



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) ORDER
AUTHORIZATION OF COMMERCIAL AND INDUSTRIAL (C&I))
PROGRAM ENERGY EFFICIENCY INCENTIVES)
EXCEEDING \$500,000)
)
)
BAYER HEALTHCARE PHARMACEUTICALS) DOCKET NO. EO13080752V

Party of Record:

Steven Baumgardner, Associate Director of Site Engineering, Bayer Healthcare Pharmaceuticals

BY THE BOARD¹:

The New Jersey Board of Public Utilities' (the Board) Commercial & Industrial (C&I) Energy Efficiency Program includes nine (9) individual programs targeting the commercial and industrial market segments, consisting of New Construction, Retrofit, Pay for Performance - New Construction, Pay for Performance - Existing Buildings, Local Government Energy Audit, Direct Install, Combined Heat and Power (CHP)/Fuel Cells, Large Energy Users Program, and the SBC Credit Program. These programs collectively offer financial incentives 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 and other measures in new or existing buildings.

Bayer Healthcare Pharmaceuticals, in Wayne, NJ, has submitted an application for a total financial incentive in the amount of \$1,133,423 under the 2012 Pay for Performance - New Construction program, for a project located at Bayer Healthcare Consolidation, 67 Whippany Road, Whippany, NJ 07981. The estimated first incentive, for the proposed energy reduction plan (ERP), is \$50,000. The estimated second incentive, for the as-built reduction plan, including increased building envelope insulation, installation of efficient lighting and occupancy sensors throughout the facility, chiller upgrades with variable frequency drives (VFDs), installation of a VFD on the cooling tower, installation of variable volume condenser water pumps for chillers, unitary HVAC/split system upgrades, hot water boiler upgrades, upgraded gas heating equipment, gas domestic hot water heater upgrade, and installation of VFDs on variable air volume fans, is \$656,620. The estimated third incentive for the commissioning report is \$426,803. This application has an estimated 24% total energy savings as compared to the current energy code used in New Jersey, ASHRAE 90.1.2007, and will save the customer

¹ President Hanna has recused himself from this matter.

an estimated 3,567,034 kWh of electricity annually, and will result in an estimated demand reduction of 1,455 kW annually. Overall, this application will have an estimated annual energy cost savings of \$444,672, with a 13% internal rate of return and a 7 year payback. (Energy savings and cost savings are measured from a code-compliant building ASHRAE 90.1-2007 baseline). This project has an estimated measure incremental cost of \$2,917,928.

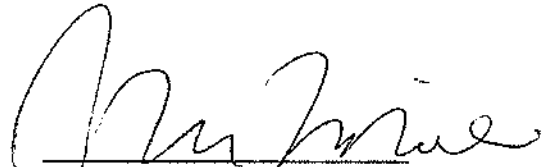
TRC, the Market Manager engaged by the Board to manage the New Jersey Clean Energy Program (NJCEP) C&I energy efficiency programs, has submitted certification that the incentive for which TRC now seeks approval to commit has been calculated in accordance with the program policies and procedures, and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

The Board **HEREBY ORDERS** the approval of the aforementioned application for the total estimated incentive amount of \$1,133,423 for Bayer Healthcare Pharmaceuticals, and **AUTHORIZES** issuance of a standard commitment letter to the applicant identified above, setting forth the terms and conditions of this commitment.

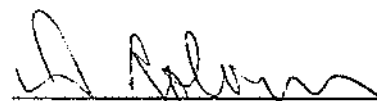
DATED: 9/18/13

BOARD OF PUBLIC UTILITIES
BY:


JEANNE M. FOX
COMMISSIONER


JOSEPH L. FIORDALISO
COMMISSIONER


MARY-ANNA HOLDEN
COMMISSIONER


DIANNE SOLOMON
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
\$500,000 – BAYER HEALTHCARE PHARMACEUTICALS

DOCKET NO. EO13080752V

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**Program Coordinator Certification
(New Incentive Commitments > \$500,000)**

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, Pay for Performance, Combined Heat & Power and Large Energy Users 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.

Maura H Watkins

By: _____

Date: 08-09-2013

Maura Watkins

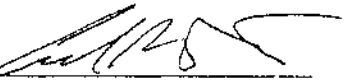
Quality Assurance Manager - Applied Energy Group, Inc.

Ref:	
App #	<u>16986</u>
Applicant	<u>Bayer Healthcare Pharmaceuticals</u>
Payee	<u>Bayer Healthcare Pharmaceuticals</u>

Committed Amount: \$1,133,423.00

Market Manager Certification
(New Incentive Commitments > \$500,000)

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.

By:  Date: 8-14-13
Carl P. Teter, P.E., LEED AP, Associate Vice President
App# 16986

1. Application Number: 16986
2. Program Name: Pay for Performance – New Construction
3. Customer Contact (name, company, address, phone #):
 Steven Baumgardner, Associate Director Site Engineering
 Bayer Healthcare Pharmaceuticals
 6 West Belt, Wayne NJ 07470
 973-305-5056
4. Project Name and Address:
 Bayer Healthcare Consolidation
 67 Whippany Road, Whippany NJ 07981
5. Rebate amount:
 Incentive #1: \$50,000.00
 Incentive #2: \$656,620.00
 Incentive #3: \$426,803.00
 Total: \$1,133,423.00
6. Brief description of measures: see next page
7. Annual Estimated Energy Savings: 3,567,034 kWh; 1,455 kW
8. Annual Estimate Energy Cost Savings: \$444,672.00 (13% IRR; 7 year payback)

Energy Efficiency Measure	Annual Energy Savings (MMBtu)	Annual Energy Savings (kWh)	Most Affected Fuel	Demand Savings (kW)	Annual Cost Savings (\$)	Lifetime (years)	Payback (years)	IRR	Lifecycle Savings	Weighted Lifetime
1 Insulation - Walls, Kneewalls, Rim Band/Joists	1.817	887,685	Electric	0.00	\$130,836	18	3.8	26%	\$1,299,450	\$2,355,041
2 Other Lighting	-3,977	1,278,656	Electric	145.97	\$123,104	15	4.3	22%	\$941,604	\$1,846,556
3 Water Cooled Chiller (Electric) - Full Load	0	72,740	Electric	130.93	\$9,245	25	11.8	7%	\$52,299	\$231,131
4 Custom Electric	0	110,285	Electric	9.82	\$14,017	18	2.9	34%	\$152,076	\$252,310
5 VFD - Chilled Water Pump	0	41,587	Electric	3.70	\$5,286	18	2.0	50%	\$62,147	\$95,143
6 Custom Electric	0	55,451	Electric	4.94	\$7,048	18	2.0	49%	\$82,582	\$126,861
7 Unitary HVAC/Split Systems	-33	656,566	Electric	1,103.03	\$83,123	15	9.7	6%	\$188,034	\$1,246,851
8 Hot Water Boiler (Gas)	803	54,195	Gas	0.00	\$14,844	20	8.3	10%	\$97,593	\$296,883
9 Custom Gas	90	0	Gas	0.00	\$889	18	47.8	-9%	-\$30,278	\$15,995
10 Water Heater (Gas) - > 50 Gals.	422	0	Gas	0.00	\$4,186	10	3.6	25%	\$20,711	\$41,864
11 VFD - Variable Air Volume	0	409,869	Electric	46.79	\$52,094	15	14.1	1%	-\$111,691	\$781,415
TOTALS:	-878	3,567,034		1,445.18	\$444,672		7	13%	\$2,757,526	16

Proposed Components						Baseline Components				
Energy Efficiency Measure	Energy Efficiency Measure Description	Capacity	Quantity	Efficiency Unit	Proposed Cost	Cost Source	Component Description	Baseline Cost	Cost Source	Incremental Costs
1	Insulation - Walls, Knee walls, Rim Band/Joists	N/A	Multiple	Walls R-6; Windows U-0.29, SHGC-0.30	\$500,000	Contractor	Building Envelope	\$0	Contractor	\$500,000
2	Other Lighting	N/A	Multiple	N/A	\$2,325,000	Contractor	Fluorescent and CFL fixtures	\$1,800,000	Contractor	\$525,000
3	Water Cooled Chiller (Electric) - Full Load	543 R	2	0.567 (full), 0.418 (part)	\$392,840	Contractor	Single Stage Chillers w/ VFD	\$284,150	Manufacture	\$108,690
4	Custom Electric	100	2	N/A	\$196,449	RS Means	Cooling Towers w/ VFD	\$155,739	Contractor	\$40,710
5	VFD - Chilled Water Pump	12.5	2	N/A	\$20,610	RS Means	Constant Volume Chilled Water Pumps	\$10,060	RS Means	\$10,550
6	Custom Electric	20	2	N/A	\$25,200	RS Means	Constant Volume Chiller Condenser Water Pumps	\$10,850	RS Means	\$14,350
7	Unitary HVAC/ Split Systems	1,276.58; 64	3	9.7, 10, 11.1	\$1,727,288	Contractor	ASHRAE EER Rated Units	\$923,000	Contractor	\$804,288
8	Hot Water Boiler (Gas)	532.3 & 548.4	6 & 1	92.5	\$210,250	Contractor	80% Efficiency Hot Water Boilers	\$87,000	Previous Experience	\$123,250
9	Custom Gas	10,351	1	80	\$72,500	Contractor	78% Efficiency Natural Gas HX	\$30,000	Previous Experience	\$42,500
10	Water Heater (Gas) - > 50 Gals.	1,200	1	95	\$50,000	Previous Experience	80% Natural Gas DIIW Heater	\$35,000	RS Means	\$15,000
11	VFD - Variable Air Volume	Multiple	96	Multiple	\$1,456,960	RS Means	Centrifugal and VAV Fans w/ VFD	\$723,370	RS Means	\$733,590

Measure incremental costs:	\$2,917,928
Partner fees for modeling:	\$0
Partner fees for inspection & verification:	\$50,000
Partner fees for other services related to the program*:	\$0
Total Project Incremental cost:	\$2,967,928

* Describe other services: