational data demonstrating the equipment achieves at least the required efficiency levels.
- Incentive dollars will be reserved based upon the date of the approved Application Form
- Funding will be reserved for 18 months from the date of the award letter; thereafter the Board, in conjunction with the Market Manager, may at its option cancel the funding. Any circumstances which will result in a delay past the 18-month timeframe must be reported to the Market Manager at least one month prior to the expiration of the funding award. Applicants must submit a request for extension in writing. The request must identify the reason for the request, and a schedule that identifies how much extra time is needed to complete the project. Requests for extensions may be granted by the Market Manager for up to one year so long as applicant can demonstrate proof of significant project advancement. This could be in the form of copies of permits, equipment invoices, installation invoices indicating percentage complete, updated project schedules, etc. Any further requests for extension must be presented to the Market Manager for Board staff consideration. In addition, Market Manger reserves the right to conduct an inspection of the project to confirm project advancement. Approval of a request

- for extension will not change or modify any other program terms and conditions.
- Applicants **must** be contributors to the Societal Benefits Charge fund.

CHP and Fuel Cell Evaluation Guidelines

As part of the evaluation of the CHP or Fuel Cell project, the following criteria will be reviewed:

- System efficiency
- Environmental performance,
- Projected system startup date,
- Annual system utilization.
- Islanding capability
- General Programmatic Goals will be considered
- Project clarity

Applicants will not be allowed to receive incentives for the installed generation equipment from other available NJ Board of Public Utilities, Office of Clean Energy funds.

Program Goals

The Combined Heat and Power and Fuel Cell Program goals and measures of effectiveness will include the following:

- **Market Penetration/Cost Effectiveness:** Reach significant numbers of commercial and industrial customers with site conditions that would directly benefit from CHP or Fuel Cell installations.
Goal: Approve at least 20 CHP or Fuel Cell applications
- **Energy Savings and Generation:** Maximize total installed capacity.

Quality Control Provisions:

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all CHP and Fuel Cell projects. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Applicant eligibility information is verified, along with all technical information in support of energy efficient measure qualification and incentive calculation. Applicant supplied information and program administrator performed incentive calculations are entered into the database, and files are created for all documents and ongoing project correspondence..

Quality Control for Projects that include CHP Systems

Each awarded CHP or Fuel Cell project will be inspected by the Market Manager. A field inspection report will be prepared and kept in the project file for record purposes.

Upon completion of the project, the award recipient will submit documentation that the work is complete (i.e., As-Built Drawings, P and ID Drawings, if necessary) and certification that the project has been constructed in accordance with the accepted application. This may include, but not be limited to, the following:

- Review of documentation to support “Eligible Project costs” as defined above.
- Verification that the information stated in the application matches what was installed.
- Confirmation that the equipment is new and permanently installed and not used, refurbished, temporary, pilot or demonstration equipment.
- Confirmation that the installed system is covered by a warranty of 5 years or a 5 year service contract.
- Confirmation that the system does not use diesel fuel, other types of oil, coal, or renewable sources for continuous operation.

The Market Manager will review this documentation, and, in conjunction with the post installation inspection, will confirm the project has been installed per the specifications of the approved application as well as in line with all program requirements. A post inspection will be performed on 100% of projects which include CHP systems. The Market Manager may also request additional project information or documentation required to verify the project has met the program requirements based on the original application. If the program requirements have been met, the Market Manager will process a minimum of 60% of the incentive based on the approved project amount. The balance (up to 20%) of the incentive will be paid approximately one year after the initial project inspection, upon confirmation that the project is achieving at least the minimum required efficiency threshold. Applicants must provide twelve (12) months of operational data demonstrating the equipment achieves the efficiency levels. If required, TRC will provide a second post inspection at this time.

If the project has not been installed in accordance with the approved application, the Market Manager will review the project and assess the variances between the project as installed and as submitted. The Market Manager will request additional support documentation from the Applicant which may be helpful in evaluating the discrepancy. The Market Manager will review the discrepancies, perform a technical evaluation, and make a recommendation to the Program Coordinator and the OCE. Upon receiving approval of the recommendation, the Market Manager will notify the applicant and process the appropriate incentive.

Pay for Performance New Construction

In order to address new buildings in the C&I market more comprehensively, TRC will continue implementing a Pay for Performance New Construction Program. The Pay for Performance New Construction Program promotes high performance buildings that achieve 15% or more energy cost savings than buildings built to the current energy code. By taking a performance-based approach, this Program allows architects, engineers, and energy professionals the flexibility to incorporate energy efficiency into the building design in a manner that best suits the project. Much of the program design and incentive structure is similar to the C&I Pay for Performance Program that is designed for existing buildings.

Program Description

The C&I Pay for Performance New Construction Program takes a comprehensive, whole building approach to energy efficiency in new commercial and industrial buildings. Similar to performance contracting programs offered in other states, this Program links incentives directly to energy savings and includes a commissioning component to ensure that the estimated savings levels are achieved. This market based-program relies on a network of Program Partners, selected through a Request for Qualifications process. Once approved, Partners will provide technical services to program participants. Partners are required to strictly follow program policy but will work under contract to owners, acting as their “energy expert”. Partners will be required to develop an Energy Reduction Plan for each project. The Energy Reduction Plan details a set of recommended measures that will achieve the performance target. A set minimum performance target will be required of all projects and will be established using a 15% energy cost reduction from a reference building based on applicable energy code². Market Manager reserves the right to consider alternative minimum threshold savings requirement in unique situations. The achievement of this energy reduction goal will be verified through post-construction commissioning.

Target Market and Eligibility

The C&I Pay for Performance Program is open to new commercial and industrial construction projects with 50,000 sq ft or more of conditioned space that are located in a Smart Growth³ area. Market Manager reserves the right to approve projects that are within 10% of the minimum 50,000 sq ft threshold. Projects may include a single building meeting square footage requirements, or multiple buildings as long as those buildings are owned by the same entity, are located on adjacent properties, and are designed and constructed within the same time period.

² Current energy code in New Jersey is ASHRAE 90.1.2007

³ SmartGrowth areas can be found using the SmartGrowth Locator at the following website:
<http://sgl.state.nj.us/hmfa/viewer.htm?LocatorType=1>

Location in a SmartGrowth² Area –New construction projects will only be eligible for incentives if they are located in areas designated for growth in the New Jersey State Plan. However, the following exceptions do apply:

- The replacement or expansion of buildings in an area not designated for growth, on a single parcel by the current owner who has owned the property for at least one year would be eligible for program incentives, provided that such replacement or expansion will result in structures that, in total no more than double the amount of square footage of the original building prior to expansion, and provided that the original building was built before March 4, 2003. New construction outside an area designated for growth that does not expand or replace an existing structure will remain ineligible for program benefits.
- Municipally owned buildings, hospitals, and/or military facilities in areas not designated for growth are also eligible for program benefits, provided they meet the same requirements noted in the preceding paragraph.

Multifamily Buildings – The Pay for Performance New Construction Program will accommodate certain types of multifamily buildings. Specifically, multifamily customers that fit the following description will be able to participate in the Pay for Performance program:

- High-rise buildings: 7 stories or greater
- Mid-rise buildings: 4-6 stories with central heating and/or cooling

Low-rise (and mid-rise where appropriate), garden-style complexes will be treated as one project under the Pay for Performance program. In other words, if there are 10 garden-style buildings that are part of one multifamily community, all 10 will be aggregated into one P4P application. The 50,000 square foot participation threshold will be met through this aggregation (including common area and in-unit). The 15% savings requirement (as well as all other program requirements) will be achieved in aggregate, as well. The same process will apply for affordable-rate housing, except for the fact that they will not need to meet the 50,000 square foot requirement to participate. Only one set of incentives will be paid per project, and all incentive caps apply. There are no additional changes to the program.

Participants will be required to work with an approved Pay for Performance Partner to develop the Energy Reduction Plan and facilitate the incorporation of the recommended energy efficient design features. In order to receive the full suite of incentives offered in the Pay for Performance Program, the submitted Energy Reduction Plan must include a package of energy efficiency measures that achieve the minimum performance threshold (i.e., 15% less energy costs better than the ASHRAE-based reference building). In addition, the Energy Reduction Plan must include a comprehensive mix of measures; lighting cannot make up more than 50% of the total projected savings.

Energy cost will be used in the performance target calculation. Energy cost is also used by ASHRAE 90.1 and Appendix G, EPC Act Federal Tax Deductions, and LEED NC. Pre-approval of the Energy Reduction Plan is required for all projects. Projects that cannot identify efficiency measures that meet the minimum performance target will be referred to the appropriate SmartStart Buildings Program(s). The Energy Reduction Plan will include a commissioning report for all recommended measures.

Multifamily complexes and campus-style facilities are viewed as a single entity that is eligible for Pay for Performance incentives subject to the annual incentive caps of \$1 million per electric account and \$1 million per gas account.

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

Program Offerings and Incentives

A key component of the Pay for Performance New Construction Program is the development of a network of Program Partners who can provide the technical, financial, and construction-related services necessary for completing the Energy Reduction Plan. The Partner network developed by the Pay for Performance Program for existing buildings includes firms that are also qualified to serve new construction projects. One of the goals of this program is to expand the network of energy efficiency firms that can provide these services in order to make this Program accessible for smaller commercial and industrial projects. This market-based approach is a key component of market transformation by creating “green collar” jobs and helping to develop the workforce necessary to achieve ambitious energy savings targets. Firms interested in becoming Program Partners will be required to submit case studies and resumes showing experience and expertise in C&I energy efficiency projects for new buildings.

Program incentives are performance-based and not specifically tied to the project cost or the recommended energy efficiency measures. Disassociating incentives from project cost is a key program design decision as it streamlines program administration by eliminating the collection of bid documents, construction contracts and change orders. This incentive structure also provides the benefit of allowing Partners to estimate and explain incentives to prospective participants as part of the program sales process.

Incentives up to \$1,000,000 per electric and \$1,000,000 per gas utility account, not to exceed \$2,000,000 per project, are available and will be released in phases upon satisfactory completion of each of three Program milestones, which are:

1. Submittal and approval of a of a Proposed Energy Reduction Plan,
 - a. Incentive paid in the amount of \$0.10/ghsf up to \$50,000
 - b. Additional submittals required: Signed Developer/Partner Contract, proof of 75% of design team's fees paid by developer, Copy of Drawing Sheet Index & Specification Booklet Table of Contents
 - c. Market Manager reserves the right to approve projects that are within 10% of the minimum 50,000 sq ft threshold.
 - d. Incentive is contingent on moving forward with construction and must be supported by a signed Installation Agreement. Market Manager, in coordination with the Office of Clean Energy, may waive this contingency in extreme situations where construction is halted due to economic or other external factors.
2. Submittal and approval of the As-Built Energy Reduction Plan
 - a. Incentive paid in the amount of \$1.00/ghsf
 - b. Additional submittals required: Invoices (or similar proof of purchase), passing post-installation inspection.
3. Submittal and Approval of the Commissioning Report that indicates achievement of a performance target of at least 15% by the proposed design
 - a. For a performance target 15%-17%, incentive paid at \$0.35/ghsf.
 - b. For a performance target 18%-20%, incentive paid at \$0.45/ghsf.
 - c. For a performance target 20% and up, incentive paid at \$0.65/ghsf.

Incentive #1 – Proposed Energy Reduction Plan – This incentive is intended to help offset the cost of services associated with the development of the Energy Reduction Plan and design fees. This incentive will be \$0.10 per gross heated square foot up to a maximum amount of \$50,000.

Incentive #2 – As-Built Reduction Plan – This incentive will be based on the final installed work scope. The incentive rate will be \$1.00 per gross heated square foot to be paid upon construction completion.

Incentive #3 –Commissioning Report – This incentive will be based upon confirmation that the building achieved the performance target value indicated in the Proposed Energy Reduction Plan. This incentive will range from \$0.35 - \$0.65 per gross heated square foot, increasing with the percentage of cost reduction achieved. Incentive #3 is payable upon construction completion and approval of the Commissioning Report. Changes during construction that result in a greater than 10% variation in projected energy cost savings must be incorporated into the As-Built Energy Reduction Plan and Incentive #3 re-calculated.

Incentive #2 and #3 combined will be capped not to exceed 75% of the total project incremental cost or \$2 million per project (if both electric and gas measures are implemented) whichever is less. Entity caps of \$4 million per calendar year (or \$5 million with CHP) also apply. Incremental costs will include both soft and hard costs

associated with participation in this Program and the achievement of the 15% performance target. Market Manager, in coordination with the Office of Clean Energy may consider alternative incentive caps in unique situations where incremental costs are difficult to quantify.

There will be no 50,000 sf eligibility requirement for the following types of customers: hospitals, select non profits*, universities, government entities (including K-12) and affordable multi-family customers (“affordable” as defined as low income, subsidized, HUD, etc.). *Non profits are defined organizations that are exempt for taxation under Section 501 (c) (3) of the Internal Revenue Code so that smaller entities in this customer class can take advantage of a whole building approach to energy efficiency.

Program Goals

The Pay for Performance New Construction Program goals and measures of effectiveness will include the following:

- Market Penetration/Cost Effectiveness: Reach significant numbers of commercial and industrial new construction projects with comprehensive, cost effective scopes of work.
Goal: Approve at least 25 applications for the Program.
- Energy Savings: Maximize total energy (electric and gas) efficiency opportunities through the whole building approach.
 1. **Goal:** Approve at least 7 Energy Reduction Plans that meet the minimum threshold for energy savings.
- Create Green Collar Jobs: Continue to expand the number of firms offering comprehensive energy services. Program orientation seminars and associated training opportunities will help to develop a network of Program Partners who can offer a full range of technical, financial, and construction-related services.

Program Deliverables

Pay for Performance – New Construction will provide the following services:

1. Maintain pool of Program Partners that can offer Program services and publicize this list to potential participants.
2. Provide up to two (2) half-day Program Orientation seminars for Program Partners to introduce the Program and the Energy Reduction Plan development.
3. Provide two (2) subsidized Energy Modeling Training Sessions for Program Partners related to ASHRAE 90.12007 Appendix G.
4. Conduct Monthly Partner Conference Calls to present Program updates and discuss any issues that Partners may be encountering.
5. 100% Quality Control review of all submitted Energy Reduction Plans.

6. One post-installation inspection per approved Proposed Energy Reduction Plan

Quality Control Provisions

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

Program Evaluation

Ongoing evaluation services will be provided by the OCE through its evaluation vendor

Retro-commissioning

TRC is proposing the implementation of a Retro-commissioning Pilot Program for 2012. Retro-commissioning is a quality-oriented process for achieving, verifying, and documenting the performance of the energy consuming systems in facilities, to ensure they meet the defined objectives and criteria. The Retro-commissioning Process assumes facility owners, programmers, designers, contractors, and operations and maintenance entities are fully accountable for the quality of their work. The Retro-commissioning Team uses methods and tools to verify the project is achieving the Owner's Project Requirements (OPRs) throughout the delivery of the project. Retro-commissioning is applied to existing facilities and can be applied to any building system; in this case it will be focused on HVAC systems and Energy Conservation Measures supporting electrical and natural gas usage, excluding the building envelope.

Program Description

Retro-Commissioning (RCx) is the process of ensuring an existing building's energy systems and equipment are operating at optimal levels to lower energy usage and provide the needs of the building's owner and occupants. RCx addresses a building's underlying system-level deficiencies as a comprehensive process rather than a set of prescriptive measures or isolated quick-fix problems.

RCx benefits provide an energy-efficient building, which is operated and maintained by a trained staff or service provider including a comfortable and safe working environment with persistent, energy savings. Retro-commissioning can lower building operating costs by reducing electric demand, energy consumption, and maintenance complaint calls and also increasing building value, occupant comfort and equipment life.

Pilot Program Approach

ASHRAE has developed The Commissioning Process Standard 0-2005, which will be used as a general reference document for the RCx program development. Care will be exercised to focus the program on the management of results and not the management of unnecessary paperwork, which too often consumes the RCx funds.

TRC proposes to first establish this program on a pilot basis due the complex nature of Retro-commissioning. TRC will address anomalies raised in evaluations of similar programs over the last few years through a pilot implementation of this program, including:

1. The experience and approach of service providers greatly affects the recommended measures – TRC will identify through an RFQ process, a qualified but limited number of RCx contractors whom demonstrate an appropriate level of experience and seek their input on optimizing the RCx pilot.

2. Documenting and verifying measures is challenging due to the nature of many O&M procedures – The RCx contractor should not be the contractor completing any associated ECM measures. TRC will develop program protocols requiring specific measure descriptions and test whether the RCx contractor needs to be actively involved in overseeing measure completion or verification. Measurement and diagnostic tools reside within appropriately deployed building automation and EMS system, which will serve as the prime reporting instrument with available.

Target Market and Eligibility

The Program will be targeted to customers with facilities that meet the following criteria:

- Have a minimum footprint of 50,000 square feet of conditioned space The customer must own and operate the facility.
- The customer must contribute to the Societal Benefits Charge through one of the investor owned utilities in New Jersey.
- The facility and systems must be in operation for a minimum of two (2) years and have at least 18 months of utility information available (fuel, water and power)
- The facility must have a qualified building automation system (BAS) in place and in operation with a graphical user interface (GUI)
- The building must be benchmarked using the Environmental Protection Agency's (EPA) online benchmarking tool, Portfolio Manager™
- The building did not undergo a commissioning effort during the construction process

The RCx Pilot Program will be marketed through existing New Jersey's Clean Energy Program contacts and will include ongoing outreach to professional organizations (Pay for Performance Partners, other architects/engineers, industry associations, sector-specific functions, etc.) and direct customer contact targeted at specific customer segments. RCx contractors will also be allowed to solicit potential projects, on a limited basis during this pilot but must prove to be acting on behalf of a New Jersey utility customer that meets the aforementioned criteria.

Program Offerings and Incentives

RCx services, including the following phases: Prescreening, Planning, Investigation, Implementation and Hand-off.

Prescreening. TRC staff will review the project application and determine if the applying facility qualifies based on the aforementioned criteria. If the facility is deemed eligible, the application will be assigned to a participating RCx contractor to begin their involvement. Should the facility not qualify, the party applying for participation will be notified in writing, citing specific reasons for disqualification. The disqualified facility can reapply for participation in the pilot program if the reasons for disqualification are remedied within the sanctioned period of time the pilot is in place. If the facility cannot

participate in the pilot program, a TRC representative will contact the facility owner to discuss participation in other components of New Jersey's Clean Energy Program.

Planning. In the planning phase, a TRC representative will accompany the selected RCx contractor on the Initial Site Visit. The Initial Site Visit is an information-gathering session, which provides the RCx contractor the opportunity to speak with the operations staff, become familiar with the major energy-consuming systems, and begin to identify potential energy-saving measures. Prior to the walk-through, the facility's operations staff should prepare the following:

- A prioritized list of existing problems and potential improvements
- Insights on current building conditions
- A minimum of 18 months of utility bill data (if the data is presented in spreadsheet form, one utility bill should be included for each of the facility's utilities).
- Preventive maintenance records, and any active service contracts.
- Mechanical, Electrical and Plumbing (MEP) plans and specifications (as-builts are preferred but not mandatory)
- Operation and Maintenance (O&M) manuals if available

This information provides the RCx contractor with an in-depth understanding of the building's energy usage and O&M practices so an accurate and realistic RCx plan can be developed to define project objectives, scope, schedule of procedures, and documentation requirements.

The draft RCx Plan is submitted to the Market Manager for review and approval. The Market Manager reviews the plan and makes comments if applicable. If comments are made, revision of the plan is required and resubmission to the Market Manager is necessary. If no comments are made, the RCx contractor will submit a final, approved plan to the Market Manager. At this point in time the first incentive is calculated and committed (not paid). The Market Manager will also identify the customer portion of investment in the project based on square footage of the building using a sliding scale, i.e. \$10,000 for 50-99.999K square feet, \$15,000 for 100-149.999K square feet, etc.

Investigation: In this phase, the RCx contractor is trying to understand how the building systems are functioning and identify and prioritize energy-saving opportunities and system improvements. A thorough review of building documentation and current O&M practices should then be undertaken by the RCx contractor, including the owner's specific operating requirements, such as temperature and humidity set-points, outside air requirements, and occupancy schedules.

The RCx contractor shall then perform diagnostic monitoring of the energy consuming equipment to determine the following:

- Whole building energy consumption
- Valve and damper positions
- Functionality of end devices, e.g. actuators, sensors, PLCs
- Outside air-temperature and humidity levels
- Equipment run times
- Space occupancies

Short-term diagnostic monitoring can be conducted using trend-logging through the building's BAS or with portable dataloggers. The measurements provide an understanding of the system's performance under various operating conditions, which in conjunction with engineering algorithms, allows the RCx Contractor to calculate potential savings opportunities and to identify problems that may require further investigation through the functional testing of individual equipment. This diagnostic monitoring forms the energy-use baseline against which all future energy-saving measures will be calculated.

The RCx Contractor will discuss a list of findings with the facility owner and the Market Manager, including identifying the most cost-effective energy-saving opportunities and system improvements (one year and less are prioritized) that are within the scope and budget of the project. Together the facility owner and the RCx Contractor decide which strategies need to be implemented for the Clean Energy Program incentive, and the RCx contractor summarizes the recommendations in a report to the building owner.

After this Investigation Phase is complete and approved by the Market Manager, the second incentive is calculated and committed.

Implementation: The building owner retains responsibility for managing the work flow and contracts with various firms to carry out the implementation plan.

The RCx Contractor provides the implementation plan consisting of those measures needing to be implemented to be eligible for the Program incentives, incorporating milestones for documentation and verification of results as the project progresses. This plan organizes and defines the work needed to complete the savings and improvement measures. Upon completion of each measure, the system is tested and the data compared to the energy baseline. Calculations are performed to confirm that the expected improvements and resulting energy savings have been realized and that the measures are well integrated and are having the anticipated effect on the building.

The RCx contractor provides the Market Manager with monthly updates on the status of the implementation. The RCx contractor also performs a post installation site visit to gather data and verify installation. The Market Manager may accompany the RCx contractor on this visit or conduct a separate post installation site visit.

Once a path is chosen, the RCx Contractor develops an implementation plan appropriate to the chosen management approach, those needing to be implemented to be eligible for the Program incentives, incorporating milestones for documentation and verification of results as the project progresses. This plan organizes and defines the work needed to complete the savings and improvement measures. Upon completion of each measure, the system is tested and the data compared to the energy baseline. Calculations are performed to confirm that the expected improvements and resulting energy savings have been realized and that the measures are well integrated and are having the anticipated effect on the building.

Hand-off: In the project hand-off phase, the RCx Contractor develops a comprehensive record of the entire RCx project that brings together all of the important information from project deliverables in a summary form. O&M manuals should be compiled for each energy-saving measure and system improvement as valuable resources for the building operations staff. The RCx contractor also conducts in-depth training to ensure that the staff has the skills to maintain the improvements and energy savings as well as to do any specific O&M functions required to sustain a high level of building performance. To achieve long-term persistence of the RCx effort, the contractor recommends strategies, in the form of an ongoing commissioning plan, that the owner and operations staff can follow to confirm that savings are continuing into the future.

Retro-commissioning is an important part of addressing the main focus of ENERGY STAR's concept of whole building performance. Buildings earning the ENERGY STAR label have been benchmarked with the EPA's Energy Performance Rating System and been shown to perform in the top 25th percentile when compared to similar buildings. By determining pre- and post-retro-commissioning project ENERGY STAR benchmarks, an ENERGY STAR benchmark can be used as an indicator of success and may help the building earn an ENERGY STAR.

After the RCx work is complete, TRC can optionally provide a classroom training course in general O&M procedures for participating customers along with training in Energy Efficiency Building Management (Post RCx).

The entire amount of eligible incentives will only be paid if the customer proceeds with all recommendations that have a one year or less simple payback. If the customer does not proceed with all of the required measures, they will forfeit that portion of their incentive.

Incentives will be finalized upon completion of program design but are estimated to be paid at \$0.09/kWh and \$1.00/therm saved up to a maximum of 50% of the project cost and \$250,000 per customer facility.

Program Goals:

The RCx Pilot Program goals and measures of effectiveness will include the following:

- Market Transformation & Penetration: Increase the market awareness of the overall benefits derived from RCx and Cx activities. This is an untapped market opportunity that has been targeted heavily in other states (TX, CA, IL, etc.)
- Recruit and train 6-10 RCx Contractors to deliver the program, allowing program procedures to be developed and fine-tuned.
- Conduct 20 pre and post benchmarkings of participating RCx facilities
- Provide RCx services to 15-20 C&I customers
- Facilitate 1-2 Operation and Maintenance Training Courses

Quality Control Provisions:

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all Retro-Commissioning applications. 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 the application and incentive calculation. Applicant supplied information and program administrator performed incentive calculations are entered into the database, and file are created for all documents and ongoing project correspondence.

Program Evaluation:

As this is a pilot offering, TRC will conduct an assessment of the pilot to assist in determining whether Retro-commissioning should be offered as a full program.

Sector Specific Program Enhancement

Background

The goal of the sector-specific initiative is to achieve greater energy efficiency awareness and energy efficiency program participation using a sector-based approach for higher education, multifamily, healthcare, municipality, hospitality and commercial and industrial buildings. Sector-based program delivery makes it easier for customers to access specific programs, services, products and technologies, training, and educational materials that are relevant to them; contractors and other allies to help them achieve their energy reduction goals, and trade organizations and other associations for further support. TRC, as OCE C&I Market Manager, has developed programmatic strategies that resonate for each of the sectors, resulting in actions that make their new or existing facilities more energy efficient. Strategies being implemented include, but are not limited to: benchmarking, one-on-one interaction, leveraging partnerships with trade associations, integration with regional and national efforts, as well as guidance for customers in using the existing NJ Clean Energy Programs and services. Sector-specific services are provided under the existing SmartStart and Pay for Performance Programs.

Program Description

The objective of the sector-specific program enhancement is to provide targeted sectors with customized services so that customers may better understand and implement: energy efficiency, sustainable design and operation, and renewable energy as appropriate to their sector. In addition to energy-related benefits, strategies vary by sector and have been developed to leverage non-energy benefits, such as: satisfying environmental regulations; improving productivity, promoting economic development, improving indoor environmental quality, and implementing operations and maintenance savings; which often influence energy efficiency decisions.

A TRC sector manager is responsible for overseeing the selected efforts and coordinating internally to ensure that there is consistency in the information provided to customers and that it reflects the goals and objectives of the New Jersey Clean Energy Program. All sectors will continue to be supported by the NJ Clean Energy website and TRC will continue to develop the format and basic content for sector specific web pages and to provide feedback to assist customers find relevant information, updates, success stories and other program resources.

The Sector-Specific initiative is an information transfer and marketing effort that uses existing core New Jersey Clean Energy Programs along with the services and strategies developed for each sector. A list of generalized services is provided below.

- **Benchmarking** — A rating system that scores and tracks a facility's energy efficiency and other factors over time to help establish relative efficiency and improvement

goals. Benchmarking may also compare a facility's energy use to its peers, identifying facilities with higher potential for energy savings. TRC will continue to build models using EPA Portfolio Manager; Energy Performance Indicator (EPI) for industrial facilities, and the NYSERDA Multifamily tool

- One-on-one interactions and outreach — direct customer assistance will help facility managers and decision-makers develop action plans and take advantage of energy efficiency and demand management. The focus will be on recruitment of new participants to NJ OCE programs and developing and maintaining ongoing customer relationships.
- Integration with regional and national efforts — collaboration with national and regional efforts and organizations such as the: the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy (DOE), Northeast Energy Efficiency Partnership, the Consortium for Energy Efficiency, the American Council for an Energy Efficient Economy, Motor Decisions Matter, ENERGY STAR®, Pump Systems Matter, and the Compressed Air Challenge. Understanding and prioritizing these efforts and partnering with these organizations will help keep New Jersey's Clean Energy Programs on the leading edge of process and technology innovation and provide opportunities to leverage these resources to better serve New Jersey sectors.

Target Market and Eligibility

Industrial — The industrial sector is the broadest and most varied of the economic sectors targeted by this initiative. The facilities in this sector vary widely in terms of types of business activities, energy intensities, energy-using equipment, and sizes. The sector can be defined generally as those facilities that manufacture, process, or store goods, equipment, or merchandise and that have a two-digit Standard Industrial Classification (SIC) Code from 20 to 50. TRC will continue to focus primarily on the unique needs and barriers faced by manufacturers of durable and non-durable goods, warehousing and other storage facilities and will add waste water treatment plants because of their significant energy savings opportunities.

The recent economic decline in manufacturing in New Jersey supports the increasingly vital need for energy efficiency improvements, to help lower operations costs and retain jobs. New Jersey's industrial sector is, on average, generally more efficient than most industries nationwide, yet, there is still much room for improvement. The rate of performance improvement in the industrial sector appears to have slowed; New Jersey facilities have not kept pace with industrial energy efficiency best practices.

Higher Education — This sector includes public or private post-secondary educational facilities including, but not limited to, colleges and universities and community colleges. Each college and university campus presents a unique set of challenges, requiring customized energy efficiency strategies. Residence halls and classrooms use lots of energy but often may be relatively minor power users as compared to the energy used by labs and some other campus buildings. Some schools attribute up to half of their energy

use to research facilities, mainly because the labs often require 6-8 air changes per hour with 100% outside air. Labs need outside air but air exchangers are very costly. Even though automation may help reduce these costs, a lab still needs about six air changes per minute when occupied and about three or four changes a minute when unoccupied. Fume hoods equipped with proximity sensors can ensure that researchers are safe while working and can be set to automatically slow down when no one is present, helping to save some energy. In comparison, large auditoriums or conference rooms have carbon dioxide monitors that allow air to safely and economically re-circulate within a given CO₂ set point. Campus parking lots and walkways use electricity to provide exterior lighting and there is increased use attributable to the need to improve overall, campus-wide security, a top concern among higher education facilities.

Historically, compared to other industries, colleges and universities have been slow to adopt energy-saving techniques. Colleges in particular often lack cohesive strategies to reduce energy use. Many institutions spend millions of dollars per year powering inefficient equipment, outdated cooling and heating systems, and antiquated clusters of research data servers stored in lab closets and back rooms. A typical college or university classroom building, lighting accounts for 31%, space heating 28%, and water heating 25% of total energy use, making those systems good targets for energy savings.

Institutional — The institutional sector can generally be described as facilities owned or operated by local governments including libraries, preschools, K-12 schools, day care and senior living/senior care. TRC will continue to focus on hospitals, healthcare facilities and municipalities. According to the New Jersey Hospital Association (NJHA), the healthcare sector is comprised of over 120 hospitals and healthcare systems located throughout New Jersey. The targeted facilities of this sector-specific initiative are:

- Acute care and children’s hospital campuses
- Free-standing acute care and children’s hospitals
- Free-standing medical office buildings, including 24 hour, walk-in clinics

To qualify, the acute care hospital, children’s hospital, and medical buildings must occupy at least 50% of the total healthcare property. Acute care and children’s hospitals are facilities that typically provide a variety of services within the same building or among multiple buildings on a campus, including emergency medical care, physician’s office services, diagnostic care, ambulatory care, and surgical care. Energy usage of all buildings and supporting functions (such as administrative offices, skilled nursing, long-term care, medical offices, exam rooms, lobbies, cafeterias) is included in the aggregate, gross square footage for the campus. The campus includes all related buildings that are connected by corridors or walkways or are in close proximity to one another. Medical office space located on the campus should be included in the aggregate, gross square footage. Computer data centers, parking garages or lots are secondary spaces that can be included in the benchmarking of an acute care or children’s hospital.

Medical buildings are facilities used to provide diagnosis and treatment for medical, dental, or psychiatric outpatient care. The total gross floor area should include all supporting functions such as kitchens used by staff, laboratories, lobbies, atria, conference rooms and auditoria, fitness areas for staff, storage areas, stairways, elevator shafts, etc., and must make up at least 50% of the facility.

Hospitals are among New Jersey's most complex, diverse, and energy-intensive facilities. Unlike most other commercial buildings, hospitals must be fully operational 24 hours a day, seven days a week, able to maintain services during power outages, natural disasters, and emergencies that could force other facilities to close. Increased participation in the programs will continue with developing sector-wide partnerships with the decision makers and organizations/associations which influence the industry. Through continuously communicating program benefits and offerings, and with extensive marketing, education, and training, the barriers will diminish. Specifically, communication with hospital executives (administrator or president/CEO), others responsible for important business functions (Board of Directors or Trustees), and in-house staff responsible for building operations will yield the most benefit. Buy-in from upper management will result in organizational commitment, and the ability of facilities personnel to initiate and follow through with the necessary capital projects and to exerting more control over vendor / contractor relationships to attain the facility goals set for sustainability and energy efficiency.

Adding municipal facilities to this sector has allowed TRC to offer benchmarking and training to enhance and support the Local Government Energy Audit program, and includes all buildings eligible for LGEA program incentives.

Multifamily - A multifamily building, as defined by the Pay for Performance Program, is a residential building of 4-6 floors above ground with a central heating/cooling system along with any building 7+ floors (regardless of heating/cooling); exceptions for buildings less than 4 floors will be made on a case-by-case basis. The 2007 US Census Bureau reported that of the three million existing housing units in New Jersey, a little over half are single family homes, the vast majority of which are owner-occupied. The remaining housing stock is multifamily units of which two-thirds are rented and of which many are in need of repair and upgrades. The New Jersey Apartment Association reports that 1951 is the median year of construction for rental units in New Jersey. An older housing stock provides significant opportunities for repairs, renovations, and energy efficiency improvements. In 2007 alone, ten percent of New Jersey existing housing units received building permits for improvements ranging from new decks to extensive reconstruction or gut rehabilitation.

Additionally, according to the NJ 2020 Energy Efficiency Master Plan, historically in New Jersey between 20,000 and 30,000 new homes are built each year. With the current economic downturn though, new construction development is expected to fall by approximately 50% over the next few years. Over half of these new homes are single family homes with the remainder being multifamily developments both large scale and

townhouse-style. The vast majority are site-built (98%) and speculative construction, the average size being approximately 2,450 square feet and containing three bedrooms. Almost all new residential buildings include central air conditioning and nearly 98% are heated with natural gas, the remainder opting for electric space heating. NJ multifamily developments account for total consumption of 58 million kWh and 65 billion BTUs per year of natural gas, annually.

The sector-specific approach for increased energy efficiency program participation will continue to focus on offering educational information, technical assistance and training, and financial incentives that multifamily building owners can access to build and execute effective and comprehensive energy reduction plans. TRC will continue to forge relationships with owners, managers, architects, and developers, a task facilitated by providing value-added support throughout the building process and by offering benchmarking.

Hospitality - The hospitality industry is a large and expanding sector of New Jersey's economy. According to the U.S. Energy Information Administration (EIA), facilities involved in the *Lodging Industry* are the third most energy intensive commercial buildings in the northeastern United States (after healthcare and education). Facilities involved in *Food Service* and *Public Assembly* were sixth and seventh respectively in national rankings of energy intensity by commercial building type.

TRC will continue to focus on facilities that are involved in lodging such as: hotels (including casino hotels), motels, inns, and extended stay facilities. We also included full service restaurants (but not other facilities involving food service such as cafeterias or fast food). Common to these facilities is a constant high turnover of large numbers of people and the challenge of providing temporary accommodations for them. Energy is primarily used for heating, ventilation, air conditioning, lighting, hot water, refrigeration, food service, and when not outsourced, laundry. The demand for rapid service, maximum convenience and comfort, and high turnover of people can create resource and energy waste, and good opportunities for energy savings.

Large full service hotels tend to have all of the energy demands of other large commercial facilities, plus the demands of HVAC for individual rooms, food service, swimming pools, laundry, and maintenance. Restaurants tend to have smaller floor space and energy demand but like the other facilities in this sector, offer food service, so there is overlap of potential energy efficiency measures that are common to all.

Though the hospitality sector has been expanding in recent years in New Jersey, the current global economic downturn has hit it particularly hard. Disposable income and corporate spending for hospitality services have significantly decreased everywhere. However, this also creates an excellent opportunity for significant systems upgrades and renovations because lighting retrofits, HVAC upgrades, and installation of new building EMS systems, etc. generally cannot be done while hotels and other facilities are fully occupied. Since the industry has a great need to reduce expenses and has been severely

impacted in recent years by escalating energy costs, a temporary decrease in business could actually lead to an increased interest in energy efficiency projects, therefore TRC will continue to pursue this opportunity.

Commercial Buildings – Efforts in this sector, will be focused on chain accounts, commercial real estate companies, and data centers. There is much opportunity for increasing Program participation, working cooperatively with utility key account representatives, and reducing energy use and waste within the commercial sector in general. Data centers, in particular, can reduce energy use dramatically by installing high-efficiency servers, virtualization software, high-efficiency lighting and cooling systems, efficient power systems, humidity controls, and cable raceways. Additional opportunities for energy savings for all building types within this sector will be identified during the plan design phase.

Program Offerings and Incentives

The following are brief descriptions of sector specific information and services. It is important to remember the overall goal is to offer a portfolio of services and strategies which cost-effectively provide the greatest impact on energy awareness, and increase Program participation by each sector.

NJ OCE's overarching goal with the Sector-specific Program is to empower facility and building owners/operators to make energy efficiency decisions. To reach this goal, TRC proposes a twofold strategy which it will apply across all subsectors. TRC will aggressively pursue an educational campaign to transform facility managers into knowledgeable energy customers and supply them with the data they need to make decisions about their own facilities. This is vital to NJ OCE's effort because they are then able to take the initiative to become agents of change within their organizations. This outreach will include benchmarking, direct training, development and dissemination of needed tools, and one-on-one technical assistance. It will take full advantage of collaborative relationships with a range of market participants detailed below. Concurrently, TRC will continue to diligently market NJ OCE's program offerings so that facility and building owners/operators understand how NJ OCE can help them translate their initiative into action.

Integrating with regional and national efforts and leveraging partnerships with trade associations are guiding principles of TRC's approach to serving the specific sectors. Integrating with regional and national efforts allows NJ OCE to benefit from the capabilities of specialized organizations to compliment TRC's in-house expertise. These organizations may include the U.S. Environmental Protection Agency (EPA), the Northeast Energy Efficiency Partnership (NEEP), and the U.S. Green Building Council (USGBC). TRC's strategy for bringing these technical skills to the individuals on the front line of energy efficiency such as facilities' directors, business officials, agency heads, and university boards is to take advantage of the relationships they have with specific organizations.

Energy Benchmarking of Electricity and Heating Fuel Use is a cornerstone of TRC's education strategy. TRC has found that benchmarking reports are very successful in providing facility managers a complete picture of energy use and cost among their various buildings. By giving them information on how well or poorly their buildings are performing relative to their peers, benchmarking helps facility managers see where their needs are and provides impetus for prioritizing and addressing those needs. The benchmarking report also provides an excellent medium for presenting information on NJ OCE programs. TRC will build upon our current success in benchmarking close to 3,000 facilities around the country by making a concerted effort to reach out to individual sector components, as well as modifying our benchmarking system to accommodate the range of building types.

Sector Specific Initiative Goals

The Sector-specific Program goals and measures of effectiveness will include the following:

- **Market Transformation & Penetration:** Expand the number of Clean Energy Program applicants from each sector.
Goal: Demonstrate an increase in Program participation based on based on specific services provided and new applications received.
Goal: Benchmark 500 buildings

Program Deliverables

The Sector-specific Program will provide the following services:

1. Update the list of sector-specific Program services and publicize this list to potential participants through their respective trade associations and on the website.
2. Continue to customize TRC's existing proprietary energy benchmarking system, *Building Energy Performance SystemTM (BEPS)*, for use in each sector.
3. Present NJCEP program incentives and sector specific offerings at Trade Association meetings and events.
4. Make marketing, website, and communication recommendations to appropriate staff.

Program Evaluation

Ongoing evaluation services will be provided by the OCE's evaluation vendor as part of overall Program evaluation.

State of NJ Energy Efficiency and Conservation Block Grants (EECBG) Rebate Program

Description

Unless additional ARRA funding is received, it is anticipated that EECBG Rebate Program activities in 2012 will be limited to completing active projects enrolled during 2010 and 2011. The following paragraphs describe this initiative.

This initiative provided rebates from the federal Energy Efficiency and Conservation Block Grants (EECBG or block grants) received by the NJ Board of Public Utilities to 512 non-formula-eligible municipalities and counties (those that did not receive a Direct Block Grant). A listing of eligible entities can be found on New Jersey's Clean Energy Program website. The first round of EECBG rebates was paid based on the completion of the EECBG application, any supporting documentation and the installation of the energy efficiency (EE) upgrades. The second round, implemented in 2011, was available on a first-come, first-served basis to the 512 non-formula-eligible municipalities and counties that did not receive a Direct Block Grant, even if they participated in round one of this EECBG Rebate Program. This program did not fund new construction but supported the installation of EE equipment as noted below. The program is being implemented by the Commercial and Industrial Market Manager, TRC. Initially, Block Grant rebates were awarded in the amount of up to \$20,000 per municipality or county. During round two, the award amount went up to \$50,000 per municipality or county, until all funds were committed or spent. The rebates were used toward the cost of installing energy efficiency measures in one of two approaches. The municipality/county could:

- Enroll in one of New Jersey's Clean Energy Program (NJCEP) C&I Programs: Direct Install, Pay for Performance or the Retrofit component of the SmartStart C&I Construction Program; or
- Participate in an eligible utility energy efficiency program; or
- Arrange to install building shell measures recommended in the Local Government Energy Audit program or equivalent audit as it is defined below in this compliance filing

In each case, the non-formula eligible local governments could use the rebate to cover the costs of energy efficiency improvements that were not already covered by existing NJBPU incentives. In all cases the energy efficiency measures must be allowed under the categorical exclusions from NEPA review as authorized by the U.S. Department of Energy, which administers the EECBG program.

In addition, the total amount of the combined NJCEP rebate and Block Grant dollars could not exceed the installed cost of the energy efficiency upgrades. The same provision applied to non-formula eligible local governments eligible for this rebate that also

received incentives from a utility pursuant to a Board-approved energy efficiency program: the total incentives from the utility, combined with those from the NJCEP and Block Grant rebates may not exceed the total installed cost of the energy efficiency upgrades, or if required by the terms of the Board's approval of the utility program, they must be equal to or less than 100% of a projects cost.

Eligible project costs follow existing Program guidelines.

Process: Outlined below is a description of how the Block Grant rebate funds may be combined with New Jersey's Commercial & Industrial Clean Energy Programs and/or utility energy efficiency programs. Where applicable, detailed descriptions of the Block Grant rebate process inspection protocols were developed by TRC and submitted to BPU staff for approval.

- 1) **SmartStart C&I Construction Program** – To receive a Block Grant rebate for measures installed under the SmartStart C&I Construction Program, non-formula eligible municipalities and counties must first engage a participating Local Government Energy Audit Program (LGEAP) contractor to conduct an energy audit or they may conduct the audit independent of the LGEA program provided that the audit is equivalent to those conducted through LGEA. (The definition of equivalent energy audit is provided below.) Once the audit is completed and accepted by the Market Manager, the local government would submit the appropriate SmartStart technology application(s) and an EECBG rebate application form to the Market Manager, who would also be available to help the entity determine which facility or measures should be targeted for this opportunity. Block Grant rebates cannot be used to cover the LGEAP audit fee.

- 2) **Direct Install Program** - Non-formula eligible local governments eligible for the Block Grant rebate, may participate in the Direct Install program. Under this program, an approved participating program contractor would conduct an inventory of energy using equipment (lighting, HVAC, etc.) and make recommendations for energy efficiency upgrades. Upon approval by the customer, the contractor would install the energy efficiency measures and the program would provide incentives to cover up to 60% of the installed cost. The entity would submit simultaneously an EECBG rebate application to the Market Manager, who would verify the participation in the Direct Install program, confirm the eligibility of the municipality or county for the Block Grant rebate, and confirm the value of the Block Grant rebate due which would be used to cover all or a portion of the remaining 40% of the project cost. The combined NJCEP incentives and Block Grant rebate could provide the measures at no cost to the local government entity for projects with a cost of up to \$50,000 (round 1) and \$125,000 (round 2, funding permitted).

- 3) **Pay for Performance** - Non-formula eligible local governments eligible for the Block Grant rebate may participate in the Pay for Performance Program. Under this program, the eligible municipality or county would secure the services of a pre-approved program partner. The partner would develop an Energy Reduction Plan and facilitate the installation of the recommended package of energy efficiency improvements. The eligible local government would then submit the EECBG rebate application to the Market Manager, who would verify the applicant's participation in the Pay for Performance program, confirm the eligibility of the municipality or county for the Block Grant rebate, and confirm the value of the Block Grant rebate that would be due and which would increase the program incentives by up to \$20,000 (round 1) and up to \$50,000 (round 2, funding permitted). (Block Grant rebates can only be applied toward the cost of measures installed and therefore cannot be used to offset the cost of developing the Energy Reduction Plan.)

- 4) **Shell Measures under the Local Government Energy Audit Program** - Non-formula eligible local governments eligible for the Block Grant rebate that have had audits completed through the Local Government Energy Audit Program, or who have equivalent audits conducted independently may be eligible to receive Block Grant rebates for costs related to the installation of building shell measures recommended in the audit. In 2010, rebates were available up to \$20,000 for all eligible entities. For 2011, TRC proposed to increase the rebate to up to \$50,000, which was available on a first-come, first-served basis, funding permitted. The value of the Block Grant rebates may not exceed the installed cost of the measure(s). The eligible municipality or county would submit to the Market Manager an EECBG rebate application, proof of project costs, and calculations demonstrating the energy savings of the building shell measure(s) installed. The Market Manager would review project cost documentation provided but would not be responsible for verifying savings calculations. The Market Manager reports savings and costs as provided by the applicant to the BPU. Inspection protocols were developed by the Market Manager and submitted to BPU staff for approval.

- 5) **Utility Incentive Programs** - If non-formula eligible local governments eligible for the Block Grant rebate participate in a utility EE incentive program which offers rebates and incentives to local government customers as an alternative to the NJCEP in certain sections of the State, the local government customer is eligible for the same Block Grant rebates as described in Item 1 above. If a qualified entity is eligible for utility rebates that supplement NJCEP rebates, these rebates and Block Grants rebates will be paid pursuant to Item 6 below. If a qualified entity participates in any utility energy efficiency program, that entity must include a copy of the utility program rebate application along with the EECBG rebate application submitted to the Market Manager.

For projects that request incentives from more than one source, incentives/rebates will be provided in the following order:

- a. NJCEP rebates
- b. Block Grant rebates
- c. Utility incentives

The combination of NJCEP incentives, utility incentives and the Block Grant rebate shall not exceed 100% of the cost of the measures. For certain utility programs, the combination of ARRA funding, NJCEP incentives and utility incentives may not fund 100% of a project's costs.

Example 1: If a project costs \$25,000 and is eligible for a \$7,000 NJCEP rebate, the project would receive a rebate of \$7,000 from the NJCEP and Block Grant rebate of \$18,000. The project would not be eligible for any utility incentives because 100% of the cost of the project would be paid from other sources.

Example 2: If a project costs \$70,000 and is eligible for a \$7,000 NJCEP rebate, the project would receive a rebate of \$7,000 from the NJCEP, a 2011 Block Grant rebate of \$50,000, and up to \$13,000 in utility rebates depending on the availability of utility incentives.

In 2010, the EECBG rebate was **ONLY** available to (and reserved for) the 512 non-formula eligible municipalities and counties. For 2011, funding was available to these 512 non-formula eligible entities on a **first-come, first-served basis**, until all available funding was committed or spent. Entities that participated in round one **WERE** eligible to participate in round 2. The EECBG rebate could be passed from the non-formula eligible municipality or county eligible for a Block Grant rebate to another local government entity such as a school district or local sewerage authority, or in the case of a county, to another local government entity in a non-formula eligible municipality or a non-formula eligible municipality within the county. However, in that case the EECBG rebate application must be signed by the highest ranking member of either the municipality or county (i.e., mayor, county freeholder president, etc.) or his/her designee. That is, the mayor or head of the Board of Freeholders may determine the local entity to which the EECBG rebate will be distributed

Previously installed energy efficiency measures are not eligible for a Block Grant rebate. Workers hired for any project(s) receiving Block Grant rebates must be hired based on at a minimum the federal prevailing wage rates as set forth by the Davis Bacon Act. This requirement does not relieve the municipality from compliance with any required State prevailing wage requirement. The eligible municipality or county would be required to work with the Market Manager to obtain documentation proving this.

Timeframe: The Board made these funds available to all eligible municipalities and county governments for a period of 12 months from the date the State received its first staged disbursement of funds. For 2011, any remaining unused or unclaimed funds were redistributed on a **first-come first-served basis** and continued to be available to the 512 ~~non-formula eligible municipalities and counties whether or not they took advantage of~~

the Block Grant rebate program during the initial one-year eligibility period. In other words, starting in 2011, non-formula eligible municipalities and counties that received the Block Grant rebate in 2010 were able to apply for the program again.

Eligible Measures: The following list of eligible energy conservation measures was included in the initial, and subsequent, ARRA submission to DOE. The same measures are eligible for EECBGs:

- The Pay for Performance Program provides incentives for an Energy Reduction Plan and energy conservation measures. Eligible measures funded under ARRA would be limited to efficient lighting, HVAC measures, occupancy sensors, variable speed drives, programmable thermostats, refrigeration measures, domestic hot water reduction measures, pipe insulation, energy star boilers and furnaces, barometric dampers, high efficiency cooling systems, high efficiency water heating equipment, energy efficient appliances, geothermal heat pumps (10 tons of capacity or smaller), windows, doors, insulation and other building shell improvements, clean and tune (furnaces), solar thermal hot water (appropriately sized for the existing building), low flow aerators/showerheads/toilets, combined heat and power systems (sized to boilers appropriate to the buildings in which they are located), chillers, motors and pumps, controls, building management systems, exhaust air heat recovery, and exhaust fans/air handlers/ventilation fans.
- The Direct Install Program identifies cost-effective energy efficiency opportunities, provides incentives and direct installation of efficiency measures on existing small commercial and industrial buildings. The upgrades for consideration will be limited to: lighting, occupancy sensors; variable speed drives; programmable thermostats; Refrigeration measures, hot water reduction measures; pipe insulation; HVAC measures; energy star boilers and furnaces; and high efficiency cooling systems.
- The SmartStart C&I Construction Program provides incentives for energy conservation measures. Eligible measures funded under EECBGs would be limited to retrofit measures only (i.e., new construction is not eligible) and to efficient lighting, high efficiency HVAC measures, lighting controls, variable speed drives, high efficiency boilers and furnaces, high efficiency cooling systems, high efficiency water heating equipment, geothermal heat pumps, high efficiency chillers, motors and pumps.
- The Local Government Energy Audit program is an incentive program which subsidizes the cost for completing an energy audit of eligible facilities. The following building shell measures will be eligible for EECBGs if they are recommended in the audit: energy efficient windows and doors, insulation, and other energy efficient building shell measures.

Large Energy Users Pilot Program

Program Description

The purpose of the Large Energy Users Pilot Program is to foster self-investment in energy efficiency, and combined heat and power projects while providing necessary financial support to large commercial and industrial utility customers in the state of New Jersey. Incentives will be awarded to customers that satisfy the program's eligibility and program requirements ("Eligible Entities or Eligible Customers"), to invest in self-directed energy projects that are customized to meet the requirements of the customers' existing facilities, while advancing the State's energy efficiency, conservation, and greenhouse gas reduction goals. The program was launched in late 2011 and is continuing into 2012 with additional funding.

Target Markets and Eligibility

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

- Eligible entities must have contributed a minimum of \$300,000 (on a pre-sales tax basis) into New Jersey's Clean Energy Program fund in calendar year 2011 (aggregate of all buildings/sites). (Eligible Entities shall be defined as (1) Public: having distinct and separate budgetary authority; (2) Public Schools: having distinct and separate budgetary authority; (3) Private: Non-residential companies including all related subsidiaries and affiliates regardless of separate EIN numbers or locations within New Jersey. Consistent with DOCKET NO. EOO7030203).
- Only facilities with an annual billed peak demand of 400 kW within the entity's portfolio will be considered for incentives

An open enrollment period (45 days) was established for entities to submit qualifications for participation. In keeping with the intent of the pilot and limited available funding, the pre-qualification period served to expedite the process for those entities meeting the eligibility requirements of the Program.

Entities interested in applying to participate in this pilot submitted the following information (limit 2 pages excluding attachments):

- Number of buildings/sites and list of all associated 2011 utility and third-party supplier accounts.
- Total usage and number of location or premise IDs as provided by utility.

- Total contribution to New Jersey’s Clean Energy Program (NJCEP) fund in previous calendar year from above buildings/sites.

Qualifying entities will be ranked by amount of contribution to the NJCEP fund in 2011 from eligible facilities (400kW annual peak demand or greater). The top entities will be approved to submit their Draft Energy Efficiency Plan (DEEP) for fund reservation. Funds will be reserved based on the date a completed DEEP is received.

Program Offerings and Incentives:

\$8 million in new funding is budgeted for this Program in 2012. The Program will offer a maximum incentive per entity which will be the lesser of:

- \$1 million
- 75% of total project(s) cost as identified in the Final Energy Efficiency Plan (FEED). Total project costs may include pre-engineering costs, soft costs, and other costs associated with the preparation of the FEED.
- 90% of total NJCEP fund contribution in previous year (i.e. from all entity facilities)
- \$0.33 per projected kWh saved annually; \$3.75 per projected Therm saved annually

The program has a minimum incentive commitment of \$200,000. Projects with incentives below this threshold will be redirected to other NJCEP programs. Incentives shall be reserved upon approval of the DEEP. Submitted DEEPs, which are deemed complete, shall be reviewed and incentives reserved on a first come, first serve basis until all incentive funds are reserved/expended. Program funds will be committed upon approval of FEED by the Program Manager and, if required, by the Board of Public Utilities. Incentive shall be paid upon project completion and verification that all program requirements are met.

Submittal Requirements for Fund Reservation:

Qualifying entities shall submit a DEEP to the Program Manager for existing facilities only. The DEEP* must be submitted to the Market Manager for review 90 days from the date of the enrollment letter. This shall be in a report format and must include at a minimum:

- Executive Summary:
 - Existing energy use by source from previous 12 months (kWh, kW, MMBtu)

- Existing total site energy use from previous 12 months (kBtu/sqft)
- Projected annual energy savings by source (kWh, kW, MMBtu, and %)
- Projected annual total site energy savings (kBtu/sqft and %)
- Total estimated project cost
- Total estimated annual energy cost savings
- Site Overview
- Utilities Overview
- Table of Energy Conservation Measures (ECMs) to be implemented in next 12 months. Including the following information by measure:
 - Estimated Installed Cost
 - Estimated Annual Energy Savings by source (kWh, kW, MMBtu)
 - Estimated Annual O&M Savings (\$)
 - Estimated Annual Energy Cost Savings (\$)
 - Estimated Simple Payback or IRR % (*total of all measures*)
 - Anticipated sources of all funding not including Large Energy Users Pilot incentive
- ECM Descriptions including:
 - General description of equipment being replaced/augmented
 - Anticipated Implementation Schedule
 - Estimated construction start and end dates for each measure

*Please note, the approved entity may choose to submit the Final Energy Efficiency Plan (FEEP) in lieu of submitting a DEEP within ninety days (90) from the date of the enrollment letter.

Submittal Requirements for Incentive Commitment:

- Qualifying entities shall submit a FEEP to the Program Manager for existing facilities only. This shall be a revision to the DEEP, and must include at a minimum:
 - Final Executive Summary:
 - Existing energy use by source from previous 12 months (kWh, kW, MMBtu)
 - Existing total site energy use from previous 12 months (kBtu/sqft)
 - Calculated annual energy savings by source (kWh, kW, MMBtu, and %)
 - Calculated annual total site energy savings (kBtu/sqft and %)
 - Total project cost (note - prevailing wage rates required)
 - Total calculated annual energy cost savings

- Table of Energy Conservation Measures (ECM) to be installed. Including the following information by measure:
 - Estimated Installed Cost (Material, Labor, etc)
 - Annual Calculated Energy Savings by source (kWh, kW, MMBtu)
 - Annual O&M Savings (\$)
 - Annual Calculated Energy Cost Savings (\$)
 - Simple Payback or IRR % (*total of all measures*)
- ECM Descriptions including:
 - Detailed description of equipment being replaced/augmented
 - Detailed description of recommended measure (including quantities, EER, AFUE, etc.)
 - Basis for calculating energy savings and O&M savings (*including all assumptions*)
 - Basis for calculating installed cost (*including all assumptions*)
- M&V:
 - Description of pre/post M&V to be implemented. Must be in accordance with IPMVP Option A or B, or other method pre-approved by Market Manager (refer to pay for Performance Program requirements for further details in this regard)
- Appendices
 - Professional Engineer (PE) Certification to verify all FEEP documents are accurate.
 - Utility bills and/or summaries (*method to collect this information to be determined*)
 - Supporting calculations
 - Specification sheets

Please note the following in regard to the annual calculated energy savings by source: Depending upon the complexity of the energy conservation measures in the EEP, the associated calculations may require building modeling to properly estimate the energy savings for particular measures. These measures may include building shell upgrades, building management systems, etc. Typical ECMs such as lighting, HVAC, motors, and others will likely not require these efforts and may be presented with generally accepted energy savings calculations and methodologies. Further details will be provided in the program application.

Submittal Requirements for Incentive Payment:

- Once the work defined in the FEEP has been completed , entity shall submit proof of construction completion for all measures, which may include but is not limited to the following:
 - Invoices for material/labor including as-built report
 - Work orders
- Entity must also submit:
 - Completed M&V report(s) certified by a Professional Engineer
 - Certification of compliance with prevailing wage
 - Valid tax clearance certificate
- Differences between the FEEP and as-built project must be documented and will require a revised FEEP submitted for review. In the event the scope of work, savings, and/or cost estimates does not match as-built documentation, an incentive true-up will occur. The true-up is not to exceed the original incentive commitment.

Terms and Conditions:

- Each Energy Conservation Measure (ECM) must demonstrate a simple payback of 8 years or less (not to include maintenance or renewable projects) or, total ECM work scope must have IRR of 10% or greater (*prior to Incentive*)
- All ECMs must meet Minimum Performance Standards, which may be fulfilled during Professional Engineer review, which shall be understood as the most stringent of:
 - 2011 Pay for Performance Guidelines-Appendix B (Attached in Appendix)
 - ASHRAE 90.1-2007
 - Local code
- DEEP must be submitted no later than ninety (90) days from date of the enrollment letter.
- FEEP must be submitted no later than one hundred and twenty (120) days from fund reservation.
- ECMs must be fully installed no later than twelve (12) months from approval of the Final Energy Efficiency Plan. Extensions may be granted for a period of up to six months with satisfactory proof of project advancement. (This could be in the form of copies of permits, equipment invoices, installation invoices indicating percentage complete, updated project schedules, etc.)

Limitations/Restrictions:

- New construction and major rehabilitation projects are not eligible under the pilot, however these projects may be eligible for other NJCEP incentives.
- Incentive will be limited to energy-efficiency measures. The following shall not be included as part of this Pilot:
 - Renewable energy
 - Maintenance energy saving projects
- Incentive shall only be available for ECMs approved in the FEEP.
- ECMs already installed or under construction will not be considered for incentives and shall not be included in DEEP/FEEP.
- Federal grants/incentives are allowed; other state/utility incentives are allowed so long as they are not originating from NJCEP funds; NJCEP loan funds are allowed. Total of Federal, state, utility, and LEU Pilot Program funding shall not exceed 100% of total project cost.
- Projects with funds currently committed under other NJCEP funded programs must be excluded from DEEP/FEEP scope and value of incentive commitment will be deducted from total LEU incentive.
- Participation in any other NJ Clean Energy program in 2012 is prohibited for entities receiving LEU incentive. Entities shall certify, in writing, that they will opt-out of all SBC programs, for remainder of calendar year.

Review and Payment Framework:

- Upon receipt of DEEP and FEEP, Program Manager will have sixty (60) days to review each submittal and provide comments to entity.
- Entity will have fifteen (15) business days to respond to comments.
- Market Manager will present FEEPs to Board for approval as required by Board policy and commitment of incentive. Market Manager may conduct up to three site inspections including a pre inspection, at 50% completion and 100% completion, as required. A pre inspection will be scheduled within 15 days of FEEP submittal, granted sufficient data is provided. Entity will need to provide access to site and notification upon reaching specific percent completions as mentioned above. Measures which require an inspection at 50% completion will be identified by TRC upon submittal of the FEEP. These measures may include building shell upgrades or equipment which will be inaccessible once installed.
- If ECMs are not completed within the specified timeframe, incentive commitment may be forfeited.
- Entity will provide M&V data as requested and will comply with any program evaluation activities.

Program Goals

The Large Energy Users Pilot Program's goal is to foster self-investment in energy efficiency and combined heat and power projects while providing necessary financial support to large commercial and industrial utility customers in the State of New Jersey.

Goal: With a maximum incentive of \$1,000,000 per entity, the Program is expected to support approximately twenty-five (25) projects.

Program Deliverables

The Market Manager will provide the following services under the Large Energy Users Pilot Program:

- Program design and management
- Review and approval/rejection of all submitted Draft Energy Efficiency Plan submittals
- Review and approval/rejection of all submitted Final Energy Efficiency Plan submittals
- Technical assistance via email and telephone to assist entities in the proper submittal of the required information
- Updates of data tracking tools to incorporate additional tasks related to this initiative
- Conduct up to three quality control inspections for each project – pre inspection, 50% completion inspection and final inspection upon installation of energy efficiency measures
- Incentive processing including issuance of checks and tracking/recordkeeping

Quality Control Provisions

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

Program Evaluation

Ongoing evaluation services will be provided by the OCE through its evaluation contractors.

Goals and Energy Savings for the C&I Clean Energy Programs

The following are the goals for 2012:

2012 NJCEP - Commercial & Industrial Projections - Participation, Savings, Avoided Emissions

Program	# of Participants	Metric	Annual Savings Projections					
			Gas Savings (DTh)	Electric Savings (MWh)	Tons of CO2	Tons of Nox	Tons of SO2	Lbs of Hg
New Construction	125	completed jobs	4,366	13,925	2,783	5	11	0
Retrofit	2750	completed jobs	40,373	212,961	118,817	219	505	6
CHP & Fuel Cell	30	applications	557,598	11,055	30,149	24	2	0.03
LGEAP	400	completed audits	n/a	n/a	n/a	n/a	n/a	n/a
P4P EB	50	approved plans	71,947	41,990	12,943	20	39	0.48
P4P NC	7	approved plans	3,150	630	304	-	1	0.01
Direct Install	1600	completed jobs	67,856	51,034	10,754	16	31	0.37
Retrocommissioning	15	completed jobs	25,000	7,500	2,786	4	6	0.08
LEUP	20	approved plans	138,030	28,837	7,324	6	-	0.00
			908,320	367,932	185,860	294	595	7.20

Program	# of Participants	Metric	Lifetime Savings Projections					
			Gas Savings (DTh)	Electric Savings (MWh)	Tons of CO2	Tons of Nox	Tons of SO2	Lbs of Hg
New Construction	125	completed jobs	78,594	250,665	174,918	322	739	8.9
Retrofit	2750	completed jobs	605,599	3,194,409	2,208,098	4,082	9,417	113.7
CHP & Fuel Cell	30	applications	6,691,176	132,660	445,407	448	391	4.7
LGEAP	400	completed audits	n/a	n/a	n/a	n/a	n/a	n/a
P4P EB	50	approved plans	1,295,044	755,813	583,561	1,014	2,228	26.9
P4P NC	7	approved plans	56,700	11,340	10,733	17	33	0.4
Direct Install	1600	completed jobs	1,221,410	918,619	690,554	1,217	2,708	32.7
Retrocommissioning	15	completed jobs	75,000	22,500	19,306	32	66	0.8
LEUP	20	approved plans	2,484,540	519,068	485,411	763	1,530	18.5
			12,508,063	5,805,074	4,617,988	7,895	17,112	206.7

Appendix A
2012 12- Month Marketing Activity Plan

C/I Market Manager Marketing Plan Summary - 2012

Background

The commercial/industrial portfolio of New Jersey's Clean Energy Program includes NJ SmartStart Buildings, which begins its tenth year of operation in 2012 offering financial incentives for energy efficient measures incorporated in new construction and retrofit projects. The portfolio includes the Local Government Energy Audit, Pay-for-Performance and Direct Install programs and also offers benchmarking. Promotional activities and collateral materials are also scheduled to support the Large Energy Users Pilot, the Multifamily Financing Pilot, the Retro-Commissioning Pilot, a stand-alone program for Combined Heat & Power projects and fuel cells, and a change to Direct Install to transfer the responsibility for marketing and assessment from the existing contractor network to TRC.

Objectives

- Build and maintain top-of-mind awareness of program opportunities among key market segments. The decision makers and the influencers of energy efficiency projects in C&I buildings is an ever-changing group, so there will always be new players who are not aware of the opportunities. Frequency is also a key component of the strategy because business owners and local government officials typically make equipment replacement decisions during times of crisis. Promoting the availability of incentives increases the likelihood that energy efficiency is being considered long before the crisis situation occurs.
- Promoting the C&I portfolio positions NJCEP to take advantage as markets rebound from recession and access to capital is improved. As commercial and industrial customers begin to make investments that will improve their profitability for the long-term, we need to elevate the importance of making energy efficiency measures a part of the overall investment strategy.
- Promotional campaigns centered around the message that financial incentives are available for energy efficiency help to support the governor's emphasis on making New Jersey more business friendly and more focused on job creation. Those campaigns will also help demonstrate to local government officials that operating savings from energy efficiency can be an important factor in offsetting state funding reductions or in keeping under municipal spending caps.

Strategic Approach

The mission of the New Jersey SmartStart Buildings Program is to transform the commercial and industrial buildings market to incorporate energy efficient technologies throughout the state as part of a whole building – whole business approach. Decisions regarding new construction, major renovation, and equipment upgrade/replacement must be viewed within the context of a strategic business investment, rather than merely a decision for the facility manager. Our advertising and marketing tactics are designed to reach

business owners, facilities management and the C-suite in the NJ business community, especially the chief financial officer.

Recognizing that the trade ally community (architects and engineers, energy service companies, contractors, product manufacturers/vendors) to a large extent drives this market, the program places major emphasis on building relationships with those influencers — creating the need for a “market push” strategic component. Focusing on these trade allies, rather than just reacting to construction projects, allows energy-saving options to be considered early in the decision-making process and increases the likelihood that future projects do not slip through the cracks.

The 2012 marketing activities budget is an integrated and comprehensive plan. Our market-push, market-pull approach makes use of public relations activities and press events, narrowcast methods (direct mail and e-mail blasts), trade shows, conferences and local events support by broadcast tactics as appropriate, social media, print and electronic advertising in trade publications and websites, and paid advertisements and sponsorships with key organizations and associations.

Tactical Components

Trade Publication Advertising

The 2012 media schedule will include the following publications (print and electronic) in an effort to reach our three primary sectors – 1) trade allies, 2) school and municipal officials, and 3) business owners, facility managers, executive decision makers and developers.

- Architectural Record GreenSource Magazine, Maintenance Solutions, and Consulting Specifying Engineer targeting the design community
- NJ Biz, NJ Business Commerce NJ, Enterprise (NJ Chamber of Commerce), Distributed Energy, Real Estate New Jersey, Globe Street and Southern NJ Business People typically read by business owners, energy managers and developers
- School Leader, School Planning & Management, College Planning and Management and School Construction News reaching decision-makers and influencers in the education community, as well as, publications of the NJ State League of Municipalities and the NJ Conference of Mayors to reach local government officials.

The print advertising schedule will be spread throughout the year with a mix of general and program specific advertising. As in years past, a refreshed creative campaign will drive traffic to the website for details about programs and how to participate.

Organizations and Associations

Beyond our traditional media schedule, the 2012 budget again includes funds for print and electronic advertising as well as event sponsorships where we can directly reach

Appendix A: 2012 12-Month Marketing Activity Plan

members of key organizations and associations. Our plan calls for focused tactics targeting:

- NJ AIA – event sponsorship and show mailers
- NJ Society of Professional Engineers – paid advertising
- Association of Energy Engineers – annual conference (Globalcon)
- EEI National Accounts – Fall Workshop – exhibit and sponsorship, and show mailers
- NJ League of Municipalities – paid advertising, annual conference exhibit and sponsorship, show mailers
- NJ Association of School Administrators – paid advertising
- NJ Association of School Business Officials – paid advertising
- NJ School Boards Association- exhibit, sponsorship and show mailer
- Property Owners Association – paid advertising
- NJ Apartment Association – paid advertising
- Building Owners and Managers Association of NJ – paid advertising
- NJ Business and Industry Association – event sponsorship
- Association of NJ Environmental Commissions – paid advertising
- NJ Conference of Mayors – exhibit, sponsorship, and paid advertising
- Healthcare Facilities Management Association – paid advertising
- NJ Hospital Association – paid advertising
- Southern New Jersey Development Council – paid advertising, event sponsorships

Trade Shows and Events

The marketing plan also includes exhibiting and sponsoring a number of annual conferences and major events that provide an opportunity to reach key target segments. For 2012, planned shows and conferences include:

- Association of Energy Engineers – annual conference (Globalcon)
- EEI National Accounts – Fall Workshop
- NJ League of Municipalities – annual conference
- NJ School Boards Association – annual conference
- NJ Business and Industry Association – member events
- NJ AIA – member events
- Southern New Jersey Development Council – member events
- NJ Conference of Mayors – annual conference

Beyond these named exhibits, a number of ad-hoc events are expected that provide opportunities to reach NJ business decision-makers and influencers. Our marketing budget includes funds for coordinating and supporting speakers at these events. Outside costs for ad-hoc events are subject to pre-approval and are funded through the variable contingency line item of the budget. Examples include the Healthcare Financial Management Association, Mid-Atlantic Buildings and Facilities, NJ RealShare, and any NJ BPU clean energy events

Appendix A: 2012 12-Month Marketing Activity Plan

A series of community outreach events is planned to promote sign-ups for Direct Install. Working in conjunction with local Chambers of Commerce, the outreach team will encourage owners of small facilities to attend sessions in their neighborhoods where they will learn about the program and schedule their energy assessment. Local government officials will be encouraged to assist in promoting these events, which will also be promoted with a mix of direct marketing tactics and local radio advertising.

The outreach team will also be presenting a series of sector specific webinars demonstrating particular solutions in key market segments. Success stories or case studies will be created and then as part of the webinars as one way to illustrate the value of these sector solutions. The webinars will be promoted with direct marketing tactics as appropriate.

Direct Marketing

Direct mail and e-mail blasting are again planned for 2012 as a primary strategy for raising awareness of all programs in the C&I portfolio. These campaigns will be designed to reach both the prospective customers of the programs as well as the trade ally community, which serves as an important influencer to decision makers.

In addition to general program and clean energy event promotions, direct marketing campaigns will address new tools and resources for select industries as part of the sector specific initiative. Pre-show mailings will also be included for:

- EEI National Accounts
- NJ State League of Municipalities
- NJ School Boards Association
- NJ AIA Sponsored Event

Collateral Materials

The 2012 budget provides for focused collateral materials that will provide program features and benefits for target markets. Funds are also provided for revising existing program materials as new features and procedures are approved. In addition, case studies continue to play a vital role in demonstrating successful projects to key targets. These materials are produced for uploading to the web-site as well as printed for distribution as part of a folder kit used at trade shows, special events and individual sales calls by the Outreach Team. The 2012 budget for collateral materials also includes funds for photography to be used in those brochures and case studies.

Additional collateral is associated with marketing Direct Install. Window decals will be made available to program participants in an effort to increase visibility in the immediate area surrounding recently completed projects. A leave-behind packet will also be produced to assist in the promotion of Direct Install in a door-to-door approach. The packet will include presentation materials as well as materials to support the scheduling process.

Public Relations

Ongoing public relations efforts include activities designed to generate editorial copy in appropriate publications throughout the state. These activities include notifying media to encourage coverage, photography to create photo releases for distribution to the appropriate networks and follow-up contacts to promote placement.

We also work with key organizations and associations to generate editorial coverage in printed and electronic media available to their memberships. We will assist editors with copy and arrange for presentation opportunities by the Outreach Team.

As in years past, press releases, press kits, and talking point documents will also be created and distributed to media outlets in association with newsworthy events or activities. This includes announcements of program changes, high profile incentive payments, innovative designs and other stories of interest to the business and design communities.

Social Media

Capitalizing on the global trend toward increased use of social media, as it applies to commercial and industrial decision-makers, the 2012 marketing plan will include a presence for the C&I portfolio as part of the LinkedIn network. This presence will require maintenance and responses to discussion threads where questions are posed to program representatives.

YouTube has also become an important tool for business to business marketing. The 2012 plan will include compiling a series of videos promoting the individual opportunities available to C&I prospects.

Video Production

In an effort to build awareness and demand for Direct Install in the private sector, a short video will be created to document the convenience and effectiveness of the program processes by taping an actual Direct Install small business customer project, start-to-finish. In addition to providing a link to the video on the NJCEP website, multiple copies will be produced on DVD and become part of a leave-behind package for Direct Install marketers or for distribution at appropriate events and during outreach activities

Program Management

The 2012 budget also includes continued funding for planning and implementation of the marketing communication campaigns and ongoing coordination with the activities of the residential and renewable market manager as well as special requests to support BPU Staff and Commissioners. Specific labor categories include:

- Creative Design and Production
- Account Coordination and Media Management
- Strategy, Planning, and Reporting

Appendix A: 2012 12-Month Marketing Activity Plan

- Web site Support and Content
- Development of Story Items for the Quarterly Newsletter
- Outreach Coordination and Support
- Development and use of web-based meetings for contractor and sector education
- Call Center Training and Support
- Responses to E-mails Submitted to the Web site

Summary

The NJCEP commercial and industrial portfolio includes a number of programs with appeal to a wide variety of specific target segments. Strategies and tactics described in this plan are part of a comprehensive and integrated collection of activities designed around the needs of those targets. In some cases, individual tactics and their associated funds can be attributed to a tight campaign around a specific program, such as with a program brochure or website page. In most cases, however, our vehicles for delivering marketing communications are tight to the segment, but wide enough in the message to introduce all of the portions of the portfolio that might appeal to that segment. The following table summarizes how those tactics are designed to promote the existing programs and planned initiatives for 2012.

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	C&I New Construction	C&I Retrofit	School New Construction & Retrofit	Pay for Performance & Combined Heat & Power	Local Government Energy Audit	Direct Install	Pay for Performance – New Construction	Institutional Sector	Higher Education Sector	Large Industrial Sector
A&E Trade Publications; Websites; AIA Trade Show; Newsletters; Trade Allies Direct Mail and E-mail	X	X	X	X	X		X	X	X	X
Large Business Owner Publications; Websites; Direct Mail and E-mail	X	X		X			X			X
Schools Publications; Websites; Direct Mail and E-mail; School Boards Trade Show and Pre-show Marketing			X		X					
Developer Publications; Websites	X	X		X		X	X	X		X
Media Story Pitching; Press Releases	X	X	X	X	X	X	X	X	X	X
Municipalities Trade Show; Newsletter; Direct Mail and E-mail			X		X	X				
Small Business Direct Marketing	X	X				X				
Medium Business Direct Marketing; Owner Publications; Websites	X	X				X				
College/University Direct Marketing	X	X		X			X		X	
Globalcon Trade Show (AEE)	X	X	X	X	X		X	X	X	X
EI National Accounts Trade Show and Pre-show Marketing	X	X		X			X	X		X
NJ BIA Trade Show/Newsletters	X	X		X		X	X			X
Website and Internet Networking Sites	X	X	X	X	X	X	X	X	X	X

Summary of Marketing and Public Relations Services Provided

The following list of services is a summary of the marketing activities included in this plan. This list is not meant to be all inclusive (our continued management of the content contained in the C&I section of the web-site is an example of additional tasks in our scope) nor is it intended to limit our ability to be flexible in responding to changing needs within the NJ BPU or in the market.

Marketing/Advertising Campaigns

- Developed to promote programs
- Creative concepts created and pitched to client
- Include media buy recommendation, script/ad developments
- Technical review before it reaches client for final sign off
- NJCEP and BPU brand included as part of advertising

Event Selection and Implementation

- Select opportunities to plan events in conjunction with Program Managers to highlight program activities.
- Once opportunities are selected and approved by BPU, contact organization to initiate planning of events.
- Coordinate with BPU to select appropriate Commissioner or BPU surrogate
- Provide BPU with relevant project and program fact sheets to assist in talking point development (*BPU staff will develop talking points, utilizing fact sheets on programs and project details provided by market managers*)
- Conduct media outreach to ensure press coverage of Program, utilizing the Commissioners as an additional hook
- Attend press events with Commissioner to ensure coverage of Program and Commissioner.

Event Reviews (process for when events are proposed to market managers/BPU)

- Conduct review of whether the proposed event is within the scope of market manager work
- If not within scope of market manager work, pass to BPU for speaker's bureau or other opportunity.
- If within scope of recommended events, follow above process.

Media Relations

- Identify opportunities to promote programs through free media opportunities.
- Write press releases or media pitches, and conduct technical review before client receives copy.
- Identify press outreach lists.
- Conduct thorough outreach to secure placement.

Written Materials

- Create fact sheets on all program areas, updated on a monthly basis to ensure accuracy
- Conduct all technical review before providing to client on a monthly basis
- Conduct technical review of articles provided by client

Educational and Promotional Materials

- Create brochures, public service announcements, pamphlets that contain a larger message of how businesses and local government can take small steps to be more energy efficient and/or invest in renewable energy
- Review and format success stories used for website and webinars written to convey the important individual sector messages of achievement and ease of interaction with incentive program representatives
- Conduct all technical review before providing to client

Quality Assurance and Technical Review

- High level, qualified staff with an expertise in writing will be developing written materials.
- Technical review by program staff needs to occur before materials are provided to client.

Changes from Current Levels

The 2012 Marketing Plan increases the 2011 budget by \$500,000. The changes accommodate the following new activities and initiatives:

- Accelerate ESIP within the LGEA participant group
- Launch a multifamily loan component to Pay for Performance
- Introduce a retro-commissioning pilot
- Transform Combined Heat & Power to a stand-alone program and offer a fuel cell incentive
- Extend the large energy users pilot
- Take over responsibility for marketing and assessment for Direct Install

Subcontractors

Parker and Partners was TRC's originally-proposed marketing subcontractor. No other subcontractor not named in TRC's original proposal will be required.

Pricing Schedule

The budget table below shows the proposed 2012 budget by cost category. As shown, the top half of the table represents the fixed cost categories, and the bottom half represents the variable cost categories.

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Note that this table is designed to demonstrate how the total annual budget was developed task by task from the bottom up. Since the majority of the cost categories below will support multiple individual program areas (new construction, retrofit, etc.), this table is not broken down by program. That breakdown is shown by contract line item in the actual proposed amendment. The fixed and variable totals on this table match those in the proposed amendment.

Category - 2012 C&I Marketing Communications Plan	Labor	Outside Costs	Total
Account Management	\$142,825	\$4,525	\$147,350
Strategic Direction	\$96,950		\$96,950
Call Center Briefings and Training	\$2,650		\$2,650
Website	\$49,960		\$49,960
Public Relations and Direct Marketing	\$155,850	\$44,150	\$200,000
Event Support	\$110,890	\$52,000	\$162,890
Creative Services	\$150,200	\$25,000	\$175,200
Fixed Component Total	\$709,325	\$125,675	\$835,000
Paid Media and Broadcasting		\$450,000	\$450,000
Printing & Production		\$245,000	\$245,000
Variable Contingency (not including labor or travel)		\$45,000	\$45,000
Variable Component Total		\$740,000	\$740,000
Grand Total	\$709,325	\$865,675	\$1,575,000

The 2012 Marketing Budget will be allocated back to the individual commercial & industrial programs based on agreed upon ratios that will be related to the estimated costs associated with each program.

Appendix B
2012 Program Budgets

Budget

2012 Proposed C&I Energy Efficiency Program Budget

	Total 2012 Budget	Admin. and Program Development	Sales, Marketing, Call Centers, Web Site	Training and Technical Support	Rebates, Grants and Other Direct Incentives	Rebate Processing, Inspections, Other Quality Control	Performance Incentives	Evaluation & Related Research
COMMERCIAL & INDUSTRIAL EE PROGRAMS								
<i>C&I New Construction</i>	\$ 10,024,122.02	\$ 261,746.67	\$ -	\$ 393,591.00	\$ 9,000,000.00	\$ 368,784.35	\$ -	\$0
<i>C&I Retrofit</i>	\$ 60,700,000.00	\$ 824,285.25	\$ -	\$ 435,295.88	\$ 56,600,000.00	\$ 2,840,418.87	\$ -	\$0
Pay for Performance New Construction	\$ 10,310,817.58	\$ 249,903.75	\$ -	\$ 494,610.08	\$ 9,300,000.00	\$ 266,303.75	\$ -	\$0
Pay for Performance	\$ 55,555,958.00	\$ 583,460.74	\$ -	\$ 510,534.64	\$ 54,000,000.00	\$ 461,962.62	\$ -	\$0
CHP	\$ 20,000,000.00	\$ 112,200.00	\$ -	\$ -	\$ 19,553,200.00	\$ 334,600.00	\$ -	\$0
Local Government Energy Audit	\$ 6,000,000.00	\$ 223,250.00	\$ -	\$ -	\$ 5,000,000.00	\$ 776,750.00	\$ -	\$0
Direct Install	\$ 41,337,218.00	\$ 816,804.90	\$ -	\$ 10,000.00	\$ 40,000,000.00	\$ 510,413.10	\$ -	\$0
Marketing	\$ 1,575,000.00	\$ -	\$ 1,575,000.00	\$ -	\$ -	\$ -	\$ -	\$0
Large Energy Users Pilot Program	\$ 38,763,000.65	\$ 205,711.14	\$ -	\$ -	\$ 38,158,861.11	\$ 398,428.40	\$ -	\$0
MultiFamily Financing Pilot	\$ 10,000,000.00	\$ 390,000.00	\$ -	\$ 250,000.00	\$ 9,100,000.00	\$ 260,000.00	\$ -	\$0
Retrocommissioning	\$ 5,000,000.00	\$ 130,000.00	\$ -	\$ 90,000.00	\$ 4,680,000.00	\$ 100,000.00	\$ -	\$0
TOTAL C&I Programs	\$ 259,266,116.25	\$ 3,797,362.45	\$ 1,575,000.00	\$ 2,184,031.60	\$ 245,392,061.11	\$ 6,317,661.09	\$ -	0.00