



**New Jersey's Clean Energy Program  
2010 Program Descriptions and Budget**

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



**2010 Revised Program & Budget Filing  
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# New Jersey's Clean Energy Program 2010 Commercial & Industrial Programs Descriptions and Budget

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# **New Jersey's Clean Energy Program 2010 Commercial & Industrial Programs Descriptions and Budget**

## **Introduction**

This 2010 Filing provides program descriptions and budgets for programs managed by TRC, the Commercial and Industrial (C&I) Energy Efficiency Market Manager who took over management of the C&I Programs from the seven electric and natural gas utilities effective April 1, 2007.

The following are program descriptions, marketing plans and program budgets for 2010. Included in the program descriptions are annual goals for each program and planned program implementation activities.

**Appendix A** - 2010 12-Month Marketing Activity Plan

**Appendix B** – 2010 Clean Energy Conference

**Appendix C** - C&I Market Manager Budgets

**Appendix D** - Performance Incentives

## 2010 C&I Programs

### General Overview

New Jersey's Commercial & Industrial (C&I) Energy Efficiency Program, which is marketed as *New Jersey SmartStart Buildings*, is the umbrella name for seven individual program components for targeted commercial and industrial market segments: 1) New Construction, 2) Retrofit, 3) Pay for Performance New Construction, 4) Pay for Performance, 5) Local Government Energy Audit, 6) Direct Install, and 7) TEACH (collectively "*SmartStart Programs*" or "Programs").

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

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

Please note, based on discussions with Board Staff, the C&I Schools New Construction and Retrofit Program has been eliminated as a stand-alone program. Eligible entities can receive equivalent services through either the C&I New Construction or C&I Retrofit Programs. In addition, Pay for Performance New Construction Program is no longer included as part of the C&I New Construction Program and is a stand-alone program for 2010.

The *SmartStart* Programs are designed to:

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

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

- Unfamiliarity or uncertainty with energy efficient building technologies and designs;
- Bias toward lower first cost versus operating costs;
- Compressed time schedules for design and construction;

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

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

- Program emphasis on customer-initiated construction and equipment replacement events that are a normal part of their business practice.
- Coordinated and consistent marketing to commercial and industrial customers, especially large and centralized players, such as national/regional accounts, major developers, etc.
- Consistent efficiency and incentive levels for efficient electric and gas equipment and design practices to permanently raise efficiency levels.
- Prescriptive incentives for pre-identified energy-efficient equipment and custom measure incentives for more complex and aggressive measures to permanently raise the efficiency levels of standard equipment.
- Design support and technical assistance for developers and their design teams for new construction and renovation projects.
- Specialized technical assistance for small commercial customers and educational institutions.
- Technical support for newly enacted commercial energy code, including training in energy code requirements.

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

**Existing Program Incentive Caps:**

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

Pay for Performance Program (P4P) - \$1 million per electric meter and \$1 million per natural gas meter per year. An additional \$1 million is available for entities that include a CHP system as part of their Energy Reduction Plan and installed measures.

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

Direct Install – Project incentive cap of \$80,000. Direct Install participants will also be held to an annual entity cap of \$250,000 per entity. The signed Scope of Work Agreement will be the milestone used to determine proximity to the entity cap.

**Entity Caps:**

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

**Annual Entity Cap:**

An annual entity cap of \$4 million per entity, per year, or \$5 million per entity, per year if the project(s) includes installation of a CHP project, shall be established through December 31, 2010. Projects developed by the State of New Jersey Office of Energy Services shall be exempt from any entity caps.

**Entity Cap “year”:**

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

Incentives received under the Direct Install, Retrofit, New Construction and Pay for Performance Programs count toward the annual incentive cap. Incentives received under The Local Government Energy Audit or TEACH Programs do not count toward annual incentive caps.

Furthermore, non-profits are defined as organizations that are exempt from taxation under Section 501 (c) (3) of the Internal Revenue Code.

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

In addition to the existing Commercial & Industrial Energy Efficiency Programs, the Board recently approved a number of other initiatives including programs run by New Jersey's investor-owned utilities as well as management of American Recovery and Reinvestment Act (ARRA) funding which will supplement existing Clean Energy Programs. TRC will process applications and provide general support for these initiatives that impact the Commercial & Industrial Energy Efficiency Programs.

TRC will also coordinate with Honeywell, the Residential Market Manager, in regard to the Community Partners Initiative. This coordination will include providing the appropriate message(s) and collateral material to Honeywell staff for delivery to the business community, or support in delivery of the message, relative to the C&I Energy Efficiency Programs available to meet this market's efficiency needs.

## **New Construction and Retrofit Programs**

### **Program Description**

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

### **Target Markets and Eligibility**

The C&I New Construction and C&I Retrofit Programs target commercial, educational, governmental/institutional, industrial, and agricultural customers engaged in customer-initiated construction events including public schools construction, other new building construction within designated Smart Growth areas, renovations, remodeling, equipment replacement, and manufacturing process improvements. The Program offers incentives and technical support for both existing buildings and new construction. To be eligible, new construction projects must be located within Smart Growth areas as defined by maps found at <http://www.nj.gov/dca/divisions/osg/docs/smartgrowthareamap.pdf> and described in NJAC 14:3-8.2. In addition, the Program offers incentives and technical support for new construction in areas where the cost of a service extension may be allowed, as provided for in NJAC 14:3-8.8. “Exemptions from cost limits on areas not designated for growth” as these rules now specify or as they may be amended in the future. In addition, the Program may be used to address economic development opportunities and transmission and distribution system constraints.

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

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

- Prescriptive Efficiency Measure 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 measures include:
  - Electric Chillers
  - Natural Gas Chillers
  - Unitary HVAC (Heating, Ventilating, Air Conditioning) Systems
  - Ground Source Heat Pumps (Geothermal)
  - Gas Fired Boilers
  - Gas Furnaces
  - Variable Frequency Drives
  - Gas Fired Water Heating
  - Gas Fired Water Booster Heating
  - Premium Efficiency Motors
  - Compressed Air Systems



- Prescriptive Lighting
  - Performance Based Lighting
  - Custom Measures
  - Multiple Measure Bonus
- Custom Measure Incentives for more complex and aggressive efficiency measures. For 2010, a new process for calculating custom measure incentives is being implemented. This entails a performance-based approach for custom equipment with a set value of incentives for electric and gas energy savings projects while including a commissioning component. Eligible electric and gas measures include lighting systems, HVAC systems, motor systems, large boiler systems, gas-engine driven chillers and other non-prescriptive measures proposed by the customer. More details regarding this process can be found later in this document in the section entitled “C&I Construction Program Incentives”.
  - 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, lighting 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-contracting services. In addition, technical assistance and incentives targeted to small commercial customers will be provided.
  - Energy Code Technical Assistance to help customer and trade allies understand the requirements of the state’s new commercial energy code, and assist 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.

Customers should submit an Application for the type of equipment they have chosen to install. The application should be accompanied by a related worksheet, where applicable, and a manufacturer's specification sheet for the selected equipment. (Program representatives will then review the application package and approve it, reject it, and/or advise of upgrades to equipment that will save energy costs and/or increase the incentives.)

## C&I New Construction

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

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

**Smart Growth Eligibility:** Customers or their trade allies can assess if a location is in a designated growth area by using a two-step process. First, use the Smart Growth Locator available from the HMFA website: [http://sgl.state.nj.us/hmfa/hmfa\\_locator.htm](http://sgl.state.nj.us/hmfa/hmfa_locator.htm) to locate the property. 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.

Comprehensive Design incentives and support, including building simulation, are available to architects and engineers to encourage the consideration and use of integrated design approaches that provide additional, synergistic energy savings. The comprehensive design incentives cover a portion of the incremental cost for additional energy efficient design services over the base cost of building design.

### Schools

“Schools” will no longer be a stand-alone offering but entities in this sector will submit applications under either the C&I New Construction, C&I Retrofit Program, Pay for Performance or Direct Install Programs, depending on the nature of the work. Incentives are offered to K-12 schools throughout New Jersey (public schools are not limited to the Smart Growth and “Designated growth areas”) and the Program will continue to provide 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 LEED.

- No incentives are currently provided to offset costs associated with LEED registration.
- Financial incentives are provided for: a) the technical studies on a cost shared basis and b) for qualified equipment.

## **C&I Retrofit**

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

### Regional and National Initiatives

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

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

The table below lists existing 2009 statewide incentives for the C&I New Construction, and C&I Retrofit program components and, where noted, changes that will take place for 2010. The incentives vary by size, technology and efficiency level and will be paid based on specific eligibility requirements. The program offers both design support incentives and custom measure incentives.

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

Starting in 2010, a new process for calculating custom measure incentives is being implemented. The Custom Screening Tool will be eliminated and the Program will provide a set level incentive for electric and gas savings. This process is more of a performance-based approach for custom equipment. Established incentive caps for the 2010 program will be the lesser of a set value of \$0.16/kWh and \$1.60/therm based on estimated annual savings, 50% of total installed project cost or a buy down to a one-year payback. Eligible projects must have a minimum first year energy savings of 75,000 kWh for custom electric projects or 1,500 therms for custom gas projects. A customized set of Microsoft Excel-based forms will be required for all projects. These forms will summarize the critical components of the custom measure including a detailed description of the technology, installed cost, and projected savings. Upon project completion, additional documentation will be required to confirm that the measures were installed as proposed and that any changes during constructions are reflected in the final savings values. As will be clearly described in the Program forms, certain measures may require post-installation metering, trending analysis, and/or the installing contractor's Statement of Substantial Completion. The evaluation of custom measure applications will include cost effectiveness calculations to assess Internal Rate of Return (IRR) and project payback with and without

incentive. Baseline for custom retrofit projects will be existing conditions, however the custom measure must exceed ASHRAE 90.1-2004 standards by at least 2% where specific guidelines exist. In cases where ASHRAE guidelines do not apply, the Program will require that custom measures exceed industry standards per the Consortium for Energy Efficiency (CEE), EPA Energy Star, and/or others. New construction/gut-rehab projects will use ASHRAE 90.1-2004 as the baseline for estimating energy savings.

TRC will provide contractors with Program spreadsheets that include standard formats for reporting Program savings as well as standard incentive and IRR calculations.

Inspection protocols for custom measure projects in 2010 will require 100% pre & post inspections for projects with an estimated incentive equal to and above \$25,000. Inspections for projects with incentives below \$25,000 will be sampled at random.

Technology Classification	2009 Current Incentive	Proposed 2010 Incentive
<b>Technical Assistance and Design Support Incentives:</b>		
Technical Assistance – Specialized Technical Study Incentive for industrial process improvements, chiller plant optimization and compressed air projects.	Cost share of the technical study on a 50%/50% basis, not to exceed \$10,000	No Change
Pre-design planning session	\$1,000	No Change
Design simulation and screening	\$5,000 or more, depending on the size of the building	No Change
Incorporation of energy efficiency measures into the Final Design	\$5,000 depending on the measures included (\$2,500 for lighting, \$2,000 for HVAC, \$500 for motors)	No Change
<b>Custom Measure Incentives:</b>		
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.	Performance incentives of \$0.16/kWh and \$1.60/therm of first year savings – or buy down to 1-year payback – based on estimated savings Minimum of 75,000 kWh or 1,500 Therms saved annually required. Projects must have an IRR of 10% or greater
<b>Qualifying Equipment Incentives: (no incentive shall exceed the non-installed cost of the measure)</b>		
<b>Electric Chillers:</b> <i>Note A - See application for changes in efficiency requirements to comply with ASHRAE 90.1-2004 Also, chiller full and part-load efficiencies are determined in accordance with A.H.R.I. Standard 550/590-2003. Refer to electric chiller incentives in table below.</i>		

## Electric Chillers Efficiency Levels and Incentives\*

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

Water Cooled Chillers	\$12 - \$170 per ton depending on size and efficiency	No Change
Air Cooled Chillers	\$8 - \$52 per ton depending on size and efficiency	No Change
<b>Natural Gas Chillers:</b>		
		<i>Refer to Note A above</i>
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
<b>Unitary HVAC Systems:</b>		
		<i>Refer to Note A above</i>
Unitary AC and Split Systems		No Change
< 5.4 tons	14.0 SEER, Up to \$92/ton	
≥ 5.4 to < 11.25 tons	11.5 EER, Up to \$73/ton	
≥ 11.25 to < 20 tons	11.5 EER, Up to \$79/ton	
≥ 20 to 30 tons	10.5 EER, Up to \$79/ton	

<b>Technology Classification</b>	<b>2009 Current Incentive</b>	<b>Proposed 2010 Incentive</b>
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	Up to \$81/ton for qualifying equipment	No Change
Occupancy Controlled Thermostats for Hospitality / Institutional Facilities	Incentives offered as a Custom Measure	\$75/per occupancy controlled thermostat
<b>Ground Source Heat Pumps:</b>		<i>Refer to Note A above</i>
Open Loop & Closed Loop ≥ 16 EER	Up to \$370 per ton, Energy Star rated equipment only	≥ 16 EER up to \$450 per ton ≥ 18 EER up to \$600 per ton ≥ 20 EER up to \$750 per ton Energy Star rated equipment only
<b>Gas Fired Boilers:</b>		
< 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

<b>Technology Classification</b>	<b>2009 Current Incentive</b>	<b>Proposed 2010 Incentive</b>																
<b>Gas Furnaces</b>																		
≥ 90% AFUE	Up to \$300 per furnace	Increase standard from ≥ 90% AFUE to ≥ 92%																
≥ 92% AFUE, with ECM	\$400 per furnace	No change																
<b>Variable Frequency Drives (HVAC):</b>																		
Variable Air Volume (add on to existing VAV HVAC systems only)	\$65 - \$155 per hp	No Change																
Chilled Water Pumps	Up to \$60 per hp	No Change																
Air Compressors with VFD's	Incentives will be paid as a Prescriptive Measure based on specific eligibility requirements. Available incentives are to be paid in accordance with the information below: <table border="0" style="margin-left: 20px;"> <thead> <tr> <th><b>Installed HP</b></th> <th><b>Incentive</b></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>&gt; 250</td> <td>Up to \$12,500</td> </tr> </tbody> </table> Refer to Application and/or website for standards that apply to these measures	<b>Installed HP</b>	<b>Incentive</b>	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
<b>Installed HP</b>	<b>Incentive</b>																	
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																	
<b>Gas Fired Water Heating:</b>																		
≤ 50 gallons ≥ 0.62 energy factor	Up to \$50 per water heater	No Change																
≥ 82% energy factor	No incentive	\$300 per tankless water heater																
> 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																



Technology Classification	2009 Current Incentive	Proposed 2010 Incentive
<b>Gas Fired Water Booster Heaters:</b>		
≤ 100 MBH	Up to \$17 per MBH	No Change
> 100 MBH	Up to \$35 per MBH	No Change
<b>Premium Efficiency Motors:</b>		
Fractional (< 1 HP) Electronic Commutated Motors (ECM)	Treated under Custom Measure path	\$40 per ECM for replacement of existing shaded-pole motor in refrigerated/freezer cases
Three phase motors	Follows the Regional MotorUp Program Incentive Schedule (below)	No Change

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

<b>Qualifying Premium Motor Efficiencies and Incentives</b>									
<b>Premium Motor Incentives</b>					<b>Premium Motor Incentives</b>				
<b>Open Drip-Proof (ODP)</b>					<b>Totally Enclosed Fan-Cooled (TEFC)</b>				
Size	Speed (RPM)			Custom Incentive (\$/Motor)	Size	Speed (RPM)			Custom Incentive (\$/Motor)
	1200	1800	3600			1200	1800	3600	
HP	NEMA Nominal Efficiency			HP	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	2009 Current Incentive	Proposed 2010 Incentive
<b>Prescriptive Lighting:</b>		
<p>T-5 and T-8 lamps with electronic ballast replacing T-12 lamps</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. Electronic ballast replacement necessary for all eligible delamped fixtures. Eliminate 75 kW threshold for prescriptive lighting</p> <p>No incentives for new construction or complete renovation. Complete renovation is defined as 100% fixture replacement for the space involved.</p>	<p>\$15 per fixture for T12 to T8/T5 (1-4 lamps) retrofit</p> <p>\$10 per fixture for T8 to reduced wattage T8 (28W/25W 4') (1-4 lamps) retrofit – requires lamp and ballast replacement</p> <p>No Change</p>
<p>Permanently De-lamp Fixtures and Add Reflectors as long as changing to a more efficient lighting system.</p>	<p>\$20 per fixture. Refer to application for details</p> <p>Incentives for de-lamped T-8 lamps with new reflectors are available only for fixtures with a Total Harmonic Distortion of <math>\leq 20\%</math>. Electronic ballast replacement required for all eligible de-lamped fixtures. Eligible de-lamping can include reduction in linear lamp feet from existing conditions. For example, 1-8' linear fluorescent lamp can be considered as 2-4' linear lamps. U-bend lamps 4' in total length can be considered as 2-F17/T8 lamps. For clarification, this \$20 per fixture incentive applies to T-8 to T-8 replacement with permanent delamping and adding new reflectors which results in a more efficient lighting system with maintained light levels.</p>	<p>No change</p>

Technology Classification	2009 Current Incentive	Proposed 2010 Incentive
Permanently De-lamp fixtures, continued	\$30 per fixture for the retrofit of T-12 to T-8 technology with permanent delamping adding new reflectors.	No Change
LED Exit Signs (New Fixtures Only)	\$20 per fixture with facility demand less than 75 kW; \$10 per fixture with facility demand greater than 75 kW	No Change
Hard-wired compact fluorescent surface mounted fixtures (New Fixtures Only). Must be pin based	UP to \$25 per 1 lamp fixture Up to \$30 per 2 or more lamp fixtures	No Change
Screw-in PAR 38 or PAR 30 Compact Fluorescent Lamp (CFL) with Aluminum Reflector replacing existing incandescent fixtures. Lamps must be warranted by the manufacturer for 8,000 hours, THD < 33% and BF > 0.9	\$7 per lamp replaced	No Change
Hard-wired compact fluorescent recessed fixtures (New Fixtures Only, must be pin based technology with THD of < 33% and BF > 0.9)	Up to \$25 per 1 lamp fixture Up to \$30 per 2 or more lamp fixtures	No Change
Metal Halide w/ pulse start ballast, for fixtures > 150 watts	\$25 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	Incentives will be paid as a Prescriptive Measure based on specific eligibility requirements. <ul style="list-style-type: none"> <li>• T-5 or T-8 fluorescent fixtures replacing 1000 Watt or greater HID, T-12 fluorescent, or incandescent fixtures: \$284.00 per fixture removed.</li> <li>• T-5 or T-8 fluorescent fixtures replacing 400 - 999 Watt HID, T-12 fluorescent, or incandescent fixture: \$100.00 per fixture removed.</li> </ul>	No Change

Technology Classification	2009 Current Incentive	Proposed 2010 Incentive
	<ul style="list-style-type: none"> <li>• T-5 or T-8 fluorescent fixtures replacing 250 - 399 Watt HID, T-12 fluorescent, or incandescent fixture: \$50.00 per fixture removed.</li> </ul>	
<p>T-5 and T-8 Fixtures replacing 75 – 250 Watt HID fixture</p>	<ul style="list-style-type: none"> <li>• T-5 or T-8 fluorescent fixtures replacing 175 to 249 Watt HID fixture: \$43.00 per fixture removed.</li> <li>• T-5 or T-8 fluorescent fixtures replacing 100 to 174 Watt HID fixture: \$30.00 per fixture removed.</li> <li>• T-5 or T-8 fluorescent fixtures replacing 75 to 99 Watt HID fixture: \$16.00 per fixture removed.</li> </ul> <p>The current requirement for one to one replacement will be eliminated</p> <p>Refer to Application and/or website for standards that apply to these measures</p>	<p>No Change</p>
<p>New Construction and Complete Renovation</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>Induction Lighting Fixtures Retrofit of HID</p>	<p>Treated under Custom Measure path</p>	<p>\$50 per HID (<math>\geq 100W</math>) fixture retrofitted with induction lamp, power coupler and generator. Replacement unit must use 30% less wattage per fixture than existing HID system.</p>
<p>Replacement of HID</p>	<p>Treated under Custom Measure path</p>	<p>\$70 per HID (<math>\geq 100W</math>) fixture with a new induction fixture</p>
<p>Low Bay LED Parking Lot Lighting</p>	<p>\$43 per fixture</p>	<p>No Change</p>
<p>LED Refrigerated/Freezer Case Lighting</p>	<p>No incentive offered</p>	<p>\$42 per 5' LED fixture \$65 per 6' LED fixture Incentive for replacement of fluorescent lighting system in medium or low temperate display cases. Technical requirements of this incentive are listed on the prescriptive lighting application.</p>

<b>Technology Classification</b>	<b>2009 Current Incentive</b>	<b>Proposed 2010 Incentive</b>
<b>Lighting Controls:</b>		
LED Traffic Signal Lamps (conversion of existing intersections only) 8 " Lamp 12" Lamp	\$0 – No incentive offered \$0 – No incentive offered	No Change No Change
LED Pedestrian Signal Lamps (conversion of existing intersections only)	\$0 – No incentive offered	No Change
Occupancy Sensors (Turning fixtures off in Existing facilities only)  Wall Mounted Remote Mounted (e.g., ceiling)	Up to \$20 per control Up to 35 per control	No Change No Change
Day Lighting Dimmers – All facilities Fluorescent Fixtures  HID or Fluorescent Hi-Bay controls	Up to \$25 per fixture controlled. For office applications only, increase to \$50 per fixture controlled Up to \$75 per fixture controlled (HID only)	For office applications only, increase to \$50 per fixture controlled  No Change
Hi-Low Controls - All facilities: Fluorescent Fixtures HID or Fluorescent Hi-Bay	Up to \$25 per fixture controlled Up to \$75 per fixture controlled (HID or Fluorescent Hi-Bay)	No Change No Change

Technology Classification	2009 Current Incentive	Proposed 2010 Incentive
<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 5% below (more efficiency) ASHRAE 90.1.2004 code; incentive cap up to \$30/fixture</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. Incentive cap up to \$30/fixture</p>	<p>No Change</p> <p>No Change</p>
<p>Performance Based Lighting incentives for indoor/outdoor installations (attached to building) – Existing Construction</p>	<p>This classification will be processed under prescriptive lighting incentives. For projects that require Complete Renovation please refer to previous section.</p>	<p>No Change</p>
<p><b>Multiple Measure Bonus:</b></p>		
	<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>Increase to 15%. Bonus will also be available if the multiple measures include lighting and lighting controls.</p>

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

In addition to the qualifying equipment incentives, customers with unique needs will be offered specialized incentives for Technical Assistance Services. Through the Technical Assistance Services component of the program the Market Manager provides technical support matched to the needs and capabilities of commercial and industrial customers. Services may include incentives for detailed energy-efficiency studies for C&I buildings, and incentives for specialized technical studies, such as studies of industrial process improvements, chiller plant optimization projects, and compressed air projects.

In addition, enhanced technical assistance will be provided for customers with greater than 200kW annual demand. This technical assistance could include a walk-through audit which provides a high level assessment of the opportunities as well as an Action Plan with recommendations for moving ahead with energy efficiency improvements.

- Chiller Plant Optimization Incentive is 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 system 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(s). Additional benefits can include a better performing building and improved savings from the ancillary efficiency measures.

The incentive is targeted at C&I customers with chiller plants of 500 tons or more that are in line for replacement, conversion, or in need of additional chiller capacity. Program offerings 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 System Incentives is designed 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 the levels necessary to produce desired levels of market response.

#### **Requirements:**

Technical Assistance Services will be subject to the following requirements:

1. All proposed customer projects require prior review and approval by the Market Manager. This approval will be based on the following: a) only to help customers decide about system improvements (e.g. chiller optimization); b) study will not be used to review application of a particular measure.





specifications that result in a verification of the incentive calculation. A field inspection report is prepared and maintained in the project file for future verification.

### **Budget**

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

### **Minimum Requirements for Program Administration**

Not Applicable.

## **Local Government Energy Audit Program (LGEA Program)**

### **Description:**

The Program provides incentives to subsidize the cost of an energy audit for facilities owned by municipalities or other local government agencies (Agency) as well as New Jersey State Colleges and Universities. For 2010, the LGEA Program will also be open to select non profits. Select non profits include charitable organizations which refer to organizations that are exempt from taxation under Section 501 (c) (3) of the Internal Revenue Code.

The Program is implemented as follows:

1. New Jersey Department of the Treasury has established, based on its review of proposals received in response to its RFP, a list of qualified contractors that are available to contract directly with the participating Agencies to provide energy audit services. The list of contractors includes hourly rates for the provision of energy audit services.
2. The Agency will request proposals from contractors on the approved Treasury list. The solicitation will include a description of the facilities to be audited.
3. Contractors will provide the Agency an estimate of the cost to perform the energy audit based upon the hourly rates provided in response to the RFP. The estimate shall be on a fixed fee basis only. The estimate shall not be, in whole or in part, contingent on any other factors such as shared savings, commissions, or percentages of project costs.
4. The Agency will submit a request for reimbursement for 100% of the estimated cost of the energy audit to the Office of Clean Energy's C&I Market Manager, TRC. Within twelve months of audit approval, the entity must install energy efficiency upgrades identified in the audit. (Upon written request, an extension of up to twelve months may be granted by the Market Manager. Entity must identify the reason for the request and may be required to provide a schedule or documentation such as equipment invoices to demonstrate proof of project advancement.) These installed measures must have a net cost equal to or greater than 25% of the incentive paid or the entity will be obligated to return to the Program 25% of the incentive paid. The customer-funded portion of any measures installed through either the NJCEP Direct Install Program or the PSE&G Direct Install Program will count toward the net cost requirement.
5. The Market Manager will review requests for funding, including scope and cost, and issue incentive commitment letters to applicants that meet program requirements provided that sufficient funding remains available.
6. The Agency will contract directly with the firm they have selected to perform the energy audit.

7. Upon completion of the audit, the Market Manager will review the energy audit report and, provided that all program requirements are met, the Program will reimburse the Agency for a portion of the cost of the energy audit.

Participants in the Local Government Energy Audit Program will be able to take advantage of incentives available under existing New Jersey Clean Energy incentive programs to implement specific measures recommended in the energy audit.

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

### **Target Markets & Eligibility**

This program offers qualifying municipalities and other government agencies, including New Jersey State Colleges and Universities, incentives to subsidize the cost of having an energy audit of their facilities performed. For 2010, this program will be expanded to include select non-profits. Select non-profits are those entities that are exempt from taxation under Section 501 (c) (3) of the Internal Revenue Code.

### **Goals and Energy Savings:**

Goals:

Review and Process 700 Audits (Audit = One Building).

Energy Savings:

Not applicable

### **Quality Control Provisions**

Documented policies and procedures provide proper guidelines to ensure consistency in the processing and quality control for all LGEA Program participants. All applications are reviewed upon receipt to verify adherence to eligibility requirements. Technical information in the energy audit is also verified. Applicant supplied information is entered into the database, and files are created for all documents and ongoing project correspondence. On a random basis, on-site facility inspections are also conducted to verify building and audit data. For 2010, the inspection rate will be reduced from 40% to 20% of audits.

## **Direct Install Program**

### **Background**

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

### **Program Description**

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

### **Target Market and Eligibility**

The Direct Install Program is open to all commercial and industrial customers whose peak demand did not exceed 200 kW in any of the preceding twelve months. 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.

### **Program Offerings and Incentives**

The Direct Install Program provides turn-key services and offers customers a single source of technical assistance, financial incentives and installation services. The Program will be delivered across the state by multiple regional contractors who have been selected via a Request for Proposal (RFP) process to deliver installation and related services. Each contractor has been selected to serve a defined geographic region (e.g., county) of New Jersey. Selected contractors focus on their pre-determined territory and are responsible for promotion of the program, program services, and reporting to TRC on a weekly, monthly and annual basis. The Program has developed comprehensive listings of unit pricing for all eligible equipment. Eligible equipment categories include but may not be limited to:

- Super T8 and T5 Lamp and Ballast Retrofit
- LED Exit Signs
- Commercial CFL Fixtures
- Occupancy Sensors
- VFDs

- 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 are offered to reduce the cost of installing energy efficient equipment and are based on the total installed cost of the retrofits. Qualifying C&I customers are eligible for incentives up to 80% of the installed cost of the approved project with a project incentive cap of \$80,000. Direct Install participants will also be held to an annual entity cap of \$250,000 per entity. Incentives are paid to the installation contractor and the contractor will invoice the customer for the remaining balance of the installation.

Direct Install 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. TRC will review all post-implementation reports and either forward to OCE as approved for payment or send back to the contractor with questions or issues
7. Tracking and reporting on program activity including:
  - a. Customer name, address and contact person
  - b. Customer account number(s)
  - c. Project type (electric, gas, both)
  - d. Business type (SIC or NAICS code)
  - e. Inventory of equipment to be replaced, including quantity, type, location, hours of use
  - f. Estimates of energy (kWh &/or therms) and demand (kW) savings and total project costs
8. Proper disposal of all removed equipment.

## Program Goals

Direct Install Program goals will include the following:

- **Market Transformation:** Expand the awareness and knowledge of energy efficiency among small business owners. Promote the financial and environmental benefits of reducing energy consumption with emphasis on a comprehensive, whole-building approach.  
*Goal:* Expose up to 2,500 small businesses to the financial and environmental benefits of energy efficiency improvements.
  - **Market Penetration/Cost Effectiveness:** Reach significant numbers of small commercial and industrial customers with comprehensive, cost effective scopes of work.  
*Goal:* Complete more than 1,445 installation projects across the State.
  - **Achieve Energy Savings:** Maximize total energy (electric and gas) efficiency opportunities while maximizing the diversity of equipment installed in completed project.  
*Goal:* Annual savings equivalent to approximately 8,000,000 kWh
  - **Expand the Contractor Network / Create Green Collar Jobs:** Program marketing, customer demand, and technical training opportunities will help to develop a workforce under the Participating Contractors of equipment installers who can offer quality installation services and associated technical assistance.  
*Goal:* A network of contractors capable of serving all regions of the State.
- Program Incentives - \$14,064,450
  - External Evaluation – To be provided by the OCE’s external program evaluation vendor.

## Quality Control Provisions

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

## Delivery Methods

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

## **Pay for Performance**

### **Program Description**

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

### **Target Market and Eligibility**

The C&I Pay for Performance Program is open to existing commercial and industrial buildings with peak demand in excess of 200 kW in any of the preceding twelve months. In addition, any multifamily facility which does not meet the eligibility requirements of the New Jersey Clean Energy Home Performance Program is eligible to participate in the Pay for Performance Program. Participants are required to work with an approved Pay for Performance Partner to develop the Energy Reduction Plan and facilitate installation of the recommended package of energy efficiency improvements. In order to receive the full suite of incentives offered in the Pay for Performance Program, the submitted Energy Reduction Plan must include a package of energy efficiency measures that achieve the minimum performance threshold or Energy Target (i.e., 15% of total building source energy consumption). Market Manager reserves the right to consider alternative minimum threshold savings requirement in unique situations. 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.

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

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

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

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

Campus-style facilities are viewed as a single entity that is eligible for Pay for Performance incentives subject to the annual incentive caps of \$1 million per electric account and \$1 million per gas account to the campus. Campus facilities are encouraged to participate in the C&I Sector Specific offering to assist in prioritizing each building for energy efficiency improvements. The Sector Specific offering will provide benchmarking services for all buildings and assist the building owner(s) in developing a multi-year plan for addressing the energy efficiency improvements across the campus. Through this plan, building owners can schedule major building improvement projects over several years to maximize energy efficiency as well as taking full advantage of Clean Energy Program incentives.

Once a set of buildings within a campus is selected to be included in the P4P Program, they will be addressed in a single Energy Reduction Plan (ERP). For administrative purposes of tracking technical reviews and site inspections, each building addressed within this multi-building ERP will be considered a separate project. This is necessary because although a single ERP will include all of the necessary project information, the review of each of the building simulation models will require individual attention. Similarly, site inspections will take considerably longer for multi-building projects as each building will require an inspection. Where applicable, administrative tracking will be associated with any approved sampling of building simulation models (i.e., if a single model is developed to represent several similar buildings).

### **Program Offerings and Incentives**

The Pay for Performance Program has developed a network of Program Partners who can provide the technical, financial, and construction-related services necessary for completing the Energy Reduction Plan. One of the goals of this program is to expand the network of energy efficiency firms that can provide these services in order to make this Program accessible for 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 long-term energy savings targets. The Program has enrollment periods during the year where firms that are interested in becoming Program Partners are required to submit an application, including case studies and resumes showing recent successful



experience and expertise in C&I energy efficiency projects. Applications are reviewed by a technical evaluation panel who will determine if an applicant meets the criteria to become an approved program Partner. Once approved, Partners must attend a program orientation session before being able to bring projects into the Program.

Program incentives are performance-based and not specifically tied to the project cost or the recommended energy efficiency measures. Disassociating incentives from project cost is a key program design decision as it streamlines program administration by eliminating the collection of bid documents, construction contracts and change orders. This incentive structure also provides the benefit of allowing Program Partners to estimate and explain incentives to prospective participants as part of the program sales process. Estimated construction costs as included in the Energy Reduction Plan are reviewed by TRC. Program incentives are capped not to exceed 50% of the total estimated project cost.

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

1. Submittal of a complete Energy Reduction Plan
  - a. Incentive based on facility square footage at 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 estimated level of savings in kWh and/or therms
3. Completion of Post Construction Benchmarking 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 has been developed to offset the cost of services associated with the development of the Energy Reduction Plan. This incentive is based on the square footage of the building(s). TRC has analyzed the relative complexity of conducting a whole building energy audit for various business types and has developed a \$/sq ft value for several types, as appropriate. This incentive is capped at 50% of annual energy cost. This incentive cap assists in limiting incentives for facilities with large square footage but very low energy intensity (e.g. warehouses). Please note, for customers who have successfully participated in the Local Government Energy Audit Program, Incentive #1 related to the Energy Reduction Plan will be reduced by 50% to \$0.05 per square foot up to \$25,000 to recognize the value of the audit provided through the LGEA Program.

Incentive #2a – Installation of Recommended Measures – This incentive is based on a projected energy savings and designed to pay approximately 60% of the total performance-based incentive. A custom approach may be offered to large industrial customers whose annual energy costs are more heavily weighted to manufacturing processes. This approach will be reviewed on a case-

by-case basis. The performance-based incentives to be paid at completion of construction are as follows (designed to be roughly 60% of the total performance-based incentive):

1. Electricity savings from \$0.11/kWh for the minimum 15% savings up to \$0.13/kWh, based on \$0.005/kWh per additional 1% savings.
2. Natural gas savings from \$1.10/therm for the minimum 15% savings up to \$1.45/therm based on \$0.05/therm per additional 1% savings.

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

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

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

Incentive #2b – Post Construction Benchmarking Report – Upon submittal of a Post Construction Benchmarking Report that verifies that the level of savings actually achieved by the installed measures meets or exceeds the minimum performance threshold, the performance-based incentive will be released. The preliminary performance-based incentives are as follows (designed to be roughly 40% of the total performance-based incentive):

1. Annual electricity savings from \$0.07/kWh to \$0.09/kWh based on % savings
2. Annual natural gas savings from \$0.70/therm to \$1.05/therm based on % savings

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

To validate the savings and achievement of the Energy Target, the EPA Portfolio Manager will be used. 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 at least one full year of historical energy use data for the building.
- Document annual energy use during the post-retrofit period. Collect energy consumption data for the 12-month post-installation period.
- Calculate Percent Reduction of Source Energy Use as the difference between baseline and post-retrofit energy consumption as a percentage of the baseline energy consumption (baseline – post retrofit energy consumption / baseline).

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, 60% of the total performance-based incentive will be released. The remaining 40% of the performance-based incentive will be released upon completion of the Post Construction Benchmarking Report which reflects that the minimum performance threshold has been met or exceeded.

There will be no 200kW eligibility requirement for the following types of customers: hospitals, select non profits\*, universities, government entities and affordable multi-family customers (“affordable” as defined as low income, subsidized, HUD, etc.). \*Non profits are defined as organizations that are exempt for taxation under Section 501 (c) (3) of the Internal Revenue Code so that smaller entities in this customer class can take advantage of a whole building approach to energy efficiency.

### **Advanced Measure Incentive – Combined Heat and Power**

Under the Pay for Performance Program, participants are eligible to receive additional financial incentives for Combined Heat and Power (CHP) installations to further enhance energy efficiency in their buildings through on-site power generation with recovery and productive use of waste heat, and reducing existing and new demands to the electric power grid. Energy reductions in kWh and therms associated with the CHP unit cannot be included in meeting the 15% minimum source energy reduction.

Buildings that are already energy efficient, as demonstrated by achieving the ENERGY STAR Building Label, may access the CHP incentives without participating in the Pay for Performance Program. In cases where the building is not eligible for the ENERGY STAR Building designation, the LEED EB approach will be used to determine eligibility, which is a building in the 25<sup>th</sup> percentile level above the national median.

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

#### *Equipment Eligibility*

To qualify for the incentive, customers must install equipment that is sized to meet all or a portion of their on-site load. Only new commercially available permanently installed generating

equipment qualifies for incentives. The following items do not qualify for a CHP Incentive: used, refurbished, temporary, pilot, demonstration, portable, or back-up generation. Systems or equipment that use diesel fuel, other types of oil or coal for continuous operation are not eligible.

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.

**Advanced Incentives for CHP Systems** *(in addition to Pay for Performance 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 TECHNOLOGY AND INCENTIVE LEVELS

<b>Eligible Technology</b>	<b>Incentive (\$/Watt) (Up to \$1.0 Million)</b>	<b>Maximum % of Project Cost</b>	<b>Minimum System Size</b>
Level 1 •Fuel cells not fueled by Class I renewable fuel	\$4.00/Watt	60%	None
Level 2: CHP Powered by Non-Renewable Fuel Source •Microturbines •Internal Combustion Engines •Combustion Turbines	\$1.00/Watt	30% <sup>(1)</sup>	None

Level 2A: CHP Powered by Class 1 Renewable Fuel Source (2)  •Microturbines •Internal Combustion Engines •Combustion Turbines	System			
	<u>Size (kw)</u>	<u>Rebate(3)</u>	40% (4)	None
	<10	\$5.00		
	10-99.9	\$3.75		
	100-499.9	\$2.00		
	500-1,000	\$.65		
Level 3 •Heat Recovery or Other Mechanical Recovery from Existing Equipment Utilizing New Electric Generation Equipment	\$0.50/Watt		30%	None
(1) The maximum percentage of project cost will go to 40% where a cooling application is use or included with the CHP system. (2) New Jersey's Renewable Energy Portfolio Standard N.J.A.C. 14:8 2.5 clearly defines what materials are considered to be Class 1 biomass materials; those materials which are not deemed Class 1 must go through sustainability determination by New Jersey Department of Environmental Protection (NJDEP) to qualify. (3) Rebates are tiered; for example for a 20 kW project the first 10 kW is paid at \$5.00 per watt, and the second 10 kW at \$3.75 per watt. (4) Includes all capital equipment costs associated with: producing and refining biomass feedstock, generating electricity and heat recovery.				

The Market Manager has developed the 2010 Pay for Performance budget to include funding for CHP projects. The current 2010 Pay for Performance budget allocates \$10 million toward CHP related projects. Pay for Performance projects that incorporate a CHP component will be eligible for additional incentive up to \$1,000,000 per Non-Renewable fuel powered CHP project. The CHP budget shown in Appendix B is to accrue funds for the previous year's CHP project incentives only.

In 2010, New Jersey's Clean Energy Program will explicitly provide an incentive for projects fueled by Class 1 biomass resources. The overall CHP incentive cap for a project fueled by Class 1 biomass is increased from 30% to 40% of overall installed costs, with installed costs including all eligible costs defined below. The REIP budget will fully fund any CHP incentive for a Class 1 biomass project. In 2010, this budget is \$6.675 million. In 2010, biopower projects are also eligible for an incentive for a feasibility study, to cover up to 50% of eligible costs. The REIP budget will fund feasibility study incentives. The details of the feasibility incentive will be defined and communicated in early 2010.

*CHP Warranty Requirements*

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

### *Eligible CHP Project Costs*

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

- Combined Heat and Power 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 for CHP Incentives*

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

- Used, refurbished, temporary, pilot, demonstration, or portable equipment/systems.
- Back-Up Generators - systems intended for emergency or back-up generation purposes.
- Any system/equipment that uses diesel fuel, other types of oil 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.

### *Guidelines for Projects that include CHP Systems*

Prior to equipment installation:

- Participants must apply through the Pay for Performance program and submit the required Application Form and the appropriate Technical Worksheet to the Market Manager. In addition to complying with the guidelines established for Pay for Performance, Applications that also include CHP will be evaluated on the basis of the criteria listed below in Evaluation Guidelines. 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. The Market Manager will inspect 100% of the installations prior to issuing the incentive.

- A minimum of seventy-five percent (75%) of the incentive related to the CHP system 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 submit a request for extension in writing. The request must identify the reason for the request, and a schedule that identifies how much extra time is needed to complete the project. Requests for extensions may be granted by the Market Manager for up to one year so long as applicant can demonstrate proof of significant project advancement. This could be in the form of copies of permits, equipment invoices, installation invoices indicating percentage complete, updated project schedules, etc. Any further requests for extension must be presented to the Market Manager for Board staff consideration. In addition, Market Manger reserves the right to conduct an inspection of the project to confirm project advancement. Approval of a request for extension will not change or modify any other program terms and conditions.
- Applicants **must** be contributors to the Societal Benefits Charge fund.

#### *CHP Evaluation Guidelines*

Projects will be evaluated utilizing the criteria established for under the Pay for Performance program and will based on a comprehensive, whole building approach to energy efficiency. As part of the evaluation of the CHP component of the overall project, the following criteria will be reviewed:

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

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

Incentives will be awarded on a case-by-case basis. The Office of Clean Energy has the right to change/modify or discontinue the Advanced Incentive CHP component of the Pay for Performance Program without notice. The program will cease when commitments exhaust allocated 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.

### **Program Goals**

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

- **Market Penetration/Cost Effectiveness:** Reach significant numbers of commercial and industrial customers with comprehensive, cost effective scopes of work.  
**Goal:** Approve at least 46 applications for the Program.
- **Energy Savings:** Maximize total energy (electric and gas) efficiency opportunities through the whole building approach.  
**Goal:** Approve at least 38 Energy Reduction Plans that meet the minimum threshold for energy savings. Approve at least 4 Energy Reduction Plans that include CHP systems.
- **Create Green Collar Jobs:** Continue to expand the number of firms offering comprehensive energy services. Program orientation seminars and associated training opportunities will help to develop a network of Program Partners who can offer a full range of technical, financial, and construction-related services.

### **Program Deliverables**

The Pay for Performance Program will provide the following services:

1. Maintain a pool of Program Partners that can offer Program services and publicize this list to potential participants.
2. Continue to develop new Program Partners as market demand warrants. Provide up to 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. OCE staff will also be invited.
3. Conduct Monthly Partner Conference Calls to present Program updates and discuss any issues that Partners may be encountering.
4. 100% Quality Control review of all submitted Energy Reduction Plans.
5. 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. Pre and/or post inspections are conducted as required.



### *Quality Control for Projects that include CHP Systems*

In addition to the Pay for Performance Quality Control provisions, projects that include CHP systems will be required to meet additional provisions. Each awarded project that includes CHP 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 projects which include CHP systems. The Market Manager may also request additional project information or documentation required to verify the project has met the program requirements based on the original application. If the program requirements have been met, the Market Manager will process a minimum of 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.

- Program Incentives are \$45 million
- External Evaluation – To be provided by the OCE’s external evaluation vendor.

## **Pay for Performance New Construction**

In order to address new buildings in the C&I market more comprehensively, in 2009 TRC developed and is implementing a Pay for Performance New Construction Program. This Program was formerly an enhancement to the existing New Construction Program but based on discussions with Board Staff, for 2010 is a stand-alone offering. The Pay for Performance New Construction Program promotes high performance buildings that achieve 15% or more energy savings than buildings built to the current energy code. By taking a performance-based approach, this Program allows architects, engineers, and energy professionals the flexibility to incorporate energy efficiency into the building design in a manner that best suits the project. Much of the program design and incentive structure is similar to the C&I Pay for Performance Program that is designed for existing buildings.

### **Program Description**

The C&I Pay for Performance New Construction Program takes a comprehensive, whole building approach to energy efficiency in new commercial and industrial buildings. Similar to performance contracting programs offered in other states, this Program links incentives directly to energy savings and includes a measurement and verification (M&V) component to ensure that the estimated savings levels are achieved. This market based- program relies on a network of Program Partners, selected through a Request for Qualifications process. Once approved, Partners will provide technical services to program participants. Partners are required to strictly follow program policy but will work under contract to owners, acting as their “energy expert”. Partners will be required to develop an Energy Reduction Plan for each project. The Energy Reduction Plan details a set of recommended measures that will achieve the performance target. A set minimum performance target will be required of all projects and will be established using a 15% reduction from a reference building based on ASHRAE Standard 90.1-2004 Appendix G. Market Manager reserves the right to consider alternative minimum threshold savings requirement in unique situations. The achievement of this energy reduction goal will be verified using post-construction utility billing data.

### **Target Market and Eligibility**

The C&I Pay for Performance Program is open to new commercial and industrial construction projects with 50,000 sq ft or more of conditioned space that are located in a Smart Growth<sup>1</sup> area.

Location in a SmartGrowth<sup>1</sup> Area –New construction projects will only be eligible for incentives if they are located in areas designated for growth in the New Jersey State Plan. However, the following exceptions do apply:

- The replacement or expansion of buildings in an area not designated for growth, on a single parcel by the current owner who has owned the property for at least one year would be eligible for program incentives, provided that such replacement or expansion

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<sup>1</sup>SmartGrowth areas can be found using the SmartGrowth Locator at the following website:

<http://se1.state.nj.us/hmf/vviewer.htm?LocatorType=1>

will result in structures that, in total no more than double the amount of square footage of the original building prior to expansion, and provided that the original building was built before March 4, 2003. New construction outside an area designated for growth that does not expand or replace an existing structure will remain ineligible for program benefits.

- Municipally owned buildings, hospitals, and/or military facilities in areas not designated for growth are also eligible for program benefits, provided they meet the same requirements noted in the preceding paragraph.

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

Energy cost will be used in the performance threshold calculation. Energy cost is also used by ASHRAE 90.1 2004 Section 1 and Appendix G, EPA Act Federal Tax Deductions, and LEED NC. Pre-approval of the Energy Reduction Plan is required for all projects. Projects that cannot identify efficiency measures that meet the minimum performance 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.

### **Program Offerings and Incentives**

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

Program incentives are performance-based and not specifically tied to the project cost or the recommended energy efficiency measures. Disassociating incentives from project cost is a key program design decision as it streamlines program administration by eliminating the collection of bid documents, construction contracts and change orders. This incentive structure also provides the benefit of allowing Partners to estimate and explain incentives to prospective participants as part of the program sales process. Incentive # 2 and #3 combined will be capped not to exceed 75% of the total project incremental cost.

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

1. Submittal of a draft Energy Reduction Plan, Signed Developer/Partner Contract, 75% of design team's fees paid by developer
  - a. Incentive paid in the amount of \$0.10/ghsf up to \$25,000
  - b. Projects that cannot identify efficiency measures that meet the minimum performance level will be referred to the appropriate SmartStart Buildings Program.
  - c. Incentive is contingent on moving forward with construction.
2. Approval of the proposed Energy Reduction Plan that indicates achievement of a performance target of at least 15% by the proposed design
  - a. Incentive based on project square footage
  - b. Paid at \$0.50/ghsf
3. Approval of the final Energy Reduction Plan confirming a performance target of at least 15%
  - a. For a performance target 15%-17%, incentive paid at \$0.75/ghsf.
  - b. For a performance target 18%-20%, incentive paid at \$0.85/ghsf.
  - c. For a performance target 20% and up, incentive paid at \$1.00/ghsf.

Incentive #1 – Energy Reduction Plan/Contract/Design Fees – This incentive will be developed to offset the cost of services associated with the development of the Energy Reduction Plan and design fees. This incentive will be \$0.10 per gross heated square foot up to a maximum amount of \$25,000.

Incentive #2 – ERP Approval – This incentive will be based on the designed project square footage. The rate will be \$0.50 per gross heated square foot to be paid upon approval of the proposed Energy Reduction Plan.

Incentive #3 –As-Built ERP Approval – This incentive will be based upon confirmation that the building achieved the performance target value indicated in the As-Built Energy Reduction Plan. This incentive will range from \$0.75 - \$1.00 per gross heated square foot, increasing with the percentage of cost reduction achieved. Incentive #3 is payable upon approval of the As-Built ERP, including the Commissioning Report. .

Specifics of the Commissioning Report will be developed during final detailed program design and will draw from existing protocols developed by accredited organizations such as the US Green Buildings Council (USGBC) and the American Institute of Architects (AIA).

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

## Program Goals

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

- Market 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 for new construction projects necessary for developing an Energy Reduction Plan.
- Market Penetration/Cost Effectiveness: Reach significant numbers of commercial and industrial new construction projects with comprehensive, cost effective scopes of work.  
**Goal:** Approve at least 7 applications for the Program.
- Energy Savings: Maximize total energy (electric and gas) efficiency opportunities through the whole building approach.
  1. **Goal:** Approve at least 6 Energy Reduction Plans that meet the minimum threshold for energy savings.

## Program Deliverables

Pay for Performance – New Construction 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. Provide two (2) Energy Modeling Training Sessions for Program Partners related to ASHRAE 90.12004 Appendix G.
4. Conduct Monthly Partner Conference Calls to present Program updates and discuss any issues that Partners may be encountering.
5. 100% Quality Control review of all submitted Energy Reduction Plans.
6. Two On-site inspections per approved Energy Reduction Plan

## Quality Control Provisions

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

### **Program Incentives**

Incentives available under this program are ~ \$3,550,000

### **Program Evaluation**

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

## **Teaching Energy Awareness with Children's Help (TEACH)**

### **Background**

In its September 14, 2006 Order, the New Jersey Board of Public Utilities (the Board) authorized the development and implementation of a pilot K-12 Schools Energy and Education Program formerly referred to as SEEP, and now referred to as Teaching Energy Awareness with Children's Help (TEACH).

### **Program Description**

The TEACH Program provides a range of services described below to educate students, teachers, and staff, while simultaneously enhancing the ability of schools 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 efficiency 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 the TEACH Program, in 2010 approximately 100 schools will be recruited within at least 6-9 school districts. Recruited schools will be benchmarked and provided the Alliance to Save Energy's Green Schools Program (or equivalent Program). This is a national program presently being implemented in several states and it is the nationally recognized standard for energy and environmental education.

### **Target Market and Eligibility**

TEACH targets New Jersey public schools that serve kindergarten through twelfth grade (K-12) populations. New Jersey is home to more than 5,000 K-12 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. TEACH will build on the lessons of the Alliance to Save Energy's Green Schools Program (or equivalent) and TRC's delivery of the Energy Smart Schools Program, offered throughout New York State to deliver a second-generation school energy education/support program across the State of New Jersey.

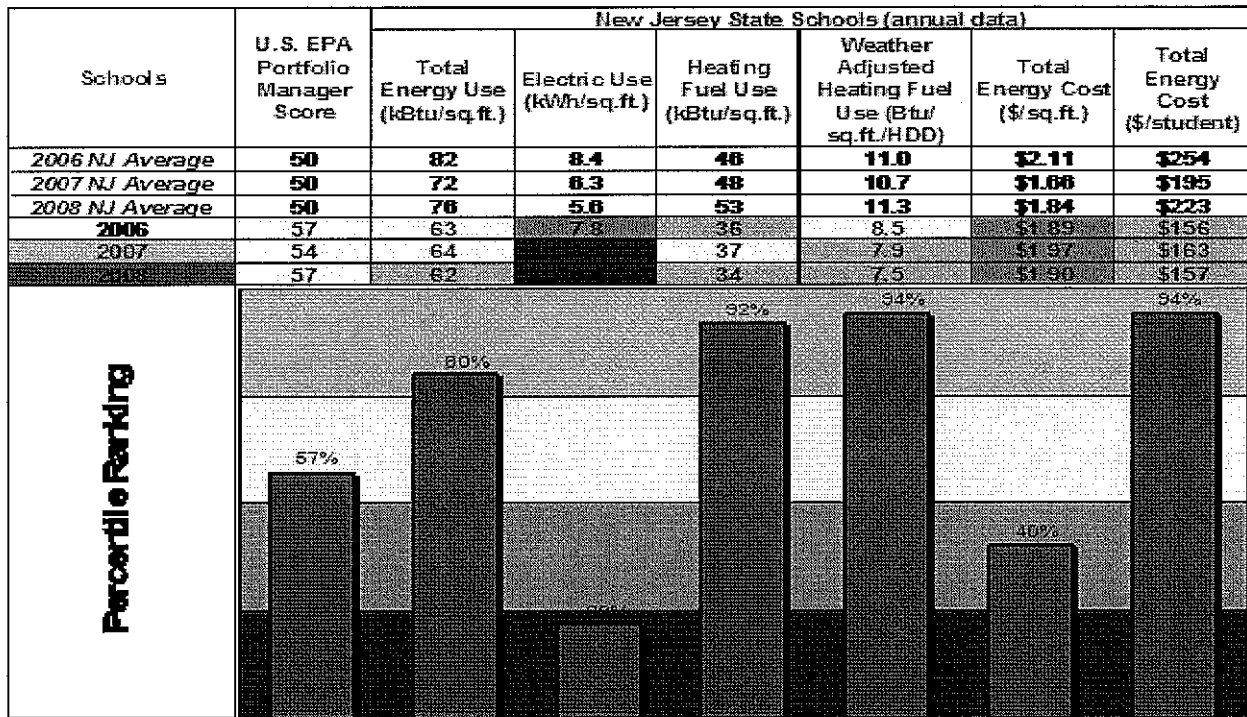
### **Program Offerings and Incentives**

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. 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 TEACH. 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. In addition, TEACH may 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.

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 Jersey Benchmarking Sample Graphic**



For 2010, the TEACH Program will provide a post-program benchmarking report in addition to the initial baseline benchmarking report provided to each participating school. For the post program benchmarking report, TRC will acquire updated building data for one year post the initial benchmarking report plus utility cost and consumption information, data verification, data



entry and analysis and individual school reports. Updated benchmarking reports will be produced after program participation is complete and reflect changes in energy usage for each participating school.

The TEACH Program also provides a range of educational services to the school districts selected to participate. The program provides opportunities for introductory, intermediate, and advanced educational activities for students. The introductory and intermediate activities are provided to the new participating districts through the regular operation of their Green Schools 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 implemented energy saving 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 provides professional development relating to energy and the environment for school personnel. This focused training explains 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. This professional development is important because most teachers may not feel comfortable teaching about energy and energy conservation because they have not been formally trained to do so. Professional development workshops, however, coupled with substantive yet inquiry-based lessons provided by TEACH can quickly overcome their initial feelings of inadequacy and will result in numerous enthusiastic, creative and confident energy educators and energy conservation advocates.

The program staff responds to requests for classroom support and enrichment, such as demonstration lessons on energy issues, impacts, and technologies. The staff provides 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 C&I Market Manager, TRC will continue to conduct active outreach in order to engage school districts in Clean Energy programming.

One type of incentive participating school districts receive through this program is in the form of the professional help and resources that the program staff provide during the operating period of the program. Another type of incentive involves financial savings from reduced energy usage as a result of school-based conservation activities.

Since an overarching goal is to deliver services as widely as possible, web-based information and accessibility is established. This information includes basic program information as well as statewide schools benchmarking statistics and trends, and tools developed during the pilot. Additionally, participants are surveyed regarding their ongoing needs for training, tools, and information. They are asked about already-identified potential services such as a summer training session for teachers and a speaker's bureau. Results of these efforts are incorporated into the evaluation and report, including recommendations for permanent implementation.

## **Program Goals**

TEACH goals and measures of effectiveness 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, TEACH 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 TEACH 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**

TEACH will provide the following services:

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

- Provide each participating teacher and administrator a set of Green Schools Learning Activities (or equivalent) and each participating custodian a set of technical opportunities for improving energy efficiency in schools.
- Provide 100 (one per school) *Green School Tool Kits* of professional energy instruments for use by students (or equivalent).
- 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*, (or equivalent )
- Conduct a mid-year professional development workshop for each team that begins its work in the fall of 2010. Provide technical assistance during the initial professional development workshops on best practices for energy efficiency in schools.
- 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.
- Conduct, or assist Green Schools Teams as needed in conducting, end-of-the-year student celebrations in each participating district.
- Calculate the financial savings for each Green School, including each school's earned refund.

### **Delivery Methods**

TEACH 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. TRC envisions selecting one firm, via a request for proposal (RFP) process to deliver the energy education portion of TEACH.

## **Sector Specific Program Enhancement**

### **Background**

The goal of the sector-specific initiative is to achieve greater energy efficiency awareness and energy efficiency program participation using a sector-based approach for higher education, multifamily, healthcare, hospitality and industrial buildings. For 2010, we are opening this initiative up to the commercial sector as well with a focus on chain accounts, commercial real estate companies, and data centers. Sector-based program delivery makes it easier for customers to access specific programs, services, products and technologies, training, and educational materials that are relevant to them; contractors and other allies to help them achieve their energy reduction goals, and trade organizations and other associations for further support. TRC, as OCE C&I Market Manager, will develop programmatic strategies that resonate for each of the sectors, resulting in actions that make their new or existing facilities more energy efficient. Strategies being implemented include, but are not limited to: benchmarking, development of targeted marketing materials and messages, one-on-one interaction, training, development of informational resources and tools, leveraging partnerships with trade associations, integration with regional and national efforts, recognition of sector leaders, as well as guidance for customers in using the existing NJ Clean Energy programs and services. Sector-specific services are provided under the existing SmartStart and Pay for Performance Programs.

### **Program Description**

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

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

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

- **Benchmarking** — A rating system that scores and tracks a facility's energy efficiency and other factors over time to help establish relative efficiency and improvement goals. Benchmarking may also compare a facility's energy use to its peers, identifying facilities

with higher potential for energy savings, or compare year to year against itself. TRC will continue to build models using EPA Portfolio Manager; Energy Performance Indicator (EPI) for industrial facilities, the NYSERDA Multifamily tool, and Year to Year comparisons of 2009 results to 2010 results.

- Targeted marketing materials and messages — materials designed to motivate key market stakeholders to take action. These materials may offer technical or historical sector information and strategies. Examples include: sector case studies, white papers, technical information, customization and repackaging of program information, etc.
- One-on-one interactions and outreach — direct customer assistance will help facility managers and decision-makers develop action plans and take advantage of energy efficiency and demand management. The focus will be on recruitment of new participants to NJ OCE programs and developing and maintaining ongoing customer relationships.
- Training — including educating customers on energy efficiency, demand reduction strategies, retro-commissioning, program opportunities, efficient operation of equipment and processes, procurement of energy efficient products, sequencing energy efficiency measures, etc. Training should encourage a long-term commitment to superior performance and be strategically tied to program resources and services.
- Partnerships with trade associations — establish partnerships with organizations and associations that result in ongoing education specific to the sector, reduce duplication of efforts, and facilitate the ability to reach the associations' constituents through established resources like newsletters, conferences, websites and training. These partnerships can increase the effectiveness of other strategies by leveraging additional resources.
- Materials and Tools — including the development of guidelines, technical resources, simple estimator tools and other technical resources designed to assist customers achieve program goals.
- Integration with regional and national efforts — collaboration with national and regional efforts and organizations such as the: the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy (DOE), Northeast Energy Efficiency Partnership, the Consortium for Energy Efficiency, the American Council for an Energy Efficient Economy, Motor Decisions Matter, ENERGY STAR®, Pump Systems Matter, and the Compressed Air Challenge. Understanding and prioritizing these efforts and partnering with these organizations will help keep New Jersey's Clean Energy Programs on the leading edge of process and technology innovation and provide opportunities to leverage these resources to better serve New Jersey sectors.
- Recognition — including awards, promotions, and other forms of customer recognition demonstrating customer efforts to reduce consumption or improve their energy efficiency that can lead to recruitment of other facilities and additional interest in maintaining efficiency in the sector. Organizations, businesses, and/or individuals may be recognized with established awards or new awards created for those effectively leading change and championing whole building and whole business efforts to reduce energy use and carbon emissions.

## **Target Market and Eligibility**

**Industrial** — The industrial sector is the broadest and most varied of the economic sectors targeted by this initiative. The facilities in this sector vary widely in terms of types of business

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

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

**Higher Education** — This sector includes public or private post-secondary educational facilities including, but not limited to, colleges and universities and community colleges. Each college and university campus presents a unique set of challenges, requiring customized energy efficiency strategies. Residence halls and classrooms use lots of energy but often may be relatively minor power users as compared to the energy used by labs and some other campus buildings. Some schools attribute up to half of their energy use to research facilities, mainly because the labs often require 6-8 air changes per hour with 100% outside air. Labs need outside air but air exchangers are very costly. Even though automation may help reduce these costs, a lab still needs about six air changes per minute when occupied and about three or four changes a minute when unoccupied. Fume hoods equipped with proximity sensors can ensure that researchers are safe while working and can be set to automatically slow down when no one is present, helping to save some energy. In comparison, large auditoriums or conference rooms have carbon dioxide monitors that allow air to safely and economically re-circulate within a given CO<sub>2</sub> set point. Campus parking lots and walkways use electricity to provide exterior lighting and there is increased use attributable to the need to improve overall, campus-wide security, a top concern among higher education facilities.

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

**Institutional** — The institutional sector can generally be described as facilities owned or operated by local governments including libraries, preschools, day care and senior living/senior care. TRC will continue to focus on hospitals and healthcare facilities and roll in municipalities in 2010. According to the New Jersey Hospital Association (NJHA), the healthcare sector is comprised of over 120 hospitals and healthcare systems located throughout New Jersey. The targeted facilities of this sector-specific initiative are:

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

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

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

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

Adding municipal facilities to this sector will allow TRC to offer benchmarking and training to enhance and support the Local Government Energy Audit program, and should include all buildings eligible for LGEA program incentives.

The sector specific program enhancement will also focus on the **Multifamily** and **Hospitality** sectors.

**Multifamily** - A multifamily building, as defined by the Pay for Performance Program, is a residential building of 4-6 floors above ground with a central heating/cooling system along with any building 7+ floors (regardless of heating/cooling); exceptions for buildings less than 4 floors

will be made on a case-by-case basis. The 2007 US Census Bureau reported that of the three million existing housing units in New Jersey, a little over half are single family homes, the vast majority of which are owner-occupied. The remaining housing stock is multifamily units of which two-thirds are rented and of which many are in need of repair and upgrades. The New Jersey Apartment Association reports that 1951 is the median year of construction for rental units in New Jersey. An older housing stock provides significant opportunities for repairs, renovations, and energy efficiency improvements. In 2007 alone, ten percent of New Jersey existing housing units received building permits for improvements ranging from new decks to extensive reconstruction or gut rehabilitation.

Additionally, according to the NJ 2020 Energy Efficiency Master Plan, historically in New Jersey between 20,000 and 30,000 new homes are built each year. With the current economic downturn though, new construction development is expected to fall by approximately 50% over the next few years. Over half of these new homes are single family homes with the remainder being multifamily developments both large scale and townhouse-style. The vast majority are site-built (98%) and speculative construction, the average size being approximately 2,450 square feet and containing three bedrooms. Almost all new residential buildings include central air conditioning and nearly 98% are heated with natural gas, the remainder opting for electric space heating. NJ multifamily developments account for total consumption of 58 million kWh and 65 billion BTUs per year of natural gas, annually.

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

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

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

Large full service hotels tend to have all of the energy demands of other large commercial facilities, plus the demands of HVAC for individual rooms, food service, swimming pools,



laundry, and maintenance. Restaurants tend to have smaller floor space and energy demand but like the other facilities in this sector, offer food service, so there is overlap of potential energy efficiency measures that are common to all.

Though the hospitality sector has been expanding in recent years in New Jersey, the current global economic downturn has hit it particularly hard. Disposable income and corporate spending for hospitality services have significantly decreased everywhere. However, this also creates an excellent opportunity for significant systems upgrades and renovations because lighting retrofits, HVAC upgrades, and installation of new building EMS systems, etc. generally cannot be done while hotels and other facilities are fully occupied. Since the industry has a great need to reduce expenses and has been severely impacted in recent years by escalating energy costs, a temporary decrease in business could actually lead to an increased interest in energy efficiency projects, therefore TRC will continue to pursue this opportunity.

#### **New Sector for 2010:**

Commercial Buildings – Efforts in this sector, once approved, will be focused on chain accounts, commercial real estate companies, and data centers. There is much opportunity for increasing Program participation, working cooperatively with utility key account representatives, and reducing energy use and waste within the commercial sector in general. Data centers, in particular, can reduce energy use dramatically by installing high-efficiency servers, virtualization software, high-efficiency lighting and cooling systems, efficient power systems, humidity controls, and cable raceways. Data center leasing deals helped the New Jersey office market remain stable in 2008, according to data from Colliers Houston & Co., which showed the state's vacancy rate remaining stable at about 13 percent. The last several months of 2008 saw an uptick in leases by data center tenants, including several substantial deals at the Mountain Technology Center in Clifton, where both Telx and Automated Logic leased space. Additional opportunities for energy savings for all building types within this sector will be identified during the plan design phase.

#### **Program Offerings and Incentives**

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

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

facility and building owners/operators understand how NJ OCE can help them translate their initiative into action.

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

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

**Recognizing Sector Leaders** works hand-in-hand with benchmarking to galvanize support within a facility manager's organization. By facilitating receipt of nationally recognized awards such as U.S. EPA's ENERGY STAR Building Label and the ENERGY STAR Leader Award, the Program gives facility managers the leverage to champion energy efficiency within their organizations. The recognition of sector leaders also has the ancillary benefit of providing case studies and marketing focal points.

**Training** in Energy Efficient Building Management is a key part of TRC's strategy. Based on surveying the sector-specific customer needs, this training may include Building Operator Certification (BOC) and sector-specific seminars offered through the relevant sector-specific trade and professional associations. Meeting their expressed needs in a formal educational environment ensures that facility managers have a solid foundation in efficient building operation as well as in-depth knowledge of energy efficiency topics relevant to their buildings. These training opportunities also provide an excellent forum to introduce facility managers to NJ OCE program offerings that will assist them in transforming classroom concepts into actual energy savings at their buildings.

**Conferences** are another excellent means of raising awareness of energy issues and introducing market participants to NJ OCE programs. Furthermore, conferences allow for private sector product and service providers to network with facility managers. This allows facility managers to find opportunities that complement NJ OCE's program offerings and encourages the growth of

private sector energy efficiency initiatives. TRC plans to work with these partner organizations to support at least three conferences with those organizations during the first year of the contract.

**Technical Assistance** has been extremely well-received under NYSERDA's Energy Smart Schools Program and has lead directly to the development and wide dissemination of many hands on, software tools. As TRC is not affiliated with any equipment manufacturer or supplier, TRC's impartiality ensures that we provide assistance that is truly geared toward meeting the needs of NJ OCE's customers.

### **Sector Specific Initiative Goals**

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

- **Market Transformation & Penetration:** Expand the number of Clean Energy Program applicants from each sector.
  - Goal:** Demonstrate an increase in Program participation based on based on specific services provided and new applications received.
  - Goal:** Benchmark 600 buildings
  - Goal:** Facilitate 5 Building Operator Certification Courses
  - Goal:** Facilitate 35 recognition awards, including ENERGY STAR Labels

### **Program Deliverables**

The Sector-specific Program will provide the following services:

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

### **Program Evaluation**

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

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

**Description:** This initiative will provide rebates from the federal Energy Efficiency and Conservation Block Grants (EECBG or block grants) received by the NJ Board of Public Utilities to 512 non-formula-eligible municipalities and counties (those that did not receive a direct Block Grant). A listing of eligible entities is attached. The EECBG rebates will be paid based on the completion of the EECBG application, any supporting documentation and the installation of the energy efficiency (EE) upgrades. This program will not fund new construction but will support the installation of EE equipment as noted below. The program will be implemented by the commercial and industrial market manager, TRC. Block Grant rebates will be awarded in the amount of up to \$20,000 per municipality or county. The rebates must be used toward the cost of installing energy efficiency measures in one of two approaches. The municipality/county may:

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

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

In addition, the total amount of the combined NJCEP rebate and Block Grant dollars may not exceed the installed cost of the energy efficiency upgrades. The same provision applies to non-formula eligible local governments eligible for this rebate that also receives incentives from a utility pursuant to a Board-approved energy efficiency program: the total incentives from the utility, combined with those from the NJCEP and Block Grant rebates may not exceed the total installed cost of the energy efficiency upgrades, or if required by the terms of the Board's approval of the utility program, they must be equal to or less than 100% of a projects cost.

Eligible project costs will follow existing Program guidelines.

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

- 1) **SmartStart C&I Construction Program** – To receive a Block Grant rebate for measures installed under the SmartStart C&I Construction Program, non-formula eligible municipalities and counties must first engage a participating Local Government Energy

Audit Program (LGEAP) contractor to conduct an energy audit or they may conduct the audit independent of the LGEA program provided that the audit is equivalent to those conducted through LGEA. (The definition of equivalent energy audit is provided below.) Once the audit is completed and accepted by the Market Manager, the local government would submit the appropriate SmartStart technology application(s) and an EECBG rebate application form to the Market Manager, who would also be available to help the entity determine which facility or measures should be targeted for this opportunity. Block Grant rebates cannot be used to cover the 25% balance of the LGEAP audit fee; however, pursuant to the existing design of the LGEA program, the remaining 25% of that cost would be refunded provided measures of an equivalent dollar amount are installed.

- 2) **Direct Install Program** - Non-formula eligible local governments eligible for the Block Grant rebate, whose facilities peak demand did not exceed 200 kW in any of the preceding twelve months, may participate in the Direct Install program. Under this program, an approved participating program contractor would conduct an inventory of energy using equipment (lighting, HVAC, etc.) and make recommendations for energy efficiency upgrades. Upon approval by the customer, the contractor would install the energy efficiency measures and the program would provide incentives to cover up to 80% of the installed cost. The entity would submit simultaneously an EECBG rebate application to the Market Manager, who would verify the participation in the Direct Install program, confirm the eligibility of the municipality or county for the Block Grant rebate, and confirm the value of the Block Grant rebate due which would be used to cover up to the remaining 20% of the project cost. The combined NJCEP incentives and Block Grant rebate could provide the measures at no cost to the local government entity for projects with a cost of up to \$100,000.
- 3) **Pay for Performance** - Non-formula eligible local governments eligible for the Block Grant rebate may participate in the Pay for Performance Program. Under this program, the eligible municipality or county would secure the services of a pre-approved program partner. The partner would develop an Energy Reduction Plan and facilitate the installation of the recommended package of energy efficiency improvements. The eligible local government would then submit the EECBG rebate application to the Market Manager, who would verify the applicant's participation in the Pay for Performance program, confirm the eligibility of the municipality or county for the Block Grant rebate, and confirm the value of the Block Grant rebate that would be due and which would increase the program incentives by up to \$20,000. (Block Grant rebates can only be applied toward the cost of measures installed and therefore cannot be used to offset the cost of developing the Energy Reduction Plan.)
- 4) **Shell Measures under the Local Government Energy Audit Program** - Non-formula eligible local governments eligible for the Block Grant rebate that have had audits completed through the Local Government Energy Audit Program, or who have equivalent audits conducted independently may be eligible to receive Block Grant rebates of up to \$20,000 for costs related to the installation of building shell measures recommended in the audit. The value of the Block Grant rebates may not exceed the installed cost of the measure(s). The eligible municipality or county would submit to the Market Manager an EECBG rebate application, proof of project costs, and calculations demonstrating the energy savings of the building shell measure(s) installed. The Market Manager would review project cost

documentation provided but would not be responsible for verifying savings calculations. The Market Manager will report savings and costs as provided by the applicant to the BPU. Inspection protocols will be developed by the Market Manager and submitted to BPU staff for approval.

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

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

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

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

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

Example 2: If a project costs \$40,000 and is eligible for a \$7,000 NJCEP rebate, the project would receive a rebate of \$7,000 from the NJCEP, a Block Grant rebate of \$20,000, and up to \$13,000 in utility rebates depending on the availability of utility incentives.

The EECBG rebate is **ONLY** available to the 512 non-formula eligible municipalities and counties. The EECBG rebate may be passed from the non-formula eligible municipality or county eligible for a Block Grant rebate to another local government entity such as a school district or local sewerage authority, or in the case of a county, to another local government entity in a non-formula eligible municipality or a non-formula eligible municipality within the county. However, in that case the EECBG rebate application must be signed by the highest ranking member of either the municipality or county (i.e., mayor, county freeholder president, etc.) or his/her designee. That is, the mayor or head of the Board of Freeholders may determine the local entity to which the EECBG rebate will be distributed

Previously installed energy efficiency measures are not eligible for a Block Grant rebate. Workers hired for any project(s) receiving Block Grant rebates must be hired based on at a minimum the federal prevailing wage rates as set forth by the Davis Bacon Act. This

requirement does not relieve the municipality from compliance with any required State prevailing wage requirement. The eligible municipality or county would be required to work with the Market Manager to obtain documentation proving this.

**Timeframe:** The Board will make these funds available to all eligible municipalities and county governments for a period of 12 months from the date the State receives its first staged disbursement of funds. After that period ends, any remaining unused or unclaimed funds would be redistributed on a first-come first-served basis and would continue to be available to non-formula eligible municipalities and counties whether or not they took advantage of the Block Grant rebate program during the initial one-year eligibility period. In other words, after the first-year program period, non-formula eligible municipalities and counties that received the Block Grant rebate during the first year may apply for the program again.

**Eligible Measures:** The following list of eligible energy conservation measures was included in the initial ARRA submission to DOE. The same measures would be eligible for EECBGs:

- The Pay for Performance Program provides incentives for an Energy Reduction Plan and energy conservation measures. Eligible measures funded under ARRA would be limited to efficient lighting, HVAC measures, occupancy sensors, variable speed drives, programmable thermostats, refrigeration measures, domestic hot water reduction measures, pipe insulation, energy star boilers and furnaces, barometric dampers, high efficiency cooling systems, high efficiency water heating equipment, energy efficient appliances, geothermal heat pumps (10 tons of capacity or smaller), windows, doors, insulation and other building shell improvements, clean and tune (furnaces), solar thermal hot water (appropriately sized for the existing building), low flow aerators/showerheads/toilets, combined heat and power systems (sized to boilers appropriate to the buildings in which they are located), chillers, motors and pumps, controls, building management systems, exhaust air heat recovery, and exhaust fans/air handlers/ventilation fans.
- The Direct Install Program identifies cost-effective energy efficiency opportunities, provides incentives and direct installation of efficiency measures on existing small commercial and industrial buildings. The upgrades for consideration will be limited to: lighting, occupancy sensors; variable speed drives; programmable thermostats; Refrigeration measures, high efficiency appliances including those related to food services, domestic hot water reduction measures; pipe insulation; HVAC measures; energy star boilers and furnaces; high efficiency cooling systems and high efficiency water heating equipment.

TRC proposes to add the following list of EECBG eligible measures to the list previously submitted to DOE:

- The SmartStart C&I Construction Program provides incentives for energy conservation measures. Eligible measures funded under EECBGs would be limited to retrofit measures only (i.e., new construction is not eligible) and to efficient lighting, high efficiency HVAC measures, lighting controls, variable speed drives, high efficiency boilers and furnaces, high efficiency cooling systems, high efficiency water heating equipment, geothermal heat pumps, high efficiency chillers, motors and pumps.
- The Local Government Energy Audit program is an incentive program which subsidizes

a portion of the cost for completing an energy audit of eligible facilities. The following building shell measures will be eligible for EECBGs if they are recommended in the audit: energy efficient windows and doors, insulation, and other energy efficient building shell measures.



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

### Goals:

The following are the goals for 2010:

- |  |  |
|--|--|
| • New Construction                     | 57 completed jobs                        |
| • Existing Construction (Retrofit)     | 1,200 completed jobs                     |
| • Local Government Energy Audit        | 700 audits reviewed (audit = a building) |
| • Pay for Performance                  | 38 approved plans                        |
| • Pay for Performance New Construction | 7 approved plans                         |
| • Direct Install                       | 1,445 completed installations            |

### Energy Savings:

- |   |           |
|---|-----------|
| • Electric MWh avoided – lifetime saving    | 4,430,000 |
| • Gas decatherms avoided – lifetime savings | 2,400,000 |

**Appendix A**  
**2010 12- Month Marketing Activity Plan**

**C/I Market Manager Marketing Plan Summary - 2010**

**Background**

The commercial/industrial portfolio of New Jersey's Clean Energy Program includes NJ SmartStart Buildings, which begins its eight year of operation in 2010 offering financial incentives for energy efficient measures incorporated in new construction and retrofit projects as well as design support and technical assistance. In addition, the Local Government Energy Audit Program was launched in the fall of 2008 and a Pay-for-Performance for large C&I customers began operation in March 2009. TEACH, a demonstration program directed at New Jersey's K-12 schools market sector now has over 100 participants and Direct Install, targeting smaller commercial and industrial facilities, was scheduled for launch in the fall of 2009.

**Driving Participation**

The 2009 marketing budget provided expanded levels of funding for advertising and public relations services. In the first half of the year, the increase in funds produced greater reach and frequency from print media placements, additional events and public relations activities. The television, radio and outdoor components of the plan reached key markets in the second half of the year as did the majority of the C&I trade show activity.

Despite the downturn in the national economy, the first seven months of increased marketing funds showed promise in terms of awareness and program participation. As of August 2009:

- C&I section of the NJCEP website – average page views per month in 2009 was 38% greater than 2008 levels. We are clearly driving traffic to the website at a significantly higher rate.
- NJ SmartStart Buildings completed projects through the end of July was 1,129, an annualized 28% increase.
- Incentives paid per NJ SmartStart Buildings project was up 13% over 2008 levels, a possible indication that the average project is producing greater energy savings.
- Pay-for-Performance had been in operation for less than five months. The program goal for 2009 was to have 20 projects approved. As of mid-August, the program has 26 applications received, 19 approved projects, and four completed Energy Reduction Plans
- The Local Government Energy Audit Program had 258 applicants as of mid-August. This includes 52% of eligible counties, 23% of the municipalities, 37% of our community colleges, 17% of qualified MUA facilities and 13% of the school districts. This program had been in operation for only ten months.

## Appendix A: 12-Month Marketing Activity Plan

### New Initiatives

The plan for 2010 includes an expansion of sector specific activities and energy benchmarking, complete ramp-up of Direct Install, and a series of new initiatives including:

- Development of a retrofit commissioning and HVAC clean and tune program for all commercial customers
- Enhanced technical assistance for large facilities over 200 kW, providing them with greater assistance with walk-through audits and development of energy reduction plans
- Expansion of Pay-for-Performance to include new construction (launched in later half of 2009 to be ramped up in 2010)
- Integration of utility programs – as filings are approved for energy efficiency initiatives designed to stimulate the economy and growth of green jobs, TRC will work with utility representatives to build awareness of these new programs by integrating them into the NJCEP website. We will also provide direction to the utilities about NJCEP C&I programs for the purpose of co-promoting opportunities on their websites.

### Strategic Approach

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

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

The 2010 marketing activities budget is an integrated and comprehensive plan. Our market-push, market-pull approach makes use of public relations activities and press events, narrowcast methods (direct mail and e-mail blasts), trade shows, conferences and local events, print and electronic advertising in trade publications and websites, and paid advertisements and sponsorships with key organizations and associations.

## Appendix A: 12-Month Marketing Activity Plan

### Tactical Components

#### *Trade Publication Advertising*

The 2009 media schedule included publications such as:

- Architectural Record (print and online), GreenSource Magazine, HPAC Engineering, Maintenance Solutions, and Consulting Specifying Engineer targeting the design community
- Business Week, Forbes, Fortune, Newsweek, The Week, Time, NJ Biz, Business News NJ, Commerce NJ, and Distributed Energy typically read by business owners and energy managers
- School Leader, School Planning & Management, College Planning and Management (print and digital newsletter) and School Construction News reaching decision-makers and influencers in the education community
- Real Estate New Jersey and Globe Street (online), New Jersey & Company (print and online), Black's Guide (print and online) and Green Real Estate News (digital newsletter and online) targeting commercial real estate developers.

Our proposed level of funding for 2010 print and online advertising will eliminate some of these publications and reduce our rate of frequency in others. Photography costs are also included in the proposed funding level.

#### *Organizations and Associations*

Beyond our traditional media schedule, the 2010 budget again includes funds for print and electronic advertising as well as event sponsorships where we can directly reach members of key organizations and associations. Our plan calls for focused tactics targeting:

- NJ AIA – events, sponsorships, paid advertising
- NJ Society of Professional Engineers – paid advertising
- Association of Energy Engineers – annual conference (Globalcon)
- EEI National Accounts – Fall Workshop – exhibit and sponsorship, pre-show mailing
- NJ League of Municipalities – paid advertising, annual conference exhibit and sponsorship, pre-show mailing
- School Boards Association – exhibit, sponsorship and pre-show mailings for regional events as appropriate
- Building Owners and Managers Association of NJ – paid advertising
- NJ Business and Industry Association – event sponsorship
- NJ Hotel and Lodging Association – paid advertising
- Association of NJ Environmental Commissions – paid advertising
- National Association of College Auxiliary Services – paid advertising
- NJ Conference of Mayors – conference exhibit and sponsorships
- Healthcare Facilities Management Association – paid advertising
- NJ Hospital Association – paid advertising
- Southern New Jersey Development Council – paid advertising, event sponsorships

## Appendix A: 12-Month Marketing Activity Plan

### *Trade Shows and Events*

The marketing plan also includes exhibiting and sponsoring a number of annual conferences and major events that provide an opportunity to reach key target segments. For 2010, planned shows and conferences include:

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

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

### *Direct Marketing*

Direct mail and e-mail blasting are again planned for 2010 as a primary strategy for raising awareness of all programs in the C&I portfolio. These campaigns will be designed to reach both the prospective customers of the programs as well as the trade ally community, which serves as an important influencer to decision makers.

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

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

### *Collateral Materials*

The 2010 budget provides for focused collateral materials that will describe the new programs in considerable detail for our target markets. Funds are also provided for revising our existing program materials as new features and procedures are approved. In addition, case studies continue to play a vital role in demonstrating successful projects to key targets. These materials are produced for uploading to the web-site as well as printed for distribution as part of a folder kit used at trade shows, special events and individual sales calls by the Outreach Team. The 2010 budget for collateral

## Appendix A: 12-Month Marketing Activity Plan

materials also includes funds for photography to be used in those brochures and case studies.

### *Public Relations*

Ongoing public relations efforts include activities designed to generate editorial copy in appropriate publications throughout the state (especially for the new initiatives and those introduced in the latter half of 2009). These events will include notifying media to encourage coverage, photography to create photo releases for distribution to the appropriate networks and follow-up contacts to promote placement.

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

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

### *Program Management*

The 2010 budget also includes continued funding for planning and implementation of the marketing communication campaigns and ongoing coordination with the activities of the residential and renewable market manager as well as special requests to support BPU Staff and Commissioners. Specific labor categories include:

- Creative Design and Production
- Account Coordination and Media Management
- Strategy, Planning, and Reporting
- Web site Support and Content Management (social networking capabilities such as Face Book and You Tube will be investigated in 2010 and added as appropriate)
- Development of Story Items for the Quarterly Newsletter
- Outreach Coordination and Support
- Call Center Training and Support
- Responses to E-mails Submitted to the Web site

### *Summary*

The NJCEP commercial and industrial portfolio includes a number of programs with appeal to a number of specific target segments. Strategies and tactics described in this plan are part of a comprehensive and integrated collection of activities designed around the needs of those targets. In some cases, individual tactics and their associated funds can be attributed to a tight campaign around a specific program, such as with a program brochure or website page. In most cases, however, our vehicles for delivering marketing communications are tight to the segment, but wide enough in the message to introduce all of the portions of the portfolio that might appeal to that segment. The following table summarizes how those tactics are designed to promote the existing programs and planned initiatives for 2010.

## Appendix A: 12-Month Marketing Activity Plan

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



## Appendix A: 12-Month Marketing Activity Plan

### Summary of Marketing and Public Relations Services Provided

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

#### *Marketing/Advertising Campaigns*

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

#### *Event Selection and Implementation*

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

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

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

#### *Media Relations*

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

## Appendix A: 12-Month Marketing Activity Plan

### *Written Materials*

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

### *Educational and Promotional Materials*

- Create brochures, public service announcements, pamphlets that contain a larger message of how businesses and local government can take small steps to be more energy efficient and/or invest in renewable energy
- Conduct all technical review before providing to client

### *Quality Assurance and Technical Review*

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

## **Changes from Current Programs**

The 2010 Marketing Plan reduces the 2009 budget by \$466,800. The majority of this reduction is associated with reduced print advertising in trade publications.

## **Subcontractors**

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

## **Pricing Schedule**

The budget table below shows the proposed 2010 budget by cost category. As shown, the top half of the table represents the fixed cost categories, and the bottom half represents the variable cost categories.

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

## Appendix A: 12-Month Marketing Activity Plan

Category - 2010 C&I Marketing Communications Plan	Labor	Outside Costs	Total
Account Management	\$147,825	\$4,525	\$152,350
Strategic Direction	\$87,950		\$87,950
Call Center Briefings and Training	\$2,650		\$2,650
Website	\$49,960		\$49,960
Public Relations and Direct Marketing	\$127,850	\$44,150	\$172,000
Planned Conferences and Coordination of Ad-hoc Events	\$42,890	\$52,000	\$94,890
Creative Services	\$115,200	\$25,000	\$140,200
<b>Fixed Component Total</b>	<b>\$574,325</b>	<b>\$125,675</b>	<b>\$700,000</b>
Paid Media		\$190,000	\$190,000
Overnight Delivery		\$1,000	\$1,000
Printing & Production		\$48,000	\$48,000
Variable Direct Marketing Campaigns		\$75,000	\$75,000
Variable Contingency (not including labor or travel)		\$74,200	\$74,200
<b>Variable Component Total</b>		<b>\$388,200</b>	<b>\$388,200</b>
<b>Grand Total</b>	<b>\$574,325</b>	<b>\$513,875</b>	<b>\$1,088,200</b>

The 2010 Marketing Budget will be allocated back to the individual Commercial & Industrial Programs based on agreed upon ratios that will be related to the estimated costs associated with each Program.

**Appendix B**  
**2010 Clean Energy Conference**

### **Background**

The 2010 NJ Clean Energy Conference and Leadership Awards Program were eliminated after the first three months of the year. Prior to the decision to cancel the 2010 budget, charges for marketing activities totaled \$123,866 as shown in the budget in Appendix C. A portion of the charges included expenses associated with paid advertising for 2009 leadership award winners. The remaining charges were the result of normal fixed activities in expectation that there would be a 2010 conference, including analysis of 2009 conference survey results, creative development for conference theme alternatives, planning and negotiations with hotel and conference center vendors, development of case studies, website promotion and public relations activities for 2009 award winners, and planning sessions with BPU staff.

**Appendix C**  
**2010 Program Budgets**

Appendix C: 2010 Program Budgets

Budget

New Jersey's Clean Energy Program  
**C&I Energy Efficiency Program Reporting Categories**  
 TRC's Proposed Revised 2010 Budget

Program	Total 2010 Budget	Admin. and Program Development	Sales, Marketing, Call Centers, Web Site	Training and Technical Support	Rebates, Grants and Other Direct Incentives	Rebate Processing, Inspections, Other Quality Control	Performance Incentives	Evaluation & Related Research
(All numbers 000's)								
<b>COMMERCIAL &amp; INDUSTRIAL EE PROGRAMS</b>								
Commercial/Industrial Construction	5,313,711.71	329,948.93		689,078.00	3,520,000.00	666,690.78	107,994.00	0.00
C&I New Construction	27,609,759.59	819,388.21		754,421.84	23,700,000.00	2,116,627.54	219,322.00	0.00
C&I Retrofit	4,966,134.59	301,925.98		754,638.64	3,550,000.00	251,575.97	107,994.00	0.00
Pay for Performance New Construction	47,305,102.62	511,476.27		785,641.12	45,000,000.00	879,989.23	127,996.00	0.00
Pay for Performance CHP	5,859,508.79	0.00		0.00	5,831,912.00	27,596.79	0.00	0.00
Local Government Energy Audit	11,232,385.46	162,442.73		0.00	7,900,000.00	3,149,942.73	20,000.00	0.00
Direct Install	15,482,976.50	352,266.25		10,000.00	14,064,450.00	928,266.25	127,994.00	0.00
TEACH	1,000,000.00	74,000.00		361,712.00	564,288.00	0.00	0.00	0.00
Marketing	1,088,200.00		1,088,200.00					
Clean Energy Conference	123,866.12		123,866.12					
<b>TOTAL C&amp;I Programs</b>	<b>119,981,645.38</b>	<b>2,551,448.37</b>	<b>1,212,066.12</b>	<b>3,355,491.60</b>	<b>104,130,650.00</b>	<b>8,020,889.29</b>	<b>711,300.00</b>	<b>0.00</b>

**Appendix D**  
**2010 Performance Incentives**



### Overview

The Market Manager RFP indicated that winning bidders would be eligible to earn modest 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 are needed to match up with the 2010 New Jersey Clean Energy Program Plan filed by TRC. This document presents the proposed process for development of performance incentives for the 2010 NJCEP Commercial & Industrial Program Plans.

### Incentive Levels

As part of the process to extend TRC's Market Manager contract through 2009, Treasury requested and TRC agreed to modify the amount of performance incentive funds available should certain goals be achieved. In 2010, the TRC Market Manager team will propose to maintain the same level of incentive funds as in 2009.

### Incentive Structure

Consistent with the 2009 Plan, for 2010, TRC will proposed that 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 proposed to be allocated to a variety of individual program goals for existing Commercial & Industrial Programs.

### Performance Goals

All goals will be expressed as 2010 calendar year goals. Thus all savings, generation and participants occurring between January 1, 2010 and December 31, 2010 will count toward goal achievement. Goals will be set with that period in mind. The goals will be based largely on past program experience in New Jersey, market trends, and experience in other states, with adjustments made to account for significant changes in either market conditions or program design. Due to the size of the projects and their longer construction schedules, savings associated with the Pay for Performance program components will be based on approved Energy Reduction Plans and not completed installations. Efficiency savings will be based on the algorithms in the Protocols to Measure Resource Savings that have been approved by the Board.

### Specific Goals

Specific commercial & Industrial Program goals and the performance incentive associated with them will be implemented by way of a contract modification, and subject to review and approval by the NJ Office of Clean Energy and the Board of Public Utilities.