

Agenda Date: 11/20/12

Agenda Item: 8B

#### STATE OF NEW JERSEY

Board of Public Utilities
44 South Clinton Avenue, 9<sup>th</sup> Floor
Post Office Box 350
Trenton, NJ 08625-0350
www.nj.gov/bpu/

**CLEAN ENERGY** 

IN THE MATTER OF THE CLEAN ENERGY PROGRAM AUTHORIZATION OF COMMERCIAL AND INDUSTRIAL PROGRAM ENERGY EFFICIENCY INCENTIVES	)	ORDER
EXCEEDING \$300,000	)	DOCKET NOS.
IRVINGTON MIDDLE SCHOOL	)	EO12100938V
IRVINGTON HIGH SCHOOL	)	EO12100937V
NEW JERSEY TRANSIT CORPORATION	)	EO12100943V
VERIZON	)	EO12100944V
CLARIDGE HOUSE II CONDOMINIUM ASSOCIATION	)	EO12100945V

#### Parties of Record:

Roger Monel, Associate School Business Administrator, Irvington Board of Education Tony McCoy, Direct Install Program Manager, Lime Energy Dave Gillespie, Director of Energy and Sustainability, New Jersey Transit Corporation Anthony Gambino, Senior Staff Consultant, Verizon Nicholas Amato, Board President, Claridge House II Condominium Association

#### BY THE BOARD:

The New Jersey Board of Public Utilities' (the Board) Commercial and Industrial (C&I) Energy Efficiency Program, which is marketed as the New Jersey SMARTSTART Buildings Program (SSBP or SMARTSTART), includes the C&I New Construction, C&I Retrofit, Pay-for-Performance New Construction, Pay-for-Performance Existing Buildings, Local Government Energy Audit, Direct Install, Combined Heat and Power, and Large Energy Users Pilot. These programs collectively offer financial incentives to New Jersey property owners to encourage the installation of energy efficient products and technologies. Eligible applicants may receive incentives for a portion of the cost of installing energy efficient technologies such as lighting, heating, ventilation, and air conditioning ("HVAC"), water heating or other measures in new or existing buildings.

Irvington Board of Education, Irvington, NJ, has submitted an application for a financial incentive in the amount of \$337,870 under the 2012 C&I Retrofit program in conjunction with

the 2012 Schools Lighting Initiative for complete fixture replacements, for a project located at Irvington Middle School, 427 Union Avenue, Irvington, NJ. The project consists of removing all the T-12 lights and replacing them with more efficient T-8 and T-5 fixtures. This project enables an estimated annual energy savings of 185,953 kWh of electricity to the customer.

The Irvington Board of Education has also submitted a separate application for a financial incentive in the amount of \$412,360 under the 2012 C&I Retrofit program in conjunction with the 2012 Schools Lighting Initiative for complete fixture replacements, for a project located at Irvington High School, 1253 Clinton Avenue, Irvington, NJ.<sup>1</sup> The project consists of removing all the T-12 lights and replacing them with more efficient T-8 and T-5 fixtures. This project enables an estimated annual energy savings of 354,892 kWh of electricity to the customer.

New Jersey Transit Corporation, Newark, NJ, has submitted an application for a financial incentive in the amount of \$773,667 under the 2011 Large Energy Users Pilot ("LEUP") program, for a project at the Rail Maintenance Facility on 1148 Newark Turnpike, Kearny, NJ. The applicant proposes to install energy efficient lighting, specifically 480 new LED lighting fixtures with dimming and motion controls. Installing these efficient lighting fixtures will enable an estimated annual energy savings of 2,360,294 kWh resulting in an estimated electricity demand reduction of 200 kW to the customer. Overall, this applicant will have an estimated annual energy cost savings of \$256,917.58 at a total project installation cost of \$1,031,556.

Verizon, Basking Ridge, NJ, has submitted an application for a financial incentive in the amount of \$1,000,000 under the 2011 LEUP program, for a project located at their administration and telecommunications central office on 95 William Street, Newark, NJ. The applicant proposes to install energy management controls that will enable energy savings analytics on the structure's HVAC equipment. The applicant also plans to install variable speed motor controls that will take advantage of the excess air handler capacity that the facility has to induce energy savings. Additionally, the applicant proposes to install controls and sensors within a central chiller plant to accomplish a kW/ton optimization. The applicant plans to retrofit air handling units that use single supply fans with variable frequency drives ("VFDs"), and to replace non-premium motors with premium-efficiency motors. Chilled water pumps will be fitted with VFDs controlled by static pressure, and the larger of two motors in all cooling towers will be upgraded and fitted with VFDs. Lastly, in addition to the measures listed above for Verizon's central office, the applicant plans to replace existing transformers with more efficient ones at sites on 12 North 7th Street, Camden, NJ, and on 1196 East Grand Street, Elizabeth, NJ, as part of its Final Energy Efficiency Plan. Installing these measures will enable an estimated annual energy savings of 4,561,795 kWh, but will not result in any electricity demand reduction to the customer due to the nature of the proposed measures. Overall, this applicant will have an estimated annual energy cost savings of \$538,909 at a total project installation cost of \$2,775,209.

Claridge House II Condominium Association, Verona, NJ, has submitted an application for a total financial incentive in the amount of \$674,674 under the 2011 Pay for Performance – Existing Buildings Program, for a project located at Two Claridge Drive, Verona, NJ. The first estimated incentive, for the energy reduction plan (ERP), is \$50,000. The estimated second incentive, for completed performance-based installation of recommended measures (including installation of new high-performance windows and doors, installation of variable frequency drives in the building management system, retrofitting of incandescent lighting to CFLs in

<sup>&</sup>lt;sup>1</sup> This project location was mis-stated as Irvington Middle School, yet properly noticed as Irvington High School.

residential areas, and retrofitting of T12 to T8 fluorescent fixtures with occupancy sensors in stairwells of common areas), is \$312,337. The estimated third incentive, for the post construction benchmarking report, which is based on the one-year true up of the ERP, is \$312,337. This project has an estimated 33.1% total energy savings, which equates to an estimated annual energy savings of 1,366,418 kWh of electricity, estimated annual electric demand reduction of 248 kW, and estimated annual energy savings of 129,525 therms of natural gas. Overall, this application will have an estimated annual energy cost savings of \$383,088 at an estimated first project installation cost of \$3,256,301.

TRC, the Market Manager engaged by the Board to manage the New Jersey Clean Energy Program (NJCEP) C&I energy efficiency programs, has submitted certifications that the incentives for which TRC now seeks approval to commit have been calculated in accordance with the program policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which the applicants are eligible. Further, Applied Energy Group, in its role as the NJCEP Program Coordinator, has reviewed the applications and submitted certifications that the incentives for which TRC now seeks approval to commit have been calculated in accordance with the program policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which the applicants are eligible. Based on the above, the Staff recommends that the Board approve the above-referenced applications.

The Board HEREBY ORDERS the approval of the aforementioned applications for the total estimated incentive amounts of \$337,870 for Irvington Middle School, \$412,360 for Irvington High School, \$773,667 for N.J. Transit Corp, \$1,000,000 for Verizon, and \$674,674 for Claridge House II Condominium Association, and AUTHORIZES issuance of standard commitment letters to the applicants identified above, setting forth the terms and conditions of these commitments.

DATED: 11/20/12

BOARD OF PUBLIC UTILITIES BY:

PRESIDENT

NNE M. FOX

**OMMISSIONER** 

NICHOLAS ASSELTA COMMISSIONER

KRISTI IZZO

ATTEST:

SECRETARY

JØSEPH L. FIORDALISO

**COMMISSIONER** 

COMMISSIONER

## IN THE MATTER OF THE CLEAN ENERGY PROGRAM AUTHORIZATION OF COMMERCIAL AND INDUSTRIAL (C&I) PROGRAM ENERGY EFFICIENCY INCENTIVES EXCEEDING \$300,000 – IRVINGTON MIDDLE SCHOOL AND IRVINGTON HIGH SCHOOL

#### DOCKET NOS. EO12100938V, EO12100937V, EO12100943V, EO12100944V, & EO12100945V

#### SERVICE LIST

Brian DeLuca TRC Solutions Program Manager 900 Route 9 North, Suite 104 Woodbridge, NJ 07095

Roger Kliemisch TRC Solutions Associate Vice President 900 Route 9 North, Suite 104 Woodbridge, NJ 07095

Valentina Rozanova TRC Solutions Program Manager 900 Route 9 North, Suite 104 Woodbridge, NJ 07095

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Newark, NJ 07102

Veronica Beke, DAG Division of Law Dept. of Law & Public Safety 124 Halsey Street P.O. Box 45029 Newark, NJ 07102

Kristi Izzo, Secretary Board of Public Utilities 44 South Clinton Avenue P.O. Box 350 Trenton, NJ 08625-0350

Michael Ambrosio Applied Energy Group, Inc. 317 George Street, Suite 305 New Brunswick, NJ 08901 Michael Winka Office of Clean Energy Board of Public Utilities P.O. Box 350 Trenton, NJ 08625-0350

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Allison E. Mitchell Office of Clean Energy Board of Public Utilities P.O. Box 350 Trenton, NJ 08625-0350

James Nappi Applied Energy Group, Inc. 317 George Street, Suite 305 New Brunswick, NJ 08901 Roger Monel Associate School Business Administrator Irvington Board of Education 1 University Place, 4th Floor Irvington, NJ 07111

Tony McCoy
Direct Install Program Manager
Lime Energy
3 Convery Boulevard
Suite 600
Woodbridge, NJ 07095

Dave Gillespie
Director of Energy and
Sustainability
New Jersey Transit Corp
One Penn Plaza, 8<sup>th</sup> Floor
Newark, NJ 07105

Anthony Gambino Senior Staff Consultant Verizon One Verizon Way VC31W263A Basking Ridge, NJ 07920

Nicholas Amato Board President Claridge House II Condominium Association Two Claridge Drive Verona, NJ 07044

Maura Watkins , hereby certify that in its role as Program Coordinator, Applied Energy Group, Inc. has reviewed the referenced pelow, as required by the policies and procedures applicable to each program, that the standardized equipment incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the amount shown below is the true and accurate estimated incentive for which the applicant(s) is(are) eligible.								
including the Cu Pilot Program, A supporting the in	ased on uniquely calculated estimated energy savings, ustom Program, Pay for Performance and Large Energy Users pplied Energy Group certifies locating documentation aputs used to calculate the rebate amount and evidencing of those inputs as required by the program's policies and							
Maur	a UWatkins							
By:								
	Maura Watkins Quality Assurance Manager - Applied Energy Group, Inc.							
Ref: App #	17443							
Applicant Irvington Board of Education								
Payee	Lime Energy							
Committed Ame	ount:\$337,870.00							

I <u>Carl Teter</u> hereby certify that applications on the attached list have been reviewed by TRC or its subcontractors as required by the policies and procedures applicable to each program, that the incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which each applicant is eligible.

 $\mathbf{R}\mathbf{v}$ 

Date: 10-12-12

Carl P. Teter, P.E., LEED AP, Associate Vice President

App# \7443

1. Application Number: 17443

2. Program Name: Irvington Board of Education

Customer Contact (name, company, address, phone #):
 Roger Monel
 Irvington Board of Education
 427 Union Ave Irvington, NJ 07111
 973-399-6800

4. Project Name and Address: Irvington Board of Education 427 Union Ave Irvington, NJ 07111

5. Rebate amount: Incentive: \$337,870.00

Brief description of measures
 The Irvington Middle School at 427 Union Ave. has applied for the T-12 Schools Lighting initiative. The project consists of removing all the T-12 lights and replacing them with various T8 and T5 fixtures.

Annual Estimated Energy Savings:
 The annual estimated electricity savings is 185,953 kWh.

Coordinator, Ap below, as require program, that the seeks approval to policies and pro	Watkins  , hereby certify that in its role as Program plied Energy Group, Inc. has reviewed the referenced ed by the policies and procedures applicable to each standardized equipment incentives for which TRC now to commit have been calculated in accordance with those cedures, and that the amount shown below is the true and ated incentive for which the applicant(s) is(are) eligible.
including the Cu Pilot Program, A supporting the in	ased on uniquely calculated estimated energy savings, ustom Program, Pay for Performance and Large Energy Users pplied Energy Group certifies locating documentation inputs used to calculate the rebate amount and evidencing in of those inputs as required by the program's policies and
•	a 4 Watkins
Maura Wa Quality Assur	Date: 10-05-2012  Itkins  ance Manager - Applied Energy Group, Inc.
Ref: App #	17445
Applicant	Irvington Board of Education
Payee	Lime Energy
Committed Amo	ount: \$412,360.00

I <u>Carl Teter</u> hereby certify that applications on the attached list have been reviewed by TRC or its subcontractors as required by the policies and procedures applicable to each program, that the incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which each applicant is eligible.

By:	_	in	11	1	•					Date:	10-12-12
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Carl P. Teter, P.E., LEED AP, Associate Vice President

App# 1744 5

1. Application Number: 17445

2. Program Name: Irvington Board of Education

Customer Contact (name, company, address, phone #):
 Roger Monel
 Irvington Board of Education
 1253 Clinton Ave. Irvington, NJ 07111
 973-399-6800

Project Name and Address:
 Irvington Board of Education
 1253 Clinton Ave Irvington, NJ 07111

Rebate amount: Incentive: \$412,360.00

Brief description of measures
 The irvington High School 1253 Clinton Ave. has applied for the T-12 Schools Lighting
 Initiative. The project consists of removing all the T-12 lights and replacing them with
 various T8 and T5 fixtures.

7. Annual Estimated Energy Savings: The annual estimated electricity savings is 354,892 kWh.

Maura Watkins , hereby certify that in its role as Program Coordinator, Applied Energy Group, Inc. has reviewed the referenced below, as required by the policies and procedures applicable to each program, that the standardized equipment incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the amount shown below is the true and accurate estimated incentive for which the applicant(s) is(are) eligible.									
including the Co Pilot Program, A supporting the i	ased on uniquely calculated estimated energy savings, ustom Program, Pay for Performance and Large Energy Users applied Energy Group certifies locating documentation nputs used to calculate the rebate amount and evidencing n of those inputs as required by the program's policies and								
	a 4 Warkens  Date: 10-15-2012								
Maura Watkins  Quality Assurance Manager - Applied Energy Group, Inc.									
Ref: App #	L16221								
Applicant	NJ Transit								
Payee	NJ Transit								

Committed Amount: \$773,667.00

I Carl Teter hereby certify that applications on the attached list have been reviewed by TRC or its subcontractors as required by the policies and procedures applicable to each program, that the incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which each applicant is eligible.

Carl P. Teter, P.E., LEED AP, Associate Vice President

App# L16221

1. Application Number: L16221

2. Program Name: Large Energy Users Pilot Program

Customer Contact (name, company, address, phone #):
 Dave Gillespie, Director Energy and Sustainability
 NJ Transit
 One Penn Plaza East, 8<sup>th</sup> FL
 Newark, NJ 07105
 973-232-4683

4. Project Name and Address:
Rail Maintenance Facility
1148 Newark Turnpike, Kearny NJ 07032

5. Rebate amount: \$773,667.00

- 6. Brief description of measures: Scope of work includes installation of energy efficient lighting as follows:
  - 80, Lighting Fixtures currently 400 Watt Metal Halide to be replaced with New LED lighting fixtures with dimming and motion controls
  - 400, 1000 Watt fixtures will be replaced with lower wattage LED lighting fixtures with dimming and motion controls.
- 7. Annual Estimated Energy Savings: 2,360,294 kWh; 200 kW
- 8. Annual Estimate Energy Cost Savings: \$256,917.58

Maura Watkins , hereby certify that in its role as Program Coordinator, Applied Energy Group, Inc. has reviewed the referenced below, as required by the policies and procedures applicable to each program, that the standardized equipment incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the amount shown below is the true and accurate estimated incentive for which the applicant(s) is (are) eligible.								
including the Cu Pilot Program, A supporting the in	For incentives based on uniquely calculated estimated energy savings, including the Custom Program, Pay for Performance and Large Energy Users Pilot Program, Applied Energy Group certifies locating documentation supporting the inputs used to calculate the rebate amount and evidencing TRC's evaluation of those inputs as required by the program's policies and procedures.							
Maur	a 4 Watkins							
By:	Date: 10-15-2012							
Maura Wa	atkins							
Quality Assur	ance Manager - Applied Energy Group, Inc.							
Ref: App #	L16224							
Applicant Verizon								
Payee	Verizon							
Committed Am	ount: \$1,000,000.00							

I <u>Carl Teter</u> hereby certify that applications on the attached list have been reviewed by TRC or its subcontractors as required by the policies and procedures applicable to each program, that the incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which each applicant is eligible.

Date: 10-17-12

Carl P. Teter, P.E., LEED AP, Associate Vice President

App# L16224

1. Application Number: L16224

2. Program Name: Large Energy Users Pilot Program

Customer Contact (name, company, address, phone #):
 Anthony Gambino, Sr. Staff Consultant
 Verizon
 One Verizon Way, VC31W263A
 Basking Ridge, NJ 07920
 908-559-6227

- 4. Project Name and Address:
  - (1) 95 William St., Newark, NJ 07102
  - (2) 12 N 7th St., Camden NJ 08102
  - (3) 1196 E Grand St., Elizabeth NJ 07201
- 5. Rebate amount: \$1,000,000.00

6. Brief description of measures:

	95 William Street		
	Measure Name	Measure Details	Qty
1	Energy Management Controls - Building Section G only	This includes the provision of local, supervisory, and central controllers to enable energy savings analytics on the building's HVAC equipment. Specifically the system will provide air side economize control in those AHUs, and temperature resets based on free cooling and load conditions, and chilled water resets and chiller plant optimization.	30
2	Variable speed motor control. "Affinity Law Savings" Building G only	This measure will take advantage of the excess air handler capacity that the facility has to induce energy savings. The facilities' air handling units are single zone constant volume with redundancy. In the base case two supply air fans serve a zone, one fan is redundant. We will install controls, pressure sensors for control, and variable speed drives on all fans and run the repentant fans with the base loaded fans to achieve affinity low savings. Basically in the pre-condition we have 1 fan running to supply 100% of volume needed, in the post we will have 2 fans on VFDs running at 50% each to make up the same volume as before. We have advanced logic in the controls to account for cases where fan redundancy is less than 1.	13 VFD
3	Central Chiller Plant Optimization Controls both buildings	Installing controls and sensors to accomplish a kW/ton optimization. Within the general logic we will include strategies that will reset condenser water flow and temperate, reset chilled water temperature and flow, control chiller staging, control pump staging and tower fans. The system will be tied into the central control station.	4

4	Single AHU VFD / Motor Replace Building G only	AHUs with single supply fans will be fitted with VFDs, and non-premium motors replaced with premium-efficiency motors.	15
5	CHW pump VFDs / variable primary flow both buildings	Chilled water pumps will be fitted with VFDs controlled by static pressure.	5
6	Cooling Tower VFDs both buildings	The larger of two motors in all cooling towers will be replaced with an inverter-ready, premium efficiency model. VFDs will be installed to control according to condenser water setpoint. 6 x 25 and 6 x 40 HP	12 VFDs
7	Camden NJ 2 CO – Replacement Transformer	Existing transformers totaling 893 kW will be replaced with more efficient ones.	1
8	Elizabeth NJ CO – Replacement Transformer	Existing transformers totaling 1020 kW will be replaced with more efficient ones.	1

7. Annual Estimated Energy Savings: 4,561,795 kWh

8. Annual Estimate Energy Cost Savings: \$538,909.00

Maura Watkins , hereby certify that in its role as Program Coordinator, Applied Energy Group, Inc. has reviewed the referenced below, as required by the policies and procedures applicable to each program, that the standardized equipment incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the amount shown below is the true and accurate estimated incentive for which the applicant(s) is(are) eligible.								
including the Cu Pilot Program, A supporting the in	For incentives based on uniquely calculated estimated energy savings, including the Custom Program, Pay for Performance and Large Energy Users Pilot Program, Applied Energy Group certifies locating documentation supporting the inputs used to calculate the rebate amount and evidencing TRC's evaluation of those inputs as required by the program's policies and procedures.							
Maur	a 4 Watkins							
Ву:	10-18-2012							
Maura Wa								
Quality Assur	ance Manager - Applied Energy Group, Inc.							
Ref: App #	15493							
Applicant	Claridge House II Condo Assoc							
Payee	Claridge House II Condominium Association, Inc.							
Committed Am	ount: \$674,674.00							

I <u>Carl Teter</u> hereby certify that applications on the attached list have been reviewed by TRC or its subcontractors as required by the policies and procedures applicable to each program, that the incentives for which TRC now seeks approval to commit have been calculated in accordance with those policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which each applicant is eligible.

By: G. In Total P. E. I. F. D. A. Annointe Vine Pie

Date: 10-18-12

Carl P. Teter, P.E., LEED AP, Associate Vice President App# 15493

1. Application Number: 15493

2. Program Name: Pay for Performance - Existing Buildings

Customer Contact (name, company, address, phone #):
 Nicholas Amato, Board President
 Claridge House II Condominium Association
 Two Claridge Drive, Verona, NJ 07044
 973-239-5777

4. Project Name and Address:
Claridge House II Condominium Association
Two Claridge Drive, Verona, NJ 07044

5. Rebate amount:

Incentive #1: \$50,000.00 Incentive #2: \$312,337.00 Incentive #3: \$312,337.00 Total: \$674,674.00

6. Brief description of measures:

	Measure Name (4)	Mesure Polaile (Describe Franchis) on Franchis Company of the Company of the Comp	ietia kaira iri	(Ulantify)
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1	Window/Door Package	New high performance windows and doors; alluminum frame with thermal breaks, low-E	Natural Gas	Whole building
2	BMS-VFD	Central chiller and boiler plant and distribution system optimization	Electric, A	Whole building
3	Lighting - Residence	Retrofit incandescent to CFLs	Electric	Whole building
4	Lighting - Common Area	Retrofit T12 to T8 fluorescent fixtures with occupancy sensors in stairwells:	Electric	Whole building

- 7. Annual Estimated Energy Savings: 1,366,418 kWh; 248 kW; 129,525 therms
- 8. Annual Estimate Energy Cost Savings: \$383,088.00