



Agenda Date: 3/12/12  
Agenda Item: 8A

**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/](http://www.nj.gov/bpu/)

CLEAN ENERGY

IN THE MATTER OF THE CLEAN ENERGY	)	ORDER
PROGRAM AUTHORIZATION OF COMMERCIAL	)	
AND INDUSTRIAL (C&I) PROGRAM ENERGY	)	
EFFICIENCY INCENTIVES EXCEEDING \$300,000	)	
	)	
CLARIDGE HOUSE I CONDOMINIUM	)	DOCKET NO. EO12020120V
ASSOCIATION	)	
	)	
NORTH HUNTERDON-VOORHEES REGIONAL	)	DOCKET NO. EO12020130V
HIGH SCHOOL	)	
	)	
ROCK-GW, LLC	)	DOCKET NO. EO12020131V

**Cathy Hurwitz**, Community Manager, Claridge House I Condominium Association  
**Susan Press**, Business Administrator, North Hunterdon Board of Education  
**Dan Healy**, Senior Project Manager, Design and Construction, New Jersey, Rock-GW, LLC

BY THE BOARD:

The New Jersey Board of Public Utilities' (the Board) Commercial and Industrial (C&I) Energy Efficiency Program, which is marketed as New Jersey SMARTSTART Buildings Program (SSBP or SMARTSTART), includes the C&I New Construction, C&I Retrofit, Direct Install, Pay-for-Performance New Construction, and Pay-for-Performance Existing Buildings Programs. 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, HVAC, water heating or other measures in new or existing buildings.

Claridge House I Condominium Association, Verona, NJ, has submitted an application for a monetary incentive in the amount of \$594,641 under the 2011 Pay-for-Performance – Existing Buildings program, for a project located at 1 Claridge Drive, Verona, NJ. The first estimated incentive, for the completed energy reduction plan (ERP), is \$50,000. The estimated second incentive, for installation of recommended measures (including façade/glazing replacement, removal of an air handling unit, replacement of a chiller, addition of direct digital controls, and addition of thermostatic valves, lighting upgrades, installation of HVAC controls, and HVAC

insulation) is \$319,770; and the estimated third incentive for the one-year true up of the ERP, which is based on the post construction benchmarking report, is \$224,871. This application has an estimated 35% total energy savings and will save the customer an annual estimate of 1,615,973 kWh of electricity and an annual estimate of 75,651 therms of natural gas, and will result in an annual estimated demand reduction of 406 kW. Overall, this application will have an estimated annual energy cost savings of \$321,047.

North Hunterdon Board of Education, Annandale, NJ, has submitted an application for a monetary incentive in the amount of \$483,639 under the 2010 Pay-for-Performance – Existing Buildings program, for a project located at North Hunterdon High School, 1445 Route 31, Annandale, NJ. The first estimated incentive, for the completed ERP, is \$14,211. The estimated second incentive, for installation of recommended measures (including lighting retrofit, vending misers, mechanical upgrades to the chilled water system, rooftop unit replacement, installation of a building management system, building envelope improvements, kitchen hood controllers, steam trap replacement, and transformer replacements) is \$275,729; and the estimated third incentive for the one year true up of the ERP, which is based on the post construction benchmarking report is \$193,699. This application has an estimated 46.4% total energy savings and will save the customer an annual estimate of 1,441,832 kWh of electricity and an annual estimate of 6,089 MMBtu of natural gas, and will result in an annual estimated demand reduction of 313 kW. Overall, this application will have an estimated annual energy cost savings of \$302,235.

Rock-GW, LLC, Mount Olive, NJ, has submitted an application for a monetary incentive in the amount of \$400,369 under the 2011 Pay-for-Performance – New Construction program, for a project located at The Green at Florham Park, 100 Park Ave, Florham Park, NJ. The first estimated incentive, for the proposed ERP, is \$25,000. The estimated second incentive, for the as-built reduction plan (including envelope upgrade, domestic hot water [DHW] load reduction, site lighting density, site lighting controls, garage fan control, energy efficient elevators, and high efficiency under-air-floor [UAF] system) is \$156,828, and the estimated third incentive for the commissioning report is \$218,541. This application has an estimated 19% total energy savings and will save the customer an annual estimate of 706,409 kWh of electricity, and will result in an annual estimated demand reduction of 189 kW. Overall, this application will have an estimated annual energy cost savings of \$103,136. Energy savings and cost savings are measured from a code-compliant building (ASHRAE 90.1-2007 baseline).

TRC, the Market Manager engaged by the Board to manage the New Jersey Clean Energy Program (NJCEP) C&I energy efficiency programs, has submitted its certification 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 its certification 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 \$594,641 for the Claridge House I Condominium Association, \$483,639 for North Hunterdon Board of Education, and \$400,369 for Rock-GW, LLC and

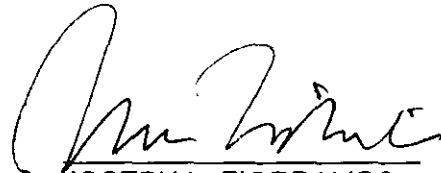
**AUTHORIZES** issuance of a standard commitment letter to the applicants identified above, setting forth the terms and conditions of these commitments.

DATED: 3/12/2012

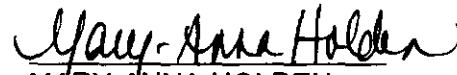
BOARD OF PUBLIC UTILITIES  
BY:

  
ROBERT HANNA  
PRESIDENT

  
JEANNE M. FOX  
COMMISSIONER

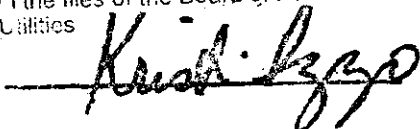
  
JOSEPH L. FIORDALISO  
COMMISSIONER

  
NICHOLAS ASSELTA  
COMMISSIONER

  
MARY-ANNA HOLDEN  
COMMISSIONER

ATTEST:  
  
KRISTI IZZO  
SECRETARY

I HEREBY CERTIFY that the within document is a true copy of the original in the files of the Board of Public Utilities



IN THE MATTER OF THE CLEAN ENERGY PROGRAM AUTHORIZATION OF COMMERCIAL  
AND INDUSTRIAL (C&I) PROGRAM ENERGY EFFICIENCY INCENTIVES EXCEEDING  
\$300,000 – CLARIDGE HOUSE I CONDOMINIUM ASSOCIATION; NORTH HUNTERDON-  
VOORHEES REGIONAL HIGH SCHOOL; AND ROCK-GW, LLC

DOCKET NOS. EO12020120V, EO12020130V, & EO12020131V

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**Program Coordinator Certification  
(New Incentive Commitments > \$300,000)**

I, **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.

For incentives based on uniquely calculated estimated energy savings, including the Custom Program and Pay for Performance, 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.

*Maura H Watkins*

By: \_\_\_\_\_

Date: 02-01-2012

**Maura Watkins**

Quality Assurance Manager - Applied Energy Group, Inc.

Ref:	<u>11591</u>
App #	_____
Applicant	<u>Claridge House I Condominium Assoc.</u>
Payee	<u>Claridge House I Condominium Assoc.</u>

Committed Amount: \$594,641.00

**Market Manager Certification**  
**(New Incentive Commitments > \$300,000)**

I (Diane M. Zukas) 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: *Diane M. Zukas*  
*Diane M. Zukas, Vice President*

Date: February 1, 2012

Application 11591

Application Number: 11591

1. Program Name: Pay for Performance – Existing Buildings

2. Customer Contact (name, company, address, phone #):

Cathy Hurwitz, Community Manager  
 1 Claridge Drive, Verona, NJ 07044  
 973-239-4244

3. Project Name and Address:

Claridge House I Condominium Association  
 1 Claridge Drive, Verona, NJ 07044

4. Rebate amount:

Incentive #1: \$50,000

Incentive #2: \$319,770

Incentive #3: \$224,871

Total: \$594,641

5. Brief description of measures

Measure Name	Measure Details
1 Façade/Glazing Replacement	Remove 50% single pane windows/doors for the ten floors below the penthouse on the east and west exposures. Replace with new double pane, clear, low "E" glazing system.
2 Air Handling Units (AHU)	Eliminate one of three 100% outside air AHU.
3 Chiller, Direct Digital Controls (DDC), Thermostatic Valves	Replace one centrifugal chiller. Add DDC controls for the chiller, pumps and AHU's. Add thermostatic on/off control valves to each fan-coil unit throughout the building.
4 Lighting Upgrade	Replace all lobby and mezzanine incandescent lighting bulbs with compact fluorescent bulbs. Replace all apartments incandescent bulbs with compact fluorescent bulbs. Add occupancy sensors to the garages to turn lights on/off when no activity is sensed.
5 HVAC, Controls	Integrate sensors in garage to signal the DDC system to turn on/off the main exhaust fans. Add one 600 CFM new fan to each of the six parking garages and hard wire interlock it with existing main garage exhaust fans to be energized when the associate main exhaust fan is de-energized and de-energized when the main exhaust fan is energized.
6 HVAC, Insulation	Insulate Domestic Hot Water Heater Storage tanks and all associated piping. Insulate existing supply and outside air ducts for AC-4.

6. Annual Estimated Energy Savings:

1,615,973 kWh; 406 kW; 75,651 therms

7. Annual Estimate Energy Cost Savings: \$321,047

**Program Coordinator Certification  
(New Incentive Commitments > \$300,000)**

I, **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.

For incentives based on uniquely calculated estimated energy savings, including the Custom Program and Pay for Performance, 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.

*Maura H Watkins*

By: \_\_\_\_\_

Date: 03-02-2012

**Maura Watkins**

Quality Assurance Manager - Applied Energy Group, Inc.

Ref:	<u>11092</u>
App #	_____
Applicant	<u>North Hunterdon-Voorhees Regional HS Dist.</u>
Payee	<u>North Hunterdon Board of Education</u>

Committed Amount: \$483,639.00



**Market Manager Certification  
(New Incentive Commitments > \$300,000)**

I Diane M. Zukas 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: Diane M. Zukas  
Diane M. Zukas, Vice President  
App# 11092

Date: 03/02/12

1. Application Number: 11092
2. Program Name: Pay for Performance- Existing Buildings
3. Customer Contact (name, company, address, phone #):  
 Susan Press, Business Administrator  
 North Hunterdon Board of Education  
 1445 Route 31  
 Annandale, NJ 08801
4. Project Name and Address:  
 North Hunterdon High School  
 1445 Route 31  
 Annandale, NJ 08801
5. Rebate amount:  
 Incentive #1: \$14,211  
 Incentive #2: \$275,729  
 Incentive #3: \$193,699  
 Total: \$483,639
6. Brief description of measures:

Measure Name	Measure Details (Measure, Equipment, Controls, etc. Installed)	Fuel/Resource	Quantity
1	Lighting Retrofit	Retrofit all lighting including replacement of T8 and T12 fluorescent lighting with low-wattage T8 and T5 fluorescent lighting.	Electric All
2	Vending Misers	add vending misers to 14 vending machines	Electric 14
3	Mechanical Upgrades - Chilled Water System	New hot water boilers (2) 1000 MBH Efficiency: 93% (1) 200 ton air cooled chiller Full Efficiency: 1.04 kW/Ton Integrated Part Load Efficiency: 13.1	Electric 2 and 1
4	Rooftop Unit Replacement	Install higher efficiency roof top units.	Electric 9
5	Building Management System Installation	Installation of building management system to control all HVAC equipment and the addition of boiler efficiency controls.	Electric
6	Building Envelope Improvements	Window, door and structure to be sealed with weather stripping and sealers to reduce infiltration.	Electric
7	Kitchen Hood Controllers	Installation of Intelhood controls with VFD on fans and installation of Intelli refrigeration controls on walk-in coolers and freezers to reduce energy consumption.	Electric 4
8	Steam Trap Replacement	Replace steam traps with newer higher efficiency units.	Natural Gas 92
9	Transformer Replacements	Replace existing transformers with newer, higher efficiency units.	Electric 25

7. Annual Estimated Energy Savings: 1,441,832 kWh; 313 kW; 6,089 MMBtu
8. Annual Estimate Energy Cost Savings: \$302,235.00

**Program Coordinator Certification  
(New Incentive Commitments > \$300,000)**

I, **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.

For incentives based on uniquely calculated estimated energy savings, including the Custom Program and Pay for Performance, 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.

*Maura H Watkins*

By: \_\_\_\_\_

Date: 02-15-2012

**Maura Watkins**

Quality Assurance Manager - Applied Energy Group, Inc.

Ref:	<u>10086</u>
App #	_____
Applicant	<u>Rock-GW, LLC</u>
Payee	<u>Rock-GW, LLC</u>

Committed Amount: \$400,369.00

**Market Manager Certification**  
**(New Incentive Commitments > \$300,000)**

I Diane M. Zukas 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: *Diane M. Zukas*  
*Diane M. Zukas, Vice President*  
*App# 10086*

Date: *2/16/12*

1. Application Number: **10086**
2. Program Name: **Pay for Performance – New Construction**
3. Customer Contact (name, company, address, phone #):  
**Dan Healy, Senior Project Manager, Design and Construction, New Jersey  
Rock-GW, LLC (Rockefeller Group Development Corporation)  
500 International Drive North, Mount Olive, NJ 07828**
4. Project Name and Address:  
**The Green at Florham Park  
100 Park Ave, Florham Park, NJ 07932**
5. Rebate amount:  
**Incentive #1: \$25,000  
Incentive #2: \$156,828  
Incentive #3: \$218,541  
Total: **\$400,369****

6. Brief description of measures:

**1) Envelope Upgrade - Wall Material Adjustments; Fenestration Material Adjustments; Roofing Material Adjustments; Reflective Roofing Material; Shading Elements on Façade as follows:**

- **Wall Material:**
  - Interior gypsum board
  - 2" R5 Insulation Rigid
  - Gypsum Board, and Spandrell Glass
  - Overall U value of 0.081
- **Fenestration Material:**
  - Double pane with low-E
  - Solar heat gain factor varies from 0.27, 0.31 and 0.37
  - Overall U value of 0.46
- **Roofing Material:**
  - Metal deck
  - 4.54 inches of high density insulation
  - Overall U value of 0.065
- **Reflective Roofing:**
  - Installed
- **Shading Elements:**
  - Architectural façade features protruding vertical fins to provide exterior solar shading

Overall the materials used in the proposed case have a higher U value compared to the baseline, reducing both the cooling and heating loads in the building. Installation of the high reflectivity roofing will reduce the heat absorbed by the

roof and decrease the cooling load of the building. Increased solar shading will provide lower cooling loads compared to the baseline design.

- 2) **Domestic Hot Water (DHW) Load Reduction** -Installation of low flow plumbing fixtures as follow:
  - Low flow plumbing fixtures
    - Reduce the domestic hot water demand by lowering the water flow, thus decreasing the hot water heating energy usage.
    - Hot Water demand with the low flow plumbing fixtures is estimated to be 9.36 kW per hour.
    - Flow Rates for fixtures as follows: WC = 1.28 gpf / Sink = 0.5 gpm / Shower = 1.6 gpm
- 3) **Site Lighting Density** – Installation of energy efficient lighting throughout that will yield a greater lighting output from a lesser power input. High Efficiency lighting resulting in a power density below the IESNA standard referenced in ASHRAE 90.1 – 2007.
- 4) **Site Lighting Controls**- Enhanced lighting control by Siemens BMS System as follows:
  - Garage Lighting – Lights off between 12:00 AM and 6:00AM
  - Interior Lobby area - Lights off between 12:00 AM and 6:00AM
  - Exterior Bldg Light / Signage - Lights off between 12:00 AM and 6:00AM
  - Site Lighting - Lights off between 12:00 AM and 6:00AM
- 5) **Garage Fan Control**- Garage Fans Interlocked with CO Monitoring System to adjust operation as follows:
  - The BMS system will enable the parking garage fan operation.
  - Fans #1 & #2 will only operate on full speed only when the CO level in the garage increases above 50 ppm.
  - Garage Fan #3 will operate continuously for minimum ventilation.
- 6) **Energy Efficient Elevators** - Installation of machine-room-less energy-efficient elevator systems. Modern hoisting machines consume less energy than traditional traction machines. Hourly electric demand reduces to 18.87 kW (from a 29.84 kW baseline)
- 7) **High Efficiency Under-Air-Floor (UAF) System** - Under-Air Floor (UAF) System; High Eff. Water Cooled RTUs as follows:
  - UAF System:
    - A customized under-floor air system is designed to deliver conditioned air.
    - Air is distributed through the under-floor plenums, which are larger and have lower pressure drops compared to traditional ceiling plenums.
    - Air is exhausted by exhaust fans in the ceiling plenum.

- Fan energy use can be reduced since the lower pressure drops allow the use of smaller supply fans.
  - RTUs:
    - Two custom Mammoth roof-top units
    - Water cooled condensers
    - High Efficiency DX cooling units; 14 EER
7. **Annual Estimated Energy Savings: Savings are measured from a code-complaint building (ASHRAE 90.1-2007 baseline) 706,409 kWh; 189 kW**
8. **Annual Estimate Energy Cost Savings: Cost savings are measured from a code-complaint building (ASHRAE 90.1-2007 baseline) \$103,136**