Agenda Date: 3/9/20
Agenda Item: 8A

STATE OF NEW JERSEY

Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 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 EXCEEDING $500,000 – MACK-CALI REALTY LP/101 HUDSON REALTY	)	ORDER
	)	DOCKET NO. QO20010053

Parties of Record:

Jeffery E. Grant, Senior Director of Corporate Energy, Mack-Cali Realty, LP
Stefanie A. Brand, Esq., Director, New Jersey Division of Rate Counsel

BY THE BOARD:

The New Jersey Board of Public Utilities ("Board" or "BPU") through its New Jersey Clean Energy Program ("NJCEP") includes several individual Commercial & Industrial ("C&I") Energy Efficiency ("EE") Programs targeting the commercial and industrial market segments. Eligible applicants may receive rebates for a portion of the cost for installing energy efficient technologies such as lighting, HVAC, and other energy conservation measures. Incentives are also available for projects involving Distributed Energy Resources ("DER"). All proposed C&I EE financial incentives and rebates exceeding $500,000 require explicit Board approval. In the Matter of the Comprehensive Energy Efficiency and Renewable Energy Resource Analysis for the 2009 through 2012 Clean Energy Program -- Revised 2012-2013 Programs & Budgets - Revised Rebate Approval Process, BPU Docket No. EO07030203, Order dated May 3, 2013.

The Large Energy Users Program ("LEUP") fosters self-investment in EE and combined heat and power projects for New Jersey's largest C&I customers. Incentives are awarded to customers that satisfy the program's eligibility and program requirements for investing in self-directed energy projects that are customized to meet the requirements of the customers' existing facilities, while advancing the State's energy efficiency, conservation, and greenhouse gas reduction goals.

By this Order, the Board considers the application of Mack-Cali Realty LP/101 Hudson Realty in Parsippany, New Jersey, submitted on July 2, 2018 under the Fiscal Year 2018 ("FY18") LEUP pursuant to the Energy Efficiency and Renewable Energy Program Plan Filing for FY18 dated January 26, 2018. The proposed project incorporates nine (9) separate locations across New Jersey. The applicant requests a total financial incentive of $937,199.21 for a project that will cost $1,717,526.63.

The proposed upgrades are grouped into four main categories: Five HVAC fan system retrofits with improved Building Automation System ("BAS") functionality and variable frequency drives ("VFDs"); one HVAC fan system retrofit with VFDs but no improved BAS; two curtain wall insulation applications; and one LED lighting retrofit. A description of the project at each location is as follows:

- **Plaza II-III Harborside, Jersey City:** The applicant will replace the existing pressure bypass system with a variable speed condenser water pumping system; retrofit cooling tower fans and condenser water pumps with VFDs; and update plant optimization algorithms to produce condenser water as efficiently as possible under all outside ambient and building load conditions.
- **333 Thornall Street, Edison:** The applicant will retrofit existing chilled water pumps and condenser water pumps in the central chilled water plant with VFDs; and add functionality to the BAS to control VFDs and to the chillers to maximize the temperature differential between condenser water, chilled water, and supply air and thereby produce chilled water more efficiently at all outside ambient and internal load conditions.
- **111 River Street, Hoboken:** The applicant will retrofit primary cooling water pumps in the existing water loop heat pump plant with VFDs; and upgrade the existing BAS to accommodate the VFDs and imbed a control algorithm that will optimize system functionality for all ambient conditions at any building load.
- **581 Main Street, Woodbridge:** The applicant will add VFDs to chilled water pumps, cooling tower fans, and condenser water pumps; convert condenser water flow control to VFD flow control to adjust flow based on load; and upgrade existing controls to maximize the temperature differential between condenser water, chilled water, and supply air, which will yield additional energy savings.
- **5 Wood Hollow Road, Parsippany:** The applicant will retrofit existing cooling tower fans and condenser water pumps with VFDs; and upgrade the BAS temperature differential for condenser water and air handling unit optimization for all outside ambient and internal load conditions, which will yield additional energy savings.
- **101 JFK Parkway, Short Hills:** The applicant will replace existing cooling plant fan starters with variable speed drives to allow fan speed to be reduced to meet outside ambient and internal load conditions.
- **Plaza IV-A Harborside, Jersey City:** The applicant will apply closed cell foam insulation to the inside surface of the parking deck's perimeter curtain wall to reduce the required electric heating load, and provide sealing for elevator shaft walls to reduce infiltration.
- **Plaza V Harborside, Jersey City:** The applicant will apply closed cell foam insulation to the inside surface of the parking deck's perimeter curtain wall to reduce the required electric heating load.
- **101 Hudson Street, Jersey City:** The applicant will replace all of the existing lighting at this location's parking deck with LED fixtures and proximity sensors to minimize lighting usage during unoccupied periods.

Annually, this project is anticipated to conserve 3,401,924 kWh of electricity and reduce peak demand by 290.41 kW. The proposed project has an estimated annual energy cost savings of $358,112.06, plus an additional $1,800.00 in operational and maintenance savings. The payback period without incentives is 4.75 years; when factoring in the incentives, the payback period is reduced to 2.16 years.

TRC Environmental Corporation, the Program Manager engaged by the Board to manage the NJCEP LEUP program, attested to the accuracy of certain information regarding the project and that the project application adheres to the current terms and conditions of the program. Further, TRC, in its role as the NJCEP Program Administrator, submitted its certification that the incentives were calculated in accordance with the program's policies and procedures, the listed amounts are the true and accurate estimated incentives for which the applicant is eligible, and the documentation supporting estimated energy savings inputs was located, reviewed, and made available to calculate the rebate amounts as required by the program's policies and procedures. Based on these certifications and the information provided by the Program Manager and Program Administrator, Board Staff recommends approval of the above-referenced application.

The Board **HEREBY ORDERS** the approval of the aforementioned application for the total estimated incentive amount of $937,199.21 for Mack-Cali Realty LP/101 Hudson Realty and **AUTHORIZES** issuance of a standard commitment letter to the applicant identified above, setting forth the terms and conditions of this commitment.

The effective date of this Order is March 19, 2020.

DATED: 3/9/20

BOARD OF PUBLIC UTILITIES
BY:

JOSEPH L. FIORDALISO
PRESIDENT

DIANNE SOLOMON
COMMISSIONER

UPENDRA J. CHIVUKULA
COMMISSIONER

ROBERT M. GORDON
COMMISSIONER

ATTEST:

AIDA CAMACHO-WELCH
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 PROGRAM ENERGY EFFICIENCY INCENTIVES EXCEEDING $500,000 – MACK-CALI REALTY LP/101 HUDSON REALTY

DOCKET NO. QO20010053

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The undersigned preparer attests that, to the best of their knowledge and belief, the above information is accurate and the subject project application adheres to the current terms and conditions of the Large Energy Users program.

Signature of Preparer

1/13/2020
Date

Ann DeLuca
Name of Preparer

51955
App#

1. Application Number: **51955**

2. Application Received Date and Fiscal Year: **7/2/2018, FY18 Large Energy Users Program**

3. Compliance Filing: **FY2018 Compliance Filing dated January 26, 2018**

4. Customer Contact (name, company, address, phone #):
   Jeffrey E. Grant
   Senior Director of Corporate Energy
   Mack-Cali Realty, LP
   7 Sylvan Way
   Parsippany, NJ 07054
   732-550-1527

5. Project Names and Address:

101 Hudson Street, Jersey City, NJ 07311	Lighting Retrofit
Plaza II-III Harborside, Jersey City, NJ 07302	Retrofit HVAC fan systems with Variable Frequency Drives and Improve BAS functionality for central plant efficiency optimization
Plaza IV-A Harborside, Jersey City, NJ 07311	Apply Curtain Wall Insulation for conditioned interior spaces
Plaza V Harborside, Jersey City, NJ 07311	Apply Curtain Wall Insulation for conditioned interior spaces
333 Thornall Street, Edison, NJ 08837	Retrofit HVAC fan systems with Variable Frequency Drives and Improve BAS functionality for central plant efficiency optimization
111 River Street, Hoboken, NJ 07030	Retrofit HVAC fan systems with Variable Frequency Drives and Improve BAS functionality for central plant efficiency optimization
581 Main Street, Woodbridge, NJ 07095	Retrofit HVAC fan systems with Variable Frequency Drives and Improve BAS functionality for central plant efficiency optimization
5 Wood Hollow Road, Parsippany, NJ 07054	Retrofit HVAC fan systems with Variable Frequency Drives and Improve BAS functionality for central plant efficiency optimization
101 JFK Parkway, Short Hills, NJ 07078	Retrofit HVAC fan systems with Variable Frequency Drives

6. Rebate amount: **$937,199.21**

7. Brief description of measures:

   Lighting Retrofit:
   101 Hudson Street, Jersey City: An existing parking deck is comprised of fluorescent lighting and the façade lighting is designed with metal halide fixtures. This measure replaces the existing system with LED technology and in addition the parking deck utilizes proximity sensors to minimize lighting system operation during unoccupied periods.

Retrofit HVAC fan systems with Variable Frequency Drives (VFDs) and Improve BAS functionality for central plant efficiency optimization:

Plaza II-III Harborside, Jersey City: Replace pressure bypass system with a variable speed condenser water pumping system and retrofit cooling tower rans, condenser water pumps with VFDs. Embed plant optimization algorithms to produce condenser water as energy efficiently as possible under all outside ambient and building load conditions.

333 Thornall Street, Edison: In the central chilled water plant, retrofit existing chilled water pumps and condenser water pumps with VFDs. Building automation system will be added to control VFDs and chillers to allow maximizing temperature differential for condenser water, chilled water and supply air to produce chilled water more efficiently at all outside ambient and internal load conditions.

111 River Street, Hoboken: Primary cooling water pumps in the existing water loop heat pump plant will be retrofitted with VFDs. Upgrade of Building Automation System to accommodate VFDs as well as imbedding control algorithm to optimize system functionality for all ambient conditions at any building load by maximizing condenser water temperature difference and minimizing cooling tower fan energy.

581 Main Street, Woodbridge: Add VFDs to chilled water pumps, cooling tower fans and condenser water pumps. Condenser water flow control will be converted from bypass to VFD flow control to adjust flow based on load. Upgrade existing controls to maximize temperature differential for condenser water, chilled water and supply air, for all outside ambient and internal load conditions.

5 Wood Hollow Road, Parsippany: Retrofit existing cooling tower fans and condenser water pumps with VFDs. Upgrade building automation system temperature differential for condenser water and air handling unit optimization for all outside ambient and internal load conditions.

Apply Curtain Wall Insulation For Conditioned Interior Spaces:

Plaza IV-A Harborside, Jersey City: Apply R-21 closed cell foam insulation to inside surface of the parking deck perimeter curtain wall to reduce the required electric heating load. Also, provide sealing for elevator shaft walls to reduce infiltration.

Plaza V Harborside, Jersey City: Apply R-30 closed cell foam insulation to the inside surface of the parking deck perimeter curtain to reduce the required electric heat load.

Retrofit HVAC fan systems with Variable Frequency Drives:

101 JFK Parkway, Short Hills: Replace existing cooling plant fan starters with variable speed drives to allow fan speed to be reduced to meet outside ambient and internal load conditions.

8. Annual Estimated Energy Savings:
   3,401,924 kWh
   290.41 peak demand
   0 therms

9. Annual Estimated Energy Cost Savings: **$358,112.06**

10. Project cost: **$1,717,526.63**

11. Operational and Maintenance Savings: **$1,800.00**

12. Simple Payback Period: **4.75 years without incentive; 2.16 years with incentive**

Program Administrator Certification
(New Incentive Commitments > $500,000)

I, **Maura Watkins**, TRC Solutions Quality Control, hereby certify that, I have reviewed the application referenced below and determined that, as required by the policies and procedures applicable to the program, (1) the equipment incentives for which the NJCEP Program Manager now seeks approval to commit NJCEP funds have been calculated in accordance with those policies and procedures, and (2) that the amount shown below is the true and accurate estimated incentive for which the applicant(s) is(are) eligible.

Additionally, for incentives based on estimated energy savings that are uniquely calculated, including the Pay for Performance Program, Large Energy Users Program, and the Combined Heat and Power Program, I also certify that I was able to locate and review documentation supporting the inputs used to calculate the rebate amount and evidencing the NJCEP Program Manager's evaluation of those inputs as required by the program's policies and procedures.

By: _____ Date: **01-13-2020**

Maura Watkins

Quality Control – TRC Solutions

Application No.: **51955**

Applicant: **Mack-Cali Realty LP/101 Hudson Realty**

Payee: **Mack-Cali Realty LP/101 Hudson Realty**

Committed Amount: **$937,199.21**