



**New Jersey's Clean Energy Program
2008 Program Descriptions and Budget**

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



**2008 Program & Budget Filing
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New Jersey’s Clean Energy Program 2008 Program Descriptions and Budget

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New Jersey's Clean Energy Program 2008 C&I Program Descriptions and Budget

Introduction

This 2008 Filing provides program descriptions and budgets for programs managed by TRC, the Commercial and Industrial 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 2008. Included in the program descriptions are annual goals for each program and planned program implementation activities.

Appendix A - 2008 12-month Marketing Activity Plan

Appendix B - C&I Market Manager Budgets.

Appendix C - Performance Incentives

2008 C&I Construction Program - Energy Efficient Construction “New Jersey SmartStart Buildings®”

Description

The Commercial & Industrial (C&I) Energy Efficient Construction Program, which is marketed as *New Jersey SmartStart Buildings*, is the umbrella name for three individual programs for targeted market segments: 1) Commercial New Construction, 2) Commercial Retrofit, and 3) K-12 Schools. The 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 buy equipment).
- Achieve market transformation by helping customers, designers and specifiers to make energy efficient equipment specification, building /system design, lighting design, and commissioning standard parts of their business practices.
- Stimulate small commercial customer investments in energy efficiency measures.
- Help facilitate effective implementation of New Jersey’s new commercial energy code and future upgrades to that code.

These programs have been designed to address key market barriers to 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 first cost versus operating costs;
- Compressed time schedules for design and construction; aversion to perceived risk-taking 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 efficiency considerations.

The programs employ a comprehensive set of offerings and strategies to address the 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 efficiency equipment and custom measure incentives for more complex and aggressive measures to permanently raise the efficiency levels of standard equipment.

- Design support/technical assistance to developers and their design team for new construction and renovation projects to permanently raise the efficiency levels of design practices.
- Specialized technical assistance for small commercial customers and educational institutions.
- Technical support for newly enacted commercial energy code including training in energy code requirements.

Target Markets and Eligibility

This program targets 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 projects within Smart Growth areas as defined by maps found at <http://www.nj.gov/dca/osg/resources/maps/index.shtml> and described in NJAC 14:3-8.2. In addition, it offers incentives and technical support for construction in an area where extension costs 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 all C&I Programs

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

- Prescriptive Efficiency Measure Rebates 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 electric measures include chillers, lighting fixtures and controls, unitary HVAC, motors, variable frequency drives, ground source heat pumps and LED traffic signals. Eligible natural gas measures include gas cooling, furnaces, boilers and water heating equipment.
- Custom Measure Incentives for more complex and aggressive custom efficiency measures. Incentives are based on incremental equipment and labor costs, in consideration of market barriers, changes in baselines over time and market transformation objectives. 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.
- Multiple Measures Bonus for the installation of multiple eligible gas and electric energy efficiency measures (i.e., two or more of the following equipment types – lighting equipment and controls, unitary HVAC, chillers, electric and gas space heating, gas water heating, motors, and/or variable speed drives). The Multiple Measures Bonus is based on the total equipment incentives but is not to exceed the smallest individual equipment incentive for the project.

- Technical Assistance and oversight to help customers evaluate energy efficiency options, utilize program offerings and services, and effectively use performance-contracted services. In addition, targeted technical assistance, and targeted incentives, will be provided to small commercial customers.
- Energy Code Technical Support assists customer and trade ally understanding of the requirements of the state’s new commercial energy code, as well as assists in building the technical foundations for possible future energy code upgrades (e.g., sharing of research results, program experience and technical support). These activities are designed to “lock-in” efficiency gains from the program and to lay the groundwork for future market transformation.

New Construction

The program offers incentives and technical support for new construction projects within “designated growth areas” as defined in NJAC 14:3-8.2 and in areas where extension costs may be allowed as provided for in NJAC 14:3-8.8. “Exemptions from cost limits 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 growth areas”.

Incentives for new construction are available only for projects in areas designated for growth in the NJ State Development and Redevelopment Plan. Public school (K-12) new construction projects are exempted from this requirement and are eligible for new Program incentives throughout the State.

Smart Growth Eligibility: Customers or their trade allies can assess if a location is in a designated growth area by using a two-step process. First, use the Smart Growth Locator available from the HMFA website: http://sgl.state.nj.us/hmfa/hmfa_locator.htm to locate the property. Second, check the State Plan Quad PDF files available from <http://nj.gov/dca/osg/resources/maps/quadmaps.shtml> to determine whether it is in a designated growth area.

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

Customers may apply for pre-approval by submitting (along with a Registration Form) an Application for the type of equipment they have chosen to install. The application should be accompanied by a related Worksheet, where applicable, and a manufacturer's specification sheet for the selected equipment. (Program representatives will review the application package and approve it, reject it, and/or advise of upgrades in equipment that will save energy costs and/or increase the incentives.)

Design Incentives and Support, including building simulation, to architects and engineers to consider and use integrated design approaches that provide additional, synergistic energy savings. The design incentives cover a portion of the incremental cost for additional energy efficient design services over the base cost of building design.

Schools

The Schools component of the Program is offered to K-12 public schools throughout New Jersey (not limited to the Smart Growth and “Designated growth areas”) and provides the following incentives and technical assistance:

- Incentives and Technical Support for Commissioning Services for qualified new K-12 public school construction of facilities greater than 50,000 square feet.
- Assistance to ensure that all schools take full advantage of existing program offerings and incentives, as well as technical assistance regarding the energy efficiency requirements of the LEED program including commissioning for school facilities greater than 50,000 square feet.
- No incentives are currently provided to offset costs associated with LEED registration.
- Public School (K-12) new construction projects are eligible for new construction incentives throughout the state and are not limited to State designated “Smart Growth” areas.
- A school’s web page “Smart Start Schools” was developed and provides specific information related to schools construction including the appropriate links for researching additional information and organizations.
- Financial incentives are provided for: a) the technical studies on a cost shared basis and b) for qualified equipment.

Commercial Retrofit

The Commercial Retrofit component is offered to all C&I customers and provides incentives for replacing standard efficiency equipment with high efficiency alternatives. The program offers a comprehensive set of incentives for:

- Design Support (available in three stages – planning, simulation, and installation). The brainstorming planning offers a \$1,000 honorarium, the simulation incentive is based upon facility size (with a 50,000 square foot minimum) and offers up to \$5,000, in addition up to \$5,000 is available for installing measures identified under Design Support.
- Custom Measures (up to 80% of qualifying measure’s incremental cost or buy-down to 2-year payback, whichever is less)
- Qualifying Equipment including:
 - Electric Chillers

- Natural Gas Chillers
 - Unitary HVAC Systems
 - Ground Source Heat Pumps (Geothermal)
 - Gas Fired Boilers
 - Gas Furnaces
 - Variable Frequency Drives
 - Gas Fired Water Heating
 - Gas Fired Water Booster Heating
 - Premium Efficiency Motors
 - Compressed Air Systems
 - Prescriptive Lighting
 - Performance Based Lighting
 - Multiple Measure Bonus
- *Chiller Optimization*, designed to (a) capture potential additional savings available at the time of a chiller replacement or conversion to a new refrigerant, and (b) help lay the foundation for market-based comprehensive treatment of major HVAC replacement projects. By examining ways to optimize the efficiency of the chiller in relation to its distribution systems (pumps, fans, ducts, pipes, controls, etc.) while simultaneously reducing other building cooling loads (such as lighting), it is often possible to reduce the size (and thus cost and peak demand) of the replacement chiller. Additional benefits can include a better performing building and improved savings from the ancillary efficiency measures.

Targeted to C&I customers with large chiller plants (of 500 tons or more) that are in line for replacement, conversion, or addition of chiller capacity program. Activities include: Technical Assistance for studies to identify potential savings and incentives for chiller replacements, incentives for lighting system improvements, and auxiliary enhancements, such as fans, pumps, motors, ducts, pipes, controls, etc.

- *Compressed Air*, to capture significant energy savings from compressed air system optimization in industrial facilities containing significant compressed air systems (over 100 HP). These customers encompass many key New Jersey industries including plastics, chemicals, paper products, high technology, and pharmaceuticals. The focus is on the efficiency of all compressor system elements, including compressors, auxiliaries, controls, distribution, end-use, and operation and maintenance. As customer and contractor awareness and market demand build, the Program will adjust incentives for studies to maintain only levels necessary to produce desired levels of market response.

Regional and National Initiatives

- *New Jersey SmartStart Buildings* has, and will continue to support efforts to upgrade federal appliance 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 Construction Program Incentives

The table below lists existing 2007 incentives for the New Construction, Schools and Commercial Retrofit Programs and, where noted, changes that will take place for 2008. The statewide incentives presented in the tables below vary by size, technology and efficiency. Incentives will be paid based on specific eligibility requirements.

Design Support Incentives:		
Pre-design planning session	\$1,000	No Change
Design simulation and screening	\$5,000 or more depending on the size of the building or; service may be provided by Market Manager	No Change
Incorporation of energy efficiency measures into the Final Design	\$5,000 depending on the measures included	No Change
Custom Measure Incentives:		
Measures not covered by the prescriptive incentive tables	Generally, up to 80% of eligible qualifying measure's incremental cost or a buy down to a 2 year payback, whichever is less. To be eligible for incentives, these projects must first pass several 'cost-effectiveness' criteria.	No Change
Qualifying Equipment Incentives (no measure 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 90.1-2004
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	2007 Current Incentive	Proposed 2008 Incentive
Unitary HVAC Systems:		
Refer to Note A above		
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	No Change
Water Source Heat Pumps	Qualifying equipment is eligible for an incentive of up to \$81/ton	No Change
Ground Source Heat Pumps:		
Refer to Note A above		
Open Loop & Closed Loop ≥ 16 EER	Up to \$370 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
> 400 MBH	Treated under Customer Measure Path	No Change

Technology Classification	2007 Current Incentive	Proposed 2008 Incentive																
Gas Furnaces ($\geq 90\%$ AFUE)	Up to \$300 per furnace	No Change																
Variable Frequency Drives (HVAC):		No Change																
Variable Air Volume (add on to existing VAV HVAC systems only)	Up to \$65 - \$155 per hp	No Change																
Chilled Water Pumps	Up to \$60 per hp	No Change																
Air Compressors with VFD's	<p>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:</p> <table> <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> <p>Refer to Application and/or website for standards that apply to these measures</p>	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	2007 Current Incentive	Proposed 2008 Incentive
Gas Fired Water Heating:		
≤ 50 gallons ≥ 0.62 energy factor	Up to \$50 per water heater	No Change
> 50 gallons; < 300 MBH ≥ 85% AFUE	Up to \$2.00 per MBH, but not less than \$50/unit	No Change
300 MBH - 1500 MBH ≥ 85% AFUE	Up to \$1.75 per MBH	No Change
>1500 MBH - 4000 MBH ≥ 84% AFUE	Up to \$1.00 per MBH	No Change
> 400 MBH	Treated under Custom Measure Path	No Change
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:		
Three phase motors	Follows the Regional MotorUp Program Incentive Schedule ¹	No Change

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	2007 Current Incentive	Proposed 2008 Incentive
Prescriptive Lighting:		Refer to Note A above
T-5 and T-8 lamps with electronic ballast replacing T-12 lamps	<p>\$20 per fixture for existing facilities with connected load \leq 75 kW \$10 per fixture for existing facilities with connected load $>$ 75kW. No incentive for new construction or complete renovation.</p> <p>Existing buildings with connected load equal to or less than 75 kW are eligible for Prescriptive Lighting incentives and are not eligible for Performance incentives</p> <p>No incentives for new construction or complete renovation. Complete renovation is defined as 100% fixture replacement for the space involved.</p>	<p>\$10 per fixture for one and two lamp retrofits; \$20 per fixture for three or four lamp retrofits; \$25 per fixture for new T-5 or T-8 fixtures with one or two lamps; \$30 per fixture for new T-5 or T-8 fixtures with three or four lamps. No incentives for new construction or complete renovation. Eliminate 75 kW threshold for prescriptive lighting</p> <p>No change</p>
Permanently De-lamp Fixtures and Add Reflectors as long as changing to a more efficient lighting system.	No Incentive	\$20 per fixture. Refer to application for details.
LED Exit Signs - (New Fixtures Only)	Up to \$20 per fixture	\$20 per fixture with facility demand less than 75 kW; \$10 per fixture with facility demand greater than 75 kW
Hard-wired compact fluorescent surface mounted fixtures - (New Fixtures Only). Must be pin based technology with THD of $<$ 33% and BF $>$ 0.9		
1 lamp fixture	Up to \$25 per 1 lamp fixture	No Change
2 lamp fixture	Up to \$30 per 2 or more lamp fixture	No Change
Hard-wired compact fluorescent recessed fixtures - (New Fixtures Only). Must be pin based technology with THD of $<$ 33% and BF $>$ 0.9		
1 lamp fixture	Up to \$25 per 1 lamp fixture	No Change
2 or more lamp fixture	Up to \$30 per 2 or more lamp fixture	No Change

Technology Classification	2007 Current Incentive	Proposed 2008 Incentive
Metal Halide w/ pulse start ballast, for fixtures > 150 watts	Up to \$45 per fixture, includes parking lot lighting	No Change
T-5 and T-8 Fixtures replacing HID, 250 watt or greater T-12 fluorescent, or 250 watt or greater incandescent fixtures	<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: \$284.00 per fixture removed. • T-5 or T-8 fluorescent fixtures replacing 400 Watt to 999 Watt HID, T-12 fluorescent, or incandescent fixture: \$100.00 per fixture removed. • T-5 or T-8 fluorescent fixtures replacing 250 Watt to 399 Watt HID, T-12 fluorescent, or incandescent fixture: \$50.00 per fixture removed. 	No Change
	<ul style="list-style-type: none"> • T-5 or T-8 fluorescent fixtures replacing 175 to 249 Watt HID fixture: \$43.00 per fixture removed. • T-5 or T-8 fluorescent fixtures replacing 100 to 174 Watt HID fixture: \$30.00 per fixture removed. 	No Change
New Construction and Complete Renovation	<ul style="list-style-type: none"> • T-5 or T-8 fluorescent fixtures replacing 75 to 99 Watt HID fixture: \$16.00 per fixture removed. <p>The current requirement for one to one replacement will be eliminated Refer to Application and/or website for standards that apply to these measures</p> <p>No incentives for new construction or complete renovation. Complete renovation is defined as 100% fixture replacement for the space involved. No incentive, performance based only.</p>	<p>No Change</p> <p>No Change</p>

Technology Classification	2007 Current Incentive	Proposed 2008 Incentive
Low Bay LED Parking Lot Lighting	No incentive	\$43 per fixture
LED Traffic Signal Lamps (conversion of existing intersections only)		
8" Lamp	Up to \$20 per 8" lamp (red & green only)	No Change
12" Lamp	Up to \$35 per 12" lamp (red & green only)	No Change
LED Pedestrian Signal Lamps (conversion of existing intersections only)	Up to \$20 per fixture	No Change
Lighting Controls:		
Occupancy Sensors (Turning fixtures off in Existing facilities only)		
Wall Mounted	Up to \$20 per control	No Change
Remote Mounted (e.g., ceiling)	Up to \$35 per control	No Change
Day Lighting Dimmers - All facilities		
Fluorescent Fixtures	Up to \$25 per fixture controlled	No Change
HID or Fluorescent Hi-Bay controls	Up to \$75 per fixture controlled (HID only)	No Change
Hi-Low Controls - All facilities:		
Fluorescent Fixtures	Up to \$25 per fixture controlled	No change
HID or Fluorescent Hi-Bay	Up to \$75 per fixture controlled (HID or Fluorescent Hi-Bay)	No Change

Technology Classification	2007 Current Incentive	Proposed 2008 Incentive
Performance Based Lighting		
<p>Performance Based Lighting incentives for indoor and outdoor installations (attached to building) - New Construction and Complete Renovation</p> <p>Complete renovations defined as "100% fixture replacement for the space involved".</p>	<p>Up to \$1.00 per watt-per-square foot below baseline which is 20% below (more efficient) code; incentive cap up to \$30/fixture.</p> <p>Existing buildings with connected load equal to or less than 75 kW are eligible for Prescriptive Lighting incentives and are not eligible for Performance incentives, unless a Complete Renovation of the lighting system is undertaken. Incentive cap up to \$30/fixture</p>	<p>No change</p> <p>Existing buildings, regardless of connected load, are eligible for Prescriptive Lighting incentives and are not eligible for Performance incentives, unless a Complete Renovation of the lighting system is undertaken.</p>
<p>Performance Based Lighting incentives for indoor/outdoor installations (attached to building) - Existing Construction</p>	<p>Up to \$1.00 per watt-per-square foot below baseline which is 10% below (more efficient) code; incentive cap up to \$30/fixture.</p> <p>Existing buildings with connected load equal to or less than 75 kW are eligible for Prescriptive Lighting incentives and are not eligible for Performance incentives, unless a Complete Renovation of the lighting system is undertaken. Incentive cap up to \$30/fixture.</p>	<p>This classification will now be processed under prescriptive lighting incentives. For projects that require Complete Renovation please refer to previous section.</p>
Multiple Measure Bonus:		
	<p>10% of the total equipment incentives for the subject project, but not to exceed the smallest individual equipment incentive for the project.</p>	<p>No Change</p>

The incentives identified above may be modified with the approval of the Office of Clean Energy

Goals and Energy Savings

Goals:

The following are the goals for 2008:

- New Construction and Schools 107 completed jobs
- Existing Construction 2,067 completed jobs

Energy Savings:

- Electric MWh avoided – lifetime saving 2,592,480
- Gas decatherms avoided – lifetime savings 1,419,996

Delivery Methods

The C&I Energy Efficient Construction program will be managed by TRC as the Commercial & Industrial Market Manager. The program 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 need to continuously monitor technologies and costs and adjust program incentives accordingly. The Market Manager will propose adjustments to these offerings based on program experience, the results of any evaluations, program and market studies as well as other state/regional market research, and current pilot/demonstration projects.

Quality Control Provisions

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all C&I program participants. All applications are reviewed upon receipt to verify adherence to eligibility requirements. 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.

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 budget for this program for 2008 is attached in Appendix B.

Minimum Requirements for Program Administration

Not Applicable.

New Program Components

Municipal/Local Government Energy Audit Program

Description:

The New Jersey Board of Public Utilities has authorized the use of \$1,000,000 under docket number EX04040276 dated August 1, 2007, for an incentive program to subsidize the cost to municipalities or other local government agencies of having an energy audit of their facilities performed. In concept, the program will be implemented as follows:

1. Treasury will establish, based on its review of the proposals received in response to an RFP, a list of qualified contractors that are available to contract directly with municipal or other local governmental agencies to provide energy audit services.
2. The list of contractors will include hourly rates for the provision of energy audit services.
3. Municipalities or other local governmental entities will request proposals from contractors on the approved Treasury list. The solicitation will include a description of the facilities which will be audited.
4. Contractors will provide the municipality or other local governmental entity an estimate of the cost to perform the energy audit based upon the hourly rates provided in response to the RFP. Proposals to municipalities or other local governmental entities shall be on a fixed fee basis only and shall not be, in whole or in part, contingent on any other factors such as shared savings, commissions, or percentages of project costs.
5. The municipality or other local governmental entity will submit a request for reimbursement of a portion of the estimated cost of the energy audit to the Office of Clean Energy's Commercial & Industrial Market Manager, TRC. The Program may provide incentives in two phases: Phase I – 75% of the audit fee; Phase II – 25% of the audit fee upon installation of the upgrades which were identified in the audit.
6. 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.
7. The municipality or other local governmental entity will contract directly with the firm selected to perform the energy audit.
8. Upon completion of the audit, the Market Manager will review the contractor's audit report and, provided that all program requirements are met, the Board of Public Utilities will reimburse the municipality or other local governmental entity for a portion of the cost of the energy audit.

The Municipal Audit Program will also provide incentives for the municipality or other local governmental entity to implement specific measures recommended in the energy audit that meet certain financial thresholds to be determined in the final program design.

In order to provide incentives through the New Jersey SmartStart Buildings Program, there are a number of operational functions which must be defined and provided. The key elements which need to be articulated — along with TRC’s present thoughts — include but are not limited to the following. We will recommend specifics for this program during the design phase:

- *What will the amount of the incentives be?* Other, similar State programs presently offer from 50 – 75% audit cost rebates. Additional incentives up to total of 100% are available for certain customer classes and/or for performing recommended upgrades.
- *Will there be per site and/or per governmental organization caps?* New Jersey’s Clean Energy Program has a ‘caps’ policy in place covering all of its C&I programs. TRC will review this to see if this particular program has any characteristics that warrant exceptions.
- *What mechanism will be in place to review and assess audit reports eligible for incentives?* Final incentives would not be disbursed until TRC had reviewed and approved the final audit report to ensure it met program requirements.
- *Will there be a cost share requirement for qualifying audits?* Yes, programs all around the country have consistently found that this provides the greatest incentive for applicants to follow through with optimal upgrades.
- *Who will issue checks for rebates and administer program funds?* TRC’s contract with NJBPU and Treasury requires it to perform this function under Treasury oversight.

As described below, the Program Guide developed during Phase 1 will contain final, detailed answers for each of the above questions/issues.

Phase 1: Program Design

TRC will start Program Design with a thorough review of both the existing literature available on public buildings energy audit issues around the country as well as comparable programs currently being offered by other States or utilities. Some of the sources that TRC has on hand and that will be reviewed include, but are not limited to, the following:

- New York State Energy Research and Development Authority (NYSERDA) multiple initiatives, including: *Flexible Technical Assistance, EnVest Program, and Technical Assistance (PON 1046)*.
- Wisconsin Focus on Energy, *Feasibility Study Grants*.
- American Public Power Association, *DSM/Energy Efficiency & Energy Audits*.
- ACEEE, *Database of Energy Demand Impacts*.
- California Energy Commission, *Database for Energy Efficiency Resources*.
- Northwest Power and Conservation Council, *Conservation Resource Comments Database*.

Informed by this review, TRC will then proceed in Program Design to develop each of the following program elements. As they are developed, they will be incorporated into a Program Guide package for municipal or other local government applicants. This Guide will contain all of the elements listed below so as to provide government applicants with all the information and forms they need in a single source document:

- Definitions
- Acceptable or not acceptable
 - Types of energy audit services/scopes of work
 - Report contents
- Participants' eligibility requirements & incentive levels according to:
 - Project location & ownership
 - Types of governmental entities
- Program Incentive Caps:
 - Per applicant
 - Per facility
 - Per program year
- Forms and Program Data:
 - Applicant checklist
 - Facility data sheets
 - Program details
 - Standard terms and conditions
 - Technical assessment forms
 - Invoicing forms

A final, important element of Program Design will be the advertising/marketing campaign to raise awareness of this as a completely new offering from the Board. A direct marketing approach is suggested as the primary method for building awareness about the program due to the narrow selection criteria in defining the target market of only municipal or other local governmental customers.

Phase 2: Program Implementation for Municipal/Other Local Governmental Customers

Program implementation includes the following elements, mirrored on the structure already approved and in place for the existing commercial & industrial programs. For program implementation, each municipal facility/building is considered a single audit:

- Program Administration — Database management; monthly, quarterly, & annual reporting; OCE committee participation & support including technical, marketing, & communications committees; ongoing program improvements.
- Advertising/marketing the program focused to the municipal or other local governmental market sector — Design & implementation of an initial campaign.
- Pre-audit application processing, including receipt, review, rejection/approval and applicant notification, and tracking/recordkeeping.
- Post-audit application-for-payment processing, including receipt, review, rejection/approval and applicant notification, issuance of checks, tracking/recordkeeping and potential energy improvement calculation.
- Technical assistance and support and review of energy audit reports performed by a customer-selected vendor/consultant — Review of draft/final reports for scope compliance, technical adequacy, & economic accuracy.
- Technical assistance performed for customer in preparation of applications — Support customer procurement, including scope & cost for specific facilities & needs.
- Quality assurance inspections — Pre-audit building and equipment data verification.

Target Markets & Eligibility

This program offers qualifying municipalities and other government agencies incentives to subsidize the cost of having an energy audit of their facilities performed.

Goals and Energy Savings:

Goals:

The goal for 2008 is to have 100 municipalities or other government agencies apply to participating in the program.

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 Municipal/Local Government Energy Audit 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

Schedule

TRC is prepared to begin Program Design immediately upon notice-to-proceed and anticipates having a complete draft Program Design Guide plus an Advertising/Marketing Campaign design ready for Board staff review within 30 days. Program delivery will then take place over the course of one year.

Delivery Methods

The Municipal/Local Government Energy Audit Program will be managed by TRC as the Commercial & Industrial Market Manager. The program will be offered on a consistent program design and implementation basis to ensure consistency across the state.

Budget

The statewide budget for this program for 2008 is attached in Appendix B.

Direct Install Program

Background

The Direct Install pilot program was originally referenced in TRC's 2007 Compliance Filing. Under this Program, the unique needs of New Jersey's small business community will be addressed.

This program would initially be implemented as a pilot under the New Jersey Office of Clean Energy's suite of Commercial & Industrial Programs presently being managed by its competitively selected Market Manager — TRC. The qualifications of TRC and its management, supervisory, and other key personnel were significant factors in TRC's selection as Market Manager. TRC's background and qualifications, including staff resumes, are described in Section 3 of its original proposal in response to Treasury's RFP 06-X-38052.

Program Description

The Direct Install Program offers eligible small business customers the opportunity to retrofit existing equipment with more energy efficient systems. The Direct Install Program is also available to municipal and other local government agencies who have participated in the Municipal/Local Government Energy Audit Program. The Program identifies all cost-effective efficiency retrofit opportunities and provides direct installation, financial incentives, education, and other strategies to encourage the early replacement of existing equipment with high efficiency alternatives, as well as the installation of new equipment. All 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 energy efficiency improvements in each customer project.

Target Market and Eligibility

Per the Energy Information Administration (EIA), commercial and industrial sector building energy use represents approximately 42% of the total energy consumption in New Jersey. The Direct Install Program offers a targeted approach at addressing the smaller facilities within this sector.

The Direct Install Program is open to all commercial and industrial customers with an average peak kW demand of 100 kW or less. This small business sector 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.

TRC will pay particular attention during this pilot phase of the program to ensure that Smart Growth Areas are well served by this program.

Program Offerings and Incentives

The Direct Install Program is a turnkey program that offers customers a single source of information, technical assistance and financial incentives. TRC envisions selecting multiple regional contractors via a request for proposal (RFP) process across the State to deliver the installation and related services. Each contractor will bid on, and be selected to serve, a defined geographic region (i.e., county) of New Jersey. Selected contractors will focus on their pre-determined territory and be responsible for promotion of the program, program services, and reporting to TRC on a weekly, monthly and annual basis. TRC will develop a comprehensive listing of unit pricing for all eligible equipment. Eligible equipment categories will include but not be limited to:

- Super T8 and T5 Lamp and Ballast Retrofit
- LED Exit Signs
- Commercial CFL Fixtures
- Occupancy Sensors
- Low Voltage Programmable Thermostats
- ENERGY STAR Boilers and Furnaces (up to 300,000 Btuh)
- High Efficiency Cooling Systems
- High Efficiency Water Heating Equipment
- ENERGY STAR Products
- Refrigeration Measures
 - Refrigeration economizer
 - Evaporator fan motor controls
 - Vending miser controls
 - Door heater controls
 - Floating head pressure controls

Customer incentives will be offered to reduce the cost of installing energy efficient equipment and will be based on the total installed cost of the retrofits. Qualifying commercial and industrial customers will be eligible for an incentive based on up to 80% of the installed cost of the approved project. Incentives will be paid to the installation contractor and the contractor will invoice the customer for the remaining balance of the installation.

Direct Install contractors are responsible for the following program components:

1. Marketing to eligible customers (marketing materials to be approved by 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 rebate applications, including pre-implementation report to TRC 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, to TRC;

7. Tracking and reporting on program activity; and,
8. Proper disposal of all removed equipment.

Program vendors will submit a post-implementation report to TRC, which will include the following:

- Customer name, address and contact person
- Customer account number(s)
- Project type (electric, gas, both)
- Business type (SIC or NAICS code)
- Inventory of equipment to be replaced, including quantity, type, location, hours of use
- Estimates of energy (kWh &/or therms) and demand (kW) savings and total project costs
- Smart Growth confirmation

TRC will review all post-implementation reports and either forward to OCE as approved for payment or send back to vendor with questions or issues.

Program Goals

Direct Install Pilot Program goals and measures of effectiveness 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 1,000 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 500 installation projects across the State.
- **Energy Savings:** Maximize total energy (electric and gas) efficiency opportunities with an annual goal of approximately 8,000,000 kWh savings equivalent.
- *Goal:* Maximize diversity of equipment installed in completed projects.
- **Demonstrable results:**
 1. Small business customers' energy use decreases through the removal of older, inefficient equipment.
 2. Expansion of firms offering energy efficient installation services to small business customers. Program marketing, customer demand, and technical training opportunities will help to develop a network of installation contractors who can offer quality installation services and associated technical assistance.

Program Deliverables

Direct Install will provide the following services:

1. Competitively select qualified regional contractors that can offer Program installation and analysis services.
2. Provide review and approval services for all submitted pre-implementation reports, verifying all associated cost and savings information.

3. Provide review and approval services for all submitted post-implementation reports.
4. 100% Quality Control review of all completed projects, including a random 10% sampling of site inspections.

Pilot Implementation Phase:

- Program Administration — to include the following services:
 - Revise and update Direct Install Program Policy Manual as necessary
 - Provide technical assistance via email and telephone
 - Provide interim Program Memos, as necessary, to clarify requirements
 - Review and approval of all submitted pre- and post-implementation reports
 - Site inspections of 10% random sample of projects
 - Program Management, including weekly, monthly, and annual reporting
- Program Incentives - \$3.5 million (~575 projects @ \$6,000 each)
- External Evaluation – Provided by the Program Coordinator.

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

Schedule

TRC is prepared to begin the Design Phase immediately upon receiving notice-to-proceed and anticipates development of marketing and program material necessary for recruiting qualified contractors within 60-90 days. Program delivery will then take place over the course of one year. Exact delivery dates for each deliverable listed above will be established and reviewed by Board staff.

The Direct Install Program will be managed by TRC as the Commercial & Industrial Market Manager. The program will be offered on a consistent program design and implementation basis to ensure consistency across the state.

Budget

A detailed budget for this program for 2008 is attached in Appendix B.

Pay for Performance

Background

The Pay for Performance Program was originally referenced in TRC's 2007 Compliance Filing. Under this Pilot phase of the Program, approximately 15-20 businesses will be served through this innovative and comprehensive approach to market transformation. This section contains TRC's approach for implementing the Pay for Performance Program.

This program will initially be implemented as a pilot under the New Jersey Office of Clean Energy's suite of Commercial & Industrial Programs presently being managed by its competitively selected Market Manager — TRC. The qualifications of TRC and its management, supervisory, and other key personnel were significant factors in TRC's selection as Market Manager. TRC's background and qualifications, including staff resumes, are described in Section 3 of its original proposal in response to Treasury's RFP 06-X-38052. TRC may include additional personnel in our Contract Modification for these services.

Program Description

The Commercial and Industrial Pay for Performance Program will take 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 will link incentives directly to energy savings and shall include a measurement and verification (M&V) component to ensure that the estimated savings levels are achieved. This market-based program will rely on a network of Program Partners, selected through a Request for Qualifications process. Once approved, Partners will then 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 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 will be required of all projects and will be based on the EPA's Portfolio Manager Benchmarking Tool and an approved whole-building energy simulation. The achievement of energy reduction goals will be 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

Per the Energy Information Administration (EIA), commercial and industrial sector building energy use represents approximately 42% of the total energy consumption in New Jersey. The Pay for Performance Program offers a targeted approach at addressing the larger facilities within this sector.

The C&I Pay for Performance Program is open to existing commercial and industrial buildings with an annual peak kW demand of more than 100 kW. In addition, any multifamily facility which does not meet the eligibility requirements of the New Jersey Clean Energy Home Performance Program will be eligible to participate in the Pay for Performance Program. Participants will be 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., 20% of total building energy consumption). 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.

Units of energy comparison used in performance threshold calculations will be determined during the program design stage. Options include source energy (used in EPA benchmarking) and energy cost (used by ASHRAE 90.1 Section 1 and appendix G, EPA Federal Tax Deductions, and LEED NC). 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). The Energy Reduction Plan will also include a measurement and verification (M&V) plan for all recommended measures.

The Pay for Performance Program will offer 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 an M&V report that verifies the level of savings achieved. These incentives are explained below in more detail.

Program Offerings and Incentives

TRC currently provides administration and inspection services for the New York State Energy Research and Development Authority's (NYSERDA) Commercial and Industrial Performance Program (CIPP) and Multifamily Performance Program (MPP). CIPP offers commercial and industrial customers various levels of incentives based on the complexity and comprehensiveness of their proposed project. MPP provides an innovative whole-building approach to addressing energy efficiency improvements in multifamily buildings, including a minimum performance threshold of 20% of the buildings total source energy use. TRC has applied the experience from these award-winning programs to the development of a similar approach for commercial and industrial buildings in New Jersey through the Pay for Performance Program.

The initial Pay for Performance Program roll-out will focus on developing a network of Program Partners who can provide the technical, financial, and construction-related services necessary for completing the Energy Reduction Plan. Energy Service Companies (ESCO) deliver this full range of services as part of their business model and will be a likely group to approach first. In

addition, one of the goals of this program will be 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 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 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.

Program incentives will be 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. Program incentives will be capped not to exceed 50% of the total project cost.

Incentives, to be finalized per the final approved program design, will be released in phases upon satisfactory completion of each of three Program milestones, which are:

1. Submittal of a complete Energy Reduction Plan
 - a. Incentive based on facility square footage at approximately \$0.10/sq ft
 - b. Maximum incentive of \$50,000, minimum incentive of \$5,000
 - c. Projects that cannot identify efficiency improvements that meet the minimum performance level will be referred to the appropriate SmartStart Buildings Program.
 - d. Incentive not to exceed 50% of facility annual energy cost.
 - e. Incentive is contingent upon moving forward with construction.
2. Installation of all recommended measures per the Energy Reduction Plan
 - a. Incentive based on a percentage of total energy consumption (combined annual costs for electricity and natural gas)
 - b. Peak Demand Bonus – provide direct linkage to NJ OCE Demand Response Program
3. Completion of M&V Report which reflects that the minimum performance threshold has been met or exceeded. This report will include verified consumption reductions based on one year of post construction energy use.

Incentive #1 – Energy Reduction Plan – This incentive will be developed to offset the cost of services associated with the development of the Energy Reduction Plan. This incentive will be based on the square footage of the building(s) and the complexity of the energy uses. TRC will analyze the relative complexity of conducting a whole building energy audit for various business types and develop a \$/sq ft value for several types, as appropriate. For example, the \$/sq ft incentive value for completing an Energy Reduction Plan for an office building might be lower than the value for a hospital. This incentive will also be capped at a set % of annual energy cost. This incentive cap will assist in limiting incentives for facilities with large square footage but very low energy intensity (e.g. warehouses).

Incentive #2a – Installation of Recommended Measures – This incentive will be based on a projected energy savings and designed to pay approximately one half of the total performance-based incentive. In addition, a direct linkage to the NJ OCE’s Demand Response program will be provided for projects that include ample peak kW reductions. Pending final program design, a custom approach may be offered to large industrial customers whose annual energy costs are more heavily weighted to manufacturing processes. The preliminary performance-based incentives to be paid at completion of construction (to be finalized per approved Program design) are as follows (designed to be roughly 50% of the total performance-based incentive):

1. Electricity savings at \$0.10/kWh
2. Natural gas savings at \$1.00/therm

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

1. Develop whole building energy simulation using approved simulation tools. The list of approved tools will be based on the software requirements outlined in ASHRAE 90.1 Section 11 or Appendix G.
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 EPAct 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 – M&V Report – Upon submittal of an M&V 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 preliminary performance-based incentives (to be finalized per approved Program design) are as follows (designed to be roughly 50% of the total performance-based incentive):

1. Electricity savings at \$0.10/kWh
2. Natural gas savings at \$1.00/therm

The M&V Report will be based on the approved M&V plan as submitted as part of the 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 Protocols 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 Protocols will follow the International Performance Measurement & Verification Protocol (IPMVP). Option C - Whole Building would be the preferred M&V approach but the Program will allow for Options A – Partially Measured Retrofit Isolation, B – Retrofit Isolation, and D – Calibrated Simulation, as necessary. The M&V Report must demonstrate savings over at least one year of post-construction consumption. The post-construction period may be extended to up to two years.

To validate the savings and achievement of the Energy Target, the EPA Portfolio Manager may be used. For buildings not covered by EPA, the process used by LEED EB may be followed. The steps of this process are summarized below:

- Develop and document building energy baseline based on historical energy use data for the building. A simplified approach would be to average together three consecutive years of historical energy use data immediately prior to building enrollment in the program and use it as baseline. Alternatively, statistics for similar building types may be included in the baseline development.
- Document annual energy use during the post-retrofit period. Collect energy consumption data for the 12-month post-installation period. In certain cases, full year consumption may be extrapolated from partial data available.
- Calculate Percent Reduction in Energy Use as the different between baseline and post-retrofit energy consumption as percentage as baseline energy consumption.

Post-retrofit performance will be validated through site inspection, following the requirements of the EPA Guide for validating the ENERGY STAR label for commercial buildings.

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 M&V Report which reflects that the minimum performance threshold has been met or exceeded.

Program Goals

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

- **Market Transformation:** Expand the number of energy efficiency firms that offer comprehensive services. Promote the financial and environmental benefits of reducing energy consumption with emphasis on a comprehensive, whole-building approach.
Goal: Develop a list of at least 15 Program Partners that can offer the comprehensive energy services necessary for developing an Energy Reduction Plan.
- **Market Penetration/Cost Effectiveness:** Reach significant numbers of commercial and industrial customers 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.
Goal: Approve at least 20 Energy Reduction Plans that meet the minimum threshold for energy savings.
- **Demonstrable results:**
 1. Participants' building energy use decreases compared to established energy baselines, and/or the use of renewable energy increases. Energy Benchmarking will not only establish baseline use for each participating building, but also provide verifiable comparisons that show the results of the efforts to save energy in their buildings.

2. Expansion 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. Develop a list of approximately 15 Program Partners that can offer Program services and publicize this list to potential participants.
2. Provide up to three (3) half-day Program Orientation seminars for Program Partners to introduce the Program and the Energy Reduction Plan development. The first Orientation will be promoted as a Program Launch event and will be open to Program Partners, potential Partners, and potential participants.
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.
4. 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 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

Pilot Implementation Phase:

- Program Administration —to include the following services:
 - Develop and conduct Program Orientations (up to 3)
 - Conduct monthly Partner conference calls
 - Provide technical assistance via email and telephone
 - Develop Frequently Asked Question (FAQ) posting on web site
 - Provide interim Program Memos, as necessary, to clarify requirements
 - 100% Quality Control review of all submitted Energy Reduction Plans
 - 100% Project Inspections on first two projects for each Partner, at a minimum
 - Program Management, including weekly, monthly, and annual reporting
- Program Incentives - \$5.6 million (approximately 25 projects @ \$225,000 each)
- External Evaluation delivery. (Program Coordinator's role)

Schedule

TRC is prepared to begin the pilot Design Phase immediately upon receiving notice-to-proceed and anticipates development of marketing and program material necessary for recruiting Program Partners within 60-90 days. Program delivery will then take place over the course of one year. Exact delivery dates for each deliverable listed above will be established and reviewed by OCE staff.

Budget

A detailed budget for this program for 2008 is attached in Appendix B.

K-12 Schools Energy Education Pilot Program

In its September 14, 2006 Order, the New Jersey Board of Public Utilities (the Board) authorized the Office of Clean Energy (OCE) to develop and implement a pilot K-12 Schools Energy and Education Program (SEEP).

Description

The Schools Energy & Education Program (SEEP) will provide a range of services described below to educate students, teachers, and staff, while simultaneously enhancing schools' ability to manage operational energy use and to comprehensively access New Jersey Clean Energy Programs. Rather than directly delivering technologies, the program builds institutional and individual capacities to understand and implement energy and environmental concepts and measures in an ongoing fashion. The program aims to build a self-sustaining culture and to provide a set of tools that school districts can use on a continuing basis after formal program activities conclude. The program will be delivered at the school district level.

Under this Program, approximately 100 schools will be recruited within at least 6 school districts to be benchmarked and to implement the Alliance to Save Energy's Green Schools Program. This is a national program presently being implemented in several states and it is the nationally recognized standard for energy and environmental education. This pilot program would be implemented as part of the New Jersey Office of Clean Energy's suite of Commercial & Industrial Programs presently being managed by its competitively selected Market Manager — TRC. The qualifications of TRC and its management, supervisory, and other key personnel were significant factors in TRC's selection as Market Manager. TRC's background and qualifications, including staff resumes, are described in Section 3 of its original proposal in response to Treasury's RFP 06-X-38052.

Target Market and Eligibility

SEEP targets New Jersey public schools that serve kindergarten through twelfth grade (K-12) populations. New Jersey is home to more than 5,000 school buildings, which are major energy consumers. These schools educate not only their students, but also their staffs, students' parents, and community members on a wide range of subjects. The techniques and value of energy efficiency and renewable energy technologies merit focused attention by schools. The energy utilities formerly operated schools energy education programs, which were suspended a few years ago. Then, a company by the name of Global Learning, Inc. received a grant to develop the Green Schools Program in Brick Township, which they have successfully implemented in both Brick Township and in the Toms River Regional Schools. SEEP proposes to build on the lessons of the Green Schools Program as well as TRC's delivery of the Energy Smart Schools Program throughout New York State to pilot a second-generation school energy education/support program in additional school districts in the State of New Jersey.

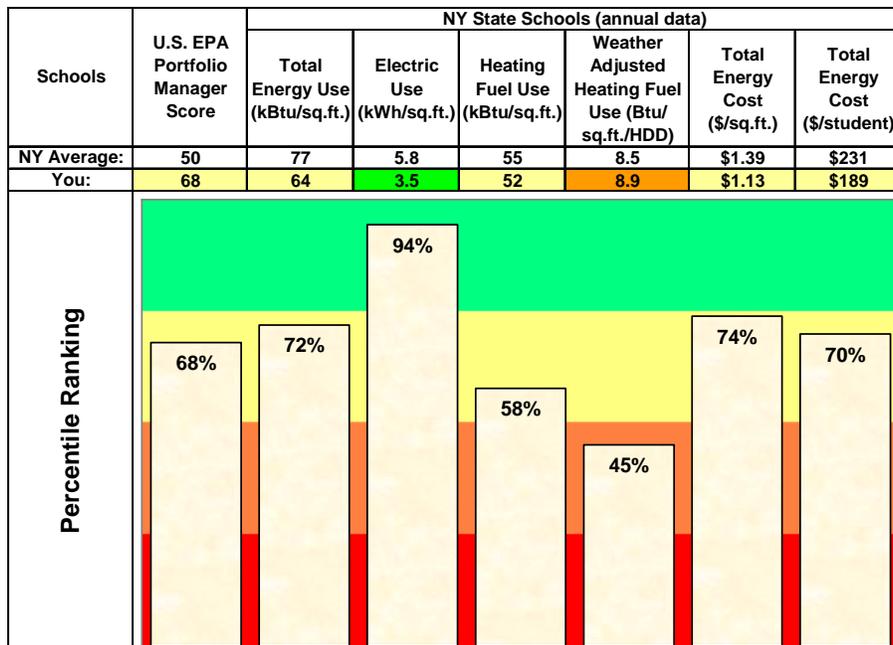
Program Offerings and Incentives

TRC will collect basic building characteristics for each school in a selected district. We will also collect at least 24 months worth of electric and heating fuel use and cost data, which will serve as each school's energy baseline. SEEP will enlist districts to refund a percentage (25-50%) of their certified savings to their Green Schools Teams, who will decide how best to re-invest these savings in additional energy educational and efficiency activities.

This building and utility data will be entered into and analyzed by TRC's proprietary *Building Energy Performance in Schools (BEPS)* system. Each school's benchmarking results will include its EPA Score, total energy use per square foot, electric use per square foot, heating fuel use per square foot, heating fuel use normalized for heating degree days, energy cost per square foot, and energy cost per student. The district and individual school will also be shown where they rank in each of these parameters relative to the other New Jersey schools in SEEP. Finally, the district will also receive a summary report showing where each of its schools rank relative to one another. These reports allow each school to develop priorities for improvement and also allow district officials to develop priorities among schools. TRC will then work with the district officials to determine which New Jersey Clean Energy Program offerings are most appropriate for their particular circumstances.

The results from each school are presented both graphically (see Figure 1, below) and textually so as to provide excellent teaching aids for students and for teachers. Each report will also be delivered to the school along with a basic spreadsheet tool allowing student/teacher teams to determine the plug load and lighting components of their electric consumption. This provides teachers with real world, hands on examples from which students can learn the basic precepts of energy use.

Figure 1: New York State Energy Benchmarking Sample Graphic



The SEEP pilot program will also provide a range of educational services to the school districts selected to participate. The program will provide opportunities for introductory, intermediate, and advanced educational activities for students. The introductory and intermediate activities will be provided to the new participating districts through the regular operation of their Green Schools Programs. The advanced activities will be offered to the more experienced students in the Brick and Toms River pilot programs. Staff will meet with the ongoing Green Schools Teams in these districts to facilitate the incorporation of service learning components that provide community outreach for advanced students in terms of energy efficiency services, such as energy audits of community or senior citizen centers.

When schools participate in other Clean Energy Program offerings, this program will assure that the site-specific impacts of these technologies are brought into the classroom. In addition to grade-appropriate teaching material, the program will provide extracurricular activities such as home or school energy audits. An essential aspect of this program is using the school facilities themselves as laboratories for learning about energy, while at the same time enhancing the schools' own ability to understand and manage energy efficiently. These aspects occur as students conduct original research on their building's energy usage utilizing the professional energy monitoring instruments provided in the Green Schools Tool Kit, as well as through such activities as energy patrols and regular meter reading.

The program will provide professional development relating to energy and the environment for school personnel. This focused training will explain to administrative, maintenance, and teaching staff exactly how their school uses energy, and the technical and operational ways to manage and change energy use patterns, including case study examples from other schools that have taken a lead. One consistent lesson from both the Brick and Toms River Green Schools pilots involved the fact that most teachers did not originally feel comfortable teaching about energy and energy conservation because they had not been formally trained to do so. The professional development workshops, however, coupled with the substantive yet inquiry-based lessons quickly overcame their initial feelings of inadequacy and resulted in numerous enthusiastic, creative and confident energy educators and energy conservation advocates.

The program staff will respond to requests for classroom support and enrichment, such as demonstration lessons on energy issues, impacts, and technologies. The staff will provide ongoing support and networking for individual participants during the program, as well as links to continuing resources through the national and New Jersey Green Schools Programs. As the Commercial & Industrial Market Manager, TRC will continue to conduct active outreach in order to engage school districts in Clean Energy programming.

One type of incentive the participating school district receives through this program is in the form of the professional help and resources that the program staff will provide during the operating period of the pilot program, which will generally run a minimum of two years in a district. Another type of incentive involves financial savings from reduced energy usage as a result of school-based conservation activities.

Finally, during the initial pilot year, several additional services and delivery mechanisms will be tested and evaluated with the participating districts. Since an overarching goal is to deliver services as widely as possible, web-based information and accessibility will be established. This information will include basic program information as well as statewide schools benchmarking statistics and trends plus tools developed during the pilot. Additionally, participants will be surveyed regarding their ongoing needs for training, tools, and information. They will be asked about already-identified potential services such as a summer training session for teachers and a speaker's bureau. Results of these efforts will be incorporated into the pilot evaluation and report, including recommendations for permanent implementation.

Program Goals

SEEP pilot goals and measures of effectiveness will include the following:

- **Market Penetration/Cost Effectiveness:** Reach significant numbers of students, teachers, school operations personnel, and parents at reasonable costs. Goal: 100 schools from 6-9 school districts, involving 500 teachers, administrators, and custodians, who in turn involve approximately 9,000 students
- **Reaching new constituencies:** Recruit participants from beyond a single subject area or grade level. By focusing on the entire school community, SEEP involves teachers, not only from science and math, but also language arts, technology, social studies, performing arts, as well as extracurricular activities such as environmental clubs and energy patrols.
- **Lasting impact:** The program becomes institutionalized in schools in both the curriculum and the operation of their facilities. The energy awareness and efficiency content and activities become institutionalized as teachers incorporate lessons into their ongoing curricula and extracurricular activities, as well as through the upgrading of O&M practices at the district and school levels.
- **Demonstrable results:**
 - Schools' energy use decreases compared to established energy baselines, and/or the use of renewable energy increases. Energy Benchmarking will not only establish baseline use for each participating school, but also provide verifiable comparisons that show the results of SEEP Teams' efforts to save energy in their buildings.
 - Measurable impact on energy and environmental awareness of students. Student pre- and post-tests will be administered and tabulated to assess changes in student knowledge about energy and its environmental impacts as well as changes in student energy-saving behaviors.

Program Deliverables

The SEEP pilot will provide the following services:

1. Recruit approximately 100 schools within 6-9 school districts to participate in SEEP, be benchmarked, and implement the Green Schools Program.
2. Establish energy baselines for each participating school utilizing its Energy Benchmarking program.
3. Provide quarterly energy reports to each Green School and to each district's central administration.

4. Provide a two-day Green Schools Team professional development workshop for each of the 6-9 districts for approximately 500 participants, who will consist of teachers, administrators, and school custodians.
5. Provide each participating teacher and administrator a set of Green Schools Learning Activities and each participating custodian a set of technical opportunities for improving energy efficiency in schools.
6. Provide 36 (an average of 4/district x 9 districts) *Green School Tool Kits* of professional energy instruments for use by students (@ \$700).
7. Provide each PreK-early elementary school (~20 of the 100) with a supplemental set of educational resources, including *Offalot Puppet Kit* and Project Learning Tree's *Energy and Society* (@ \$100)
8. Conduct a mid-year professional development workshop for each team that begins its work in the fall of 2007. Provide technical assistance during the initial professional development workshops on best practices for energy efficiency in schools.
9. Create and disseminate electronically at least 3 issues of the NJ Green Schools Newsletter featuring the activities and accomplishments of participating schools, as well as supplementary educational and energy saving resources.
10. Conduct, or assist Green Schools Teams as needed in conducting, end-of-the-year student celebrations in each participating district.
11. Calculate the financial savings for each Green School, including each school's earned refund.
12. Procure the services of an external evaluation consultant to assess the impacts of this program. As part of this assessment, this evaluator will revise, improve and administer the elementary and middle/secondary pre- and post-tests that Global Learning has utilized in the Brick and Toms River pilot programs.

Program Evaluation

This pilot program is intended to demonstrate best practices in schools' energy & education approaches that link to the school facilities' own energy use, so as to lay a foundation for a broader program in subsequent years. Therefore, evaluation of the program must be built in from the start. TRC will competitively select an additional subcontractor, an external, independent evaluator, subject to Board and Purchase Bureau staff review and approval.

This external, independent evaluator will be involved from the start, establishing evaluation criteria. The evaluator's periodic reports to the program staff will be available to Board staff, as well as the Clean Energy Council's Marketing & Communications committee. Based on energy program industry standards, five percent of the total program budget listed below has been allocated to the specific evaluation of this pilot program. Among other things, the evaluation must quantify achievements relative to the last two goals mentioned above.

Delivery Methods

The K-12 Schools Energy & Education Pilot Program will be managed by TRC as the Commercial & Industrial Market Manager. The program will be offered on a consistent program design and implementation basis to ensure consistency across the state.

Budget:

The statewide budget for this program for 2008 is attached in Appendix B.

C&I Construction Program - Combined Heat & Power

“Combined Heat & Power (CHP)”

Description

This segment of the C&I Energy Efficiency Program, which is marketed as the *Combined Heat & Power (CHP)* program provides financial incentives for Combined Heat and Power (CHP) installations to enhance energy efficiency 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 goals and objectives of the CHP program are to reduce overall system peak demand, to encourage the use of emerging technologies, to use energy more efficiently and reduce emissions and to use distributed generation to provide reliability solutions for New Jersey.

Target Market and Eligibility

Qualifying Customers

This program offers qualifying customers, contractors, and energy service companies incentives to purchase and install various types of CHP units. To qualify, the customer’s facility must be located in New Jersey, and the customer must contribute to the Societal Benefits Charge fund by purchasing electricity or gas from the utility grid. Incentives are paid up to \$1 million. Any portion of a customer’s load that is committed to an interruptible or peak load reduction program is not eligible for incentives. However, these customers can seek incentives for generation capacity to cover their uncommitted load.

Offerings and Customer Incentives

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 new commercially available permanently installed generating equipment qualifies for incentives. The following items do not qualify for CHP Incentive Program: used, refurbished, temporary, pilot, demonstration or back-up generation.

The CHP System must achieve an average annual fuel 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.

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

Participation Guidelines

The application process begins with an initial application and reservation request and ends with final project inspections and interconnection verifications. Project proposals are to be submitted during a 60 day window commencing with the issuance of the solicitation for proposals.

Incentives

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

TABLE 1: CHP INCENTIVE PROGRAM TECHNOLOGY AND INCENTIVE LEVELS

Eligible Technology⁽¹⁾	Incentive⁽²⁾ (\$/Watt) (Up to \$1.0 Million)	Maximum % of Project Cost	Minimum System Size
Level 1 •Fuel cells not fueled by Class I renewable fuel	\$4.00/Watt	60%	None
Level 2 •Microturbines •Internal Combustion Engines •Combustion Turbines	\$1.00/Watt	30% ⁽³⁾	None
Level 3 •Heat Recovery or Other Mechanical Recovery from Existing Equipment Utilizing New Electric Generation Equipment	\$0.50/Watt	30%	None

⁽¹⁾ Insert New Jersey's code requirements or any other mandates if applicable to the appropriate technology.

⁽²⁾ No one particular level will receive more than 50% of the funding, subject to review after 6 months

⁽³⁾The maximum % of project cost will go to 40% where a cooling application is used or included with the CHP system.

The CHP Program has been in existence since 2004. Each year the Program has expanded in scope and budget. Historically, there have been a number of projects (approximately 25%) that, due to various market conditions, have not been implemented. Overall market awareness of the program has increased significantly and the quantity of applications has increased annually.

In 2006 10 projects were awarded and are currently being administered by the C&I Market Manager. In addition the C&I Market Manager is also administering projects for the 2005 award that are currently in various stages of completion.

The Market Manager has developed the 2008 budget based on the historical performance of the program. The current 2008 budget allows for incentives up to \$10,608,000 and includes accruing funds for the previous year's project incentives.

Warranty Requirements

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

Eligible Project Costs

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

- Combined Heat and Power 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 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 Under the Program

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

- 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.

Delivery Methods

The Combined Heat and Power program will be managed by TRC, the C&I Market Manager.

Participation Guidelines

Prior to equipment installation:

- Participants must submit a completed New Jersey Clean Energy Program Pre-Installation Application Form and the appropriate Technical Worksheet to the Market Manager. Applications will be evaluated on the basis of the criteria listed below in Evaluation Guidelines and given a filing date. Complete applications must be submitted within the 60 day window listed above. 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 Pre-Installation 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. Market Manager will inspect 100% of the installations prior to issuing the incentive.
- A minimum of seventy-five percent (75%) of the incentive will be paid upon project completion, review and acceptance of documentation and successful inspection. The remainder, up to 25% of the project incentive, will be paid one year after project inspection and acceptance and confirmation the project is achieving the proposed efficiency threshold. Applicant must provide twelve (12) months of operational data demonstrating the equipment achieves the efficiency levels that were originally proposed.
- Incentive dollars will be reserved based upon the date of the approved Pre-Installation 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** be contributors to the Societal Benefits Charge fund.

Evaluation Guidelines

Projects will be evaluated for funding according to the following criteria:

- System efficiency, environmental performance,
- Projected system startup date,
- Annual system utilization.
- Local Marginal Pricing, as determined by the PJM interchange for the electric service area in which the project is located
- Islanding capability
- Smart Growth
- Emergency Management Center
- General Programmatic Goals will be considered
- Project clarity will be strongly considered

Project evaluations will take into consideration awarding funds to projects which are diversified in size, type of system, and type of end user. If there is a tie in the above evaluation the following factors will be used as tiebreakers:

- The Locational Marginal Price as determined by the PJM Interchange for the electric service area in which the project is located
- Inclusion of a project in an Emergency Management Center with islanding capability
- Location within the State's Smart Growth districts

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.

Incentives will be awarded case-by-case. The Office of Clean Energy has the right to change/modify or discontinue the program without notice. The program will cease when commitments exhaust allocated funding.

No one particular tier will get more than 50% of the available funding unless there are insufficient technically acceptable projects in other tiers. If this situation occurs, the technical evaluation committee will determine if a tier can exceed 50% of the funding.

Only CHP equipment installed on the customer side of the utility meter is eligible.

Equipment must be sized to serve all or a portion of the electrical load at the customer site.

Quality Control Provisions

All applications are reviewed by technical staff of the Market Manager upon receipt to verify adherence to eligibility requirements. The applications are selected according to the above referenced criteria, and are ranked accordingly. All of the results are entered into a database, and files are created for ongoing project correspondence.

Each awarded 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, or coal 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 CHP projects. 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 75% of the incentive based on the approved project amount.

The balance (up to 25%) of the incentive will be paid approximately one year after the initial project inspection, upon confirmation that the project is achieving the proposed efficiency threshold. Applicants must provide twelve (12) months of operational data demonstrating the equipment achieves the efficiency levels that were originally proposed. 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.

Budget

The statewide budget for this program for 2008 is attached in Appendix B.

Goals and Energy Savings

Goals

Meet the objective of the New Jersey Clean Energy program to use energy efficiency, and clean distributed generation to provide reliability solutions for New Jersey. The program's goals are to reduce overall system peak demand and to encourage the use of emerging technologies.

Energy Savings

Not applicable.

Minimum Requirements for Program Administration

Not applicable.

Appendix A
2008 12- Month Marketing Activity Plan

Commercial & Industrial New Construction, Retrofit, Schools and CHP

Background

The program will begin its sixth year of operation in 2008, continuing to offer financial incentives for high efficiency upgrades and improvements plus design support to new construction and retrofits of commercial and industrial facilities in New Jersey. There are two major factors driving TRC's 2008 Marketing Plan described below:

1. In 2007, program enrollment is running below anticipated levels. This indicates that program awareness in the business owner and trade ally communities has experienced a decline following the end of marketing efforts over the past few years as the utilities made way for state administration of the program. For the program's commercial and industrial customers, awareness equals participation.
2. In addition, a number of new, OCE-requested initiatives are being launched at the end of 2007 and others are planned for launch in 2008. These new initiatives, representing millions of dollars in additional incentives and support activities, include the following:
 - Municipal Audit
 - Schools Energy Education Program
 - Pay for Performance
 - Direct Install

This plan summarizes marketing communications, advertising, and promotional tactics along with budget levels to act on the above-named drivers and to achieve program participation goals.

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. Status quo decisions regarding new construction, major renovation, and equipment upgrade/replacement continually result in lost opportunities for reducing energy use and lowering demand for both natural gas and electricity.

Recognizing that the trade ally community (architects and engineers, energy service companies, 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.

Appendix A: 2007 Marketing Activity Plan

Our approach also recognizes the need for a “market pull” component directed at business owners and facility managers across a wide selection of commercial and industrial building types. Marketing communications activities are designed to create a buzz of interest around energy efficiency opportunities and drive changes in behavior by new construction and retrofit decision-makers.

Tactical Components

Trade Publication Advertising

The 2007 media schedule included publications such as:

- Architectural Record, Consulting Specifying Engineer, and others directed at the design community
- NJ Biz, Business News NJ, Distributed Energy and others typically read by business owners and energy managers
- School Leader, School Planning & Management, and School Construction News to reach decision-makers and influencers in the education community

In the past two-three years, the majority of these publications have increased display advertising prices for their new clients. Due largely to our efforts to negotiate, we have been successful extending previous rate levels for NJ SmartStart Buildings ads. Although we intend to continue negotiating for the lowest possible rates, we can anticipate an overall 10-15% increase in last year’s budget simply to maintain existing exposure levels.

Beyond our 2007 media schedule, the 2008 budget includes funds for additional publications required to publicize the new initiatives listed above such as the C&I Direct Install Program, the Municipal Energy Audit Program, the Pay-for-Performance Program, and the Schools Energy & Education Program. NJBIA, Chamber of commerce, NJ AIA, NJ ASHRAE, and NJ League of Municipalities are among those with specialized publications for their memberships where we will include advertising that will reach decision-makers across the state.

Trade Shows

In 2007, NJ SmartStart Buildings was an exhibitor at the EEI National Accounts Workshop, Globalcon, the NJ School Boards Association, the NJ League of Municipalities, the NJ Clean Energy Conference, and the Solid Waste Association of North America (SWANA).

Our 2008 budget allocates exhibiting funds for these shows as well as making funds available for becoming a sponsor at these shows in exchange for opportunities to serve as speakers and panelists. For a relatively low marginal cost, this dramatically increases the program’s visibility and the direct knowledge of participants at these shows.

New funding is also included for additional state, regional, and local opportunities such as the NJ Restaurant Association, NJ Hospital Administrators, NJ ASHRAE, NJ AIA (state and local chapters) and NJBIA. We have also reserved a smaller pool of funds to allow for outreach efforts as unanticipated opportunities present themselves where we can attend with tabletop displays, distribute collateral materials, and network with decision makers

Appendix A: 2007 Marketing Activity Plan

and trade allies involved in commercial and industrial building construction activities throughout the state.

Direct Marketing

New activities using direct mail and e-mail blasting are planned for 2008 as a primary strategy for raising awareness of the new initiatives. We have also included funds for direct mail in support of our trade show schedule where we expect to distribute pre-show mailers to anticipated/previous show attendees encouraging them to stop by our booth and discuss their planned construction projects with our experts. This is a successful cost-effective tactic already used by most private trade show exhibitors.

Collateral Materials

The Clean Energy Program produced a series of brochures in 2007 including the broad category of programs available for Commercial/Industrial and Municipal buildings. The 2008 budget provides for additional, very focused collateral that will describe the programs in considerable detail for our target markets. This includes existing offers such as incentives for premium-efficiency equipment and design support along with new initiatives that describe the Direct Install Program for small C&I customers, the Pay-for-Performance program directed at large customers, and the launch of the Municipal Energy Audit Program.

Also, in support of the design community's need for cutting-edge energy efficiency solutions, we have allocated funds for a wide range of case studies. These will allow us to highlight projects of interest that will serve to inspire the trade ally base. Additionally, nationwide experience has shown that owners are much more likely to use proven technologies backed by case studies rather than being the "first on the block" to try something. Photography is expected to be an important part of the funding for these case studies which will also become part of the NJ Clean Energy website's library.

Public Relations

There will be a ramp-up of public relations activities in 2008, both to account for generating editorial copy in appropriate publications throughout the state (especially for the new initiatives) and to manage new opportunities for BPU Commissioners' appearances to distribute incentive checks to high-profile projects (and coordinate photo releases to the publications for each event).

In addition, we intend to launch and manage a new website forum where the Architect and Engineering Community can contribute their additional case studies on innovative energy efficiency technologies and solutions that they have designed for their clients. Direct mail will be deployed to announce the new website platform and to encourage the design community's contributions and reference to the site when searching for innovative approaches to current projects.

Program Management

The 2008 budget also includes continued funding for planning and implementation of the marketing communication campaigns and ongoing coordination with the activities of the NJ Clean Energy Marketing and Communications Committee, the Annual Awards Conference Committee, and other Clean Energy Programs. Specific labor categories include:

Appendix A: 2007 Marketing Activity Plan

- Creative Design and Production
- Account Coordination and Media Management
- Strategy, Planning, and Reporting
- Website Support
- Outreach Support
- Market Research Support

Appendix A: 2007 Marketing Activity Plan

Budget

Category/Task	2008 Budget
Creative Design & Account Management	
Collateral Material	\$40,000
Trade Show Exhibit Booth	\$5,000
Trade Publication Advertisements	\$20,000
E-mail Blasts	\$5,000
Forms & E-Forms	\$12,000
Website Pages	\$0
Account Coordination & Job Traffic	\$14,000
Website Maintenance	
Updates & Revisions	\$20,000
NJ SmartStart Hosting	\$0
Program Management	
Marketing Plan Development/Updates	\$8,000
Program Administration & Reporting	\$10,000
NJCEP Website Integration Project Support	\$0
NJCEP Market Research Project Support	\$6,000
Media Outreach & Public Relations	\$30,000
Trade Show & Event Attendance	\$10,000
Management Contingency	\$7,000
Collateral Material	
Printing	\$35,000
Overnight Delivery	\$1,000
Photography for Case Studies and Brochures	\$25,000
Giveaways	\$5,000
Trade Publication Advertising	
Media Placement	\$200,000
Photography	\$10,000
Trade Shows & Events	
Globalcon	\$2,000
EEI National Accounts	\$12,000
League of Municipalities	\$9,000
NJ School Boards Association	\$9,000
SWANA	\$2,000
NJBIA	\$2,000
NJ AIA	\$2,000
NJ Clean Energy Conference	\$2,000
Trade Show Sponsorship Opportunities	\$30,000
Trade Show Contingency	\$10,000
Pre-Show Direct Mail	\$25,000
Direct Marketing	
Direct Mail - Municipalities	\$10,000
Direct Mail - Small C&I	\$25,000
Direct Mail - Large C&I	\$25,000
Direct Mail - Trade Allies	\$25,000
E-Mail Campaigns	\$8,000
Promotional Contingency	<u>\$10,000</u>
Grand Totals	<u>\$671,000</u>

Appendix A: 2007 Marketing Activity Plan

The following tables summarize the 2008 Marketing Budget by Commercial & Industrial Program for the TRC Market Manager Team. Table 1 reflects marketing activity broken out for each Program - New Construction, Existing Building Retrofit, Schools Construction and CHP; allocated per contract amounts; and split into fixed and variable components. Table 2 provides further detail of specific marketing activities that will take place during the year.

Table 1:

TRC - Commercial & Industrial Market Manager 2008 Marketing Budget		
New Construction:		
Fixed	\$ 15,263.16	
Variable	<u>\$ 39,799.10</u>	
		\$ 55,062.26
Existing Building Retrofit:		
Fixed	\$ 99,740.64	
Variable	<u>\$ 260,076.40</u>	
		\$ 359,817.04
Schools Construction:		
Fixed	\$ 11,896.56	
Variable	<u>\$ 31,020.60</u>	
		\$ 42,917.16
CHP:		
Fixed	\$ 23,990.28	
Variable	<u>\$ 62,555.30</u>	
		\$ 86,545.58
Muni/Local Government Audit:		
Fixed	\$ 3,191.76	
Variable	<u>\$ 8,322.60</u>	
		\$ 11,514.36
Direct Install:		
Fixed	\$ 12,767.04	
Variable	<u>\$ 33,290.40</u>	
		\$ 46,057.44
Pay for Performance		
Fixed	\$ 19,150.56	
Variable	<u>\$ 49,935.60</u>	
		\$ 69,086.16
TOTAL TRC:		
Fixed	\$ 186,000.00	
Variable	<u>\$ 485,000.00</u>	
		\$ 671,000.00

The following table provides further detail of specific marketing activities that will take place during the year:

Appendix A: 2007 Marketing Activity Plan

Table 2:

2008 Statewide Marketing Activities	
Trade Shows & Events	<p>Description: Participate with the statewide trade show booth at 1) NJ State League of Municipalities, 2) the NJ School Boards Association, 3) Globalcon, 4) NJ Clean Energy Conference, 5) EEI National Accounts, 6) SWANA, 7) NJBIA, and 8) NJAIA. Additional trade show opportunities will be explored. Participate with various professional society's chapter meetings to promote energy efficiency in commercial and industrial construction through the NJ SmartStart Buildings Program.</p> <p>Targeted Audience: Decision-makers with construction and renovating buildings programs and NJ school officials and facility managers</p> <p>Expected Date of Implementation: Jan-Dec 2008</p>
Trade Publication Advertising	<p>Description: Promote energy efficient construction and renovation of commercial and industrial buildings through the NJ SmartStart Buildings Program with a series of print advertisements in decision-maker and influencer publications. Publications include, but are not limited to: Architectural Record (eastern region), GreenSource (a pub of Arch. Rec), Business News NJ, New Jersey Business, Consulting-Specifying Engineer, Construction Data News (CDN Edition and PCN Edition), Distributed Energy, School Leader, School Planning & Management, and School Construction News. Additional advertising will be placed with representative trade association publications in connection with trade shows/conferences.</p> <p>Targeted Audience: Architects, design engineers, contractors municipal administrators, NJ Schools Superintendents and other school officials, developers, and building owners</p> <p>Expected Date of Implementation: Jan-Dec 2007.</p>
Program Materials	<p>Description: Brochures, program folders, and incentive applications are used to both promote energy efficient technologies in commercial and industrial buildings and to facilitate the NJ SmartStart Buildings Program implementation. Collateral Material will be developed and updated; case studies will also be created; targeted pre-show materials will be created/distributed.</p> <p>Targeted Audience: Architects, design engineers, contractors municipal administrators, NJ Schools Superintendents and other school officials, developers, and building owners</p> <p>Expected Date of Implementation: Jan-Dec 2008</p>
Commercial and Industrial Website Support	<p>Description: www.njsmartstartbuildings.com. Includes website maintenance, revisions, support, and email notification to enrolled trade allies. Also updates to on-line applications.</p> <p>Targeted Audience: Architects, design engineers, contractors, municipal administrators, NJ Schools Superintendents and other school officials, developers, and building owners</p> <p>Expected Date of Implementation: Jan-Dec 2008</p>

Appendix B
2008 Program Budgets

Appendix B: 2008 Program Budgets

New Jersey's Clean Energy Program
 C&I Energy Efficiency Program Reporting Categories
 TRC's Proposed 2008 Budget

Program	Final Proposed 2008 Budget	Total Actual NJCEP Expenditures	Admin.and Program Development	Sales, Marketing, Call Centers, Web Site	Training	Rebates, Grants and Other Direct Incentives	Rebate Processing, Inspections, Other Quality Control	Performance Incentives	Evaluation & Related Research
(All numbers 000's)									
RESIDENTIAL EE PROGRAMS									
Residential HVAC-Electric and Gas									
Residential New Construction									
ENERGY STAR Products									
Maintainance									
Room AC									
Change a Light & Other									
On Line Audit									
Home Performance with ENERGY STAR									
Residential Low Income									
Comfort Partners									
DCA Weatherization									
Weatherization Rehabilitation and Assistance									
Preservation (WRAP)									
DCA Green Homes									
Energy Conservation Kits									
Residential Market Manager Transition Costs									
Utility Residential Program Transition Costs									
Sub-Total: Residential	\$0								
COMMERCIAL & INDUSTRIAL EE PROGRAMS									
Commercial/Industrial Construction	\$35,733	\$35,734	\$518	\$458	\$0	\$31,344	\$3,013	\$400	\$0
C&I New Construction	\$4,782	\$4,782	\$76	\$55	\$0	\$4,190	\$338	\$123	\$0
C&I Retrofit	\$27,224	\$27,225	\$316	\$360	\$0	\$24,504	\$1,921	\$123	\$0
New School Construction & Retrofit	\$3,727	\$3,727	\$126	\$43	\$0	\$2,650	\$754	\$154	\$0
Combined Heat and Power	\$10,608	\$10,608	\$32	\$87	\$0	\$10,378	\$111	\$0	\$0
Municipal Audit	\$1,000	\$1,000	\$22	\$20	\$0	\$786	\$162	\$10	\$0
Direct Install	\$4,000	\$4,000	\$324	\$46	\$10	\$3,462	\$118	\$40	\$0
Pay for Performance	\$6,000	\$6,000	\$244	\$69	\$35	\$5,531	\$61	\$60	\$0
Schools Energy and Education Pilot	\$400	\$400	\$38	\$0	\$172	\$162			\$28
C&I Market Manager Transition costs									
Utility C&I Program Transition Costs									
Sub-Total: C&I Programs	\$57,741	\$57,741	\$1,178	\$679	\$217	\$51,663	\$3,465	\$510	\$28
OTHER PROGRAMS									
Special Studies									
Cool Cities									
Treasury HVAC									
Sub-Total: Other EE Programs									
TOTAL Energy Efficiency Programs									

Appendix C
2008 Performance Incentives

Overview

The Market Manager RFP indicated that winning bidders would be eligible to earn financial incentives for good performance. However, the specific goals articulated in the RFP were only appropriate in the program context in which they were developed (i.e. for the programs as they existed in 2005). A revised set of goals was established, filed and approved by the Board of Public Utilities for 2007. This Appendix presents an updated performance incentive structure and goals for 2008.

Incentive Levels

The maximum total dollar values of the financial incentives that TRC would be eligible to receive for its first year performance were established in the Market Manager RFP. Those values were used for our 2007 filing. For 2008, as provided for in the RFP, we have used the values in the Market Manager RFP, adjusted up by 3% to account for inflation between 2007 and 2008. The resulting maximum value of 2008 performance incentives is \$365,650 for commercial & industrial efficiency programs.

Incentive Structure

Sixty-seven percent (67%) of the total incentive dollars are allocated across program goals related to lifetime electricity savings (MWh) and lifetime gas savings (Dth) to which all programs contribute. The remaining 33% are allocated to a variety of individual program goals for both existing commercial & industrial programs, and new initiatives that are being launched in 2008.

We have proposed a set of minimum requirements necessary to earn *any* performance incentives. Those minimum requirements apply at the sector level. That is, if any of the minimum requirements for the commercial & industrial efficiency programs are not met, no performance incentives can be earned.

Performance Goals

All goals are expressed as 2008 calendar year goals; savings between January 1, 2008 and December 31, 2008 count toward goal achievement. Savings will be calculated on completed projects which have been invoiced by the Market Manager to the Office of Clean Energy during this period. Efficiency savings are based on the algorithms in the Protocols to Measure Resource Savings that have been approved by the Board.

The goals for efficiency and renewable programs, as negotiated with the Office of Clean Energy, were based largely on past program experience in New Jersey, with adjustments made to account for significant changes in either market conditions or program design. Limited active marketing activity took place in 2006 and early 2007. With TRC fully transitioned as Market Manager and marketing activity underway, we are working to reverse the trend of a decrease in overall participation in the programs.

Appendix C: 2008 Performance Incentives

Specific commercial & industrial program goals and the performance incentives associated with them are shown in Table C-1.

As shown in Table C-1, the performance incentive will be calculated based on the percentage of achievement as stated in Request for Proposal 06-X-38052 as follows, and shown in the table below:

- “For one hundred to one hundred-nineteen percent (100-119%) of the numerical goal, the award will be sixty percent (60%) of the Performance Incentive listed above.”
- “For one hundred-twenty to one hundred thirty-nine percent (120-139%) of the numerical goal, the award will be eighty percent (80%) of the Performance Incentive listed above.”
- “For one hundred forty percent (140%) or greater of the numerical goal, the award will be one-hundred percent (100%) of the Performance Incentive listed above.”

Minimum requirements for the commercial & industrial programs are provided in Table C-2.

Appendix C: 2008 Performance Incentives

Table C-1

Program	Performance Indicator	Lifetime Savings	Maximum Incentive	100% Goal	Maximum Incentive	120% Goal	Maximum Incentive	140% Goal	Maximum Incentive
All	Lifetime Electric MWh Avoided	2,592,480	\$171,490	2,592,480	\$102,894	3,110,976	\$137,192	3,629,472	\$171,490
All	Lifetime Gas DTH Avoided	1,419,996	\$73,496	1,419,996	\$44,098	1,703,995	\$58,797	1,987,994	\$73,496

Program	Performance Indicator	2008 Goal # of units	Maximum Incentive	100% Goal	Maximum Incentive	120% Goal	Maximum Incentive	140% Goal	Maximum Incentive
NC & Schools	Approved Applications	107	\$20,000	107	\$12,000	128	\$16,000	149	\$20,000
Existing Construction	Completed Jobs	2,067	\$60,664	2,067	\$36,398	2,480	\$48,531	2,894	\$60,664
CHP	Deliver Program	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pay for Performance	Approved Energy Reduction Plan	20	\$15,000	20	\$9,000	24	\$12,000	28	\$15,000
Direct Install Program	Completed Installations	500	\$15,000	500	\$9,000	600	\$12,000	700	\$15,000
Municipal Audit Program	Review and Process Audits	100	\$10,000	100	\$6,000	120	\$8,000	140	\$10,000

Table C-2

Table C-2: Minimum Requirements for Receiving Commercial/Industrial Efficiency Performance Incentives

Program	Performance Indicator	Minimum Performance Threshold
All	Lifetime Electric MWh Avoided	2,073,984
All	Lifetime Gas Dth Avoided	1,135,997
New Construction/Schools	Approved Applications	85
Existing Construction	Completed Jobs	1,654