



**STATE OF NEW JERSEY**  
**Board of Public Utilities**  
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Post Office Box 350  
Trenton, New Jersey 08625-0350  
[www.nj.gov/bpu/](http://www.nj.gov/bpu/)

CLEAN ENERGY

IN THE MATTER OF THE CLEAN ENERGY PROGRAM	)	ORDER
AUTHORIZATION OF COMMERCIAL AND INDUSTRIAL	)	
PROGRAM ENERGY EFFICIENCY INCENTIVES	)	
EXCEEDING \$500,000:	)	DOCKET NOS.
	)	
PQ CORPORATION	)	QG17040334
	)	
US TREASURY (PICATINNY ARSENAL)	)	QG17040434

**Parties of Record:**

**Lou Henderson, Senior Manager**, Strategic Growth Projects, PQ Corporation  
**Richard Havrisko, Director**, Department of Public Works, Picatinny Arsenal, US Treasury  
**Stefanie A. Brand, Esq., Director**, Division of Rate Counsel

**BY THE BOARD:**

The New Jersey Board of Public Utilities (Board) 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). Under the category of DER, the NJCEP offers incentives for Combined Heat and Power (CHP) and Fuel Cell with heat recovery projects to enhance energy efficiency through on-site power generation and to reduce overall system peak demand to the electrical power grid. All proposed C&I EE financial incentives and rebates exceeding \$500,000 require explicit Board approval. See I/M/O 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 Dkt. No. EO07030203 (May 3, 2013).

The Combined Heat and Power & Fuel Cell (CHP/FC) Program is open to all C&I customers of investor-owned utilities. Incentives are disbursed upon completion of three program milestones: (1) proof of purchase of equipment; (2) project installation and operation, including successful inspection; and (3) acceptance and confirmation of achievement of the required performance thresholds based upon twelve months of operating data.

By this Order, the Board considers two applications for incentives submitted under the 2017 CHP/FC Program pursuant to the Energy Efficiency and Renewable Energy Program Plan Filing for Fiscal Year 2017 dated June 28, 2016: (1) PQ Corporation, located at 2 Paddock Street, Avenel, Middlesex County; and (2) US Treasury, for a project located at Picatinny Arsenal, located at Whittemore Drive, Building 505, in Dover, Morris County (Picatinny Arsenal). These project incentives are within the entity cap, based on the application approval date.

PQ Corporation has submitted an application for a total financial incentive of \$629,736.52 under the FY17 CHP/FC Program. The project includes the installation of two 360 kW capacity CHP units each operating at 220 kW, for a total system capacity of 720 kW operating at 440 kW, and a system efficiency of 73.1%. Waste heat will be utilized and the system has blackstart capability. The estimated first incentive, for purchase of the equipment, is \$188,920.96. The estimated second incentive, for completed installation of the system, is \$314,868.26. The estimated third incentive, granted after acceptance and confirmation of required performance threshold data, is \$125,947.30. The project is anticipated to generate 3,665,555.3 kWh of electricity annually, and is estimated to recover 16,191.4 MMBtus in waste heat annually. The project will have a cost of \$2,099,121.72 and is anticipated to save on average \$286,090.84 in annual energy costs. The project has a 7.34 year payback without incentive, which is reduced to 5.14 years with incentive.

Picatinny Arsenal has submitted an application for a total financial incentive of \$2,050,000.00 under the FY17 CHP/FC Program. The project includes the installation of a 2 MW CHP system. The system has an efficiency of 72.1%. The estimated first incentive, for purchase of the equipment, is \$615,000.00. The estimated second incentive, for completed installation of the system, is \$1,025,000.00. The estimated third incentive, granted after acceptance and confirmation of required performance threshold data, is \$410,000.00. The project is anticipated to generate 15,768,000 kWh of electricity annually, and is estimated to recover 42,658.4 MMBtus in waste heat annually. The project will have a cost of \$10,426,392.00 and is anticipated to save on average \$927,890.72 in annual energy costs. The project has an 11.24 year payback without incentive, which is reduced to 9.03 years with incentive.

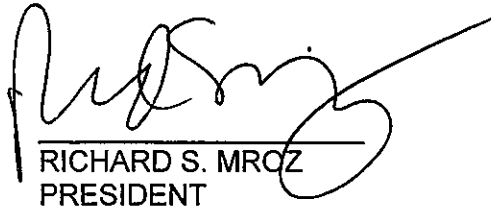
ICF International, the Program Manager engaged by the Board to manage the NJCEP CHP/FC program, submitted its certifications that the incentives were calculated in accordance with the program policies and procedures, and that the listed amounts are the true and accurate estimated incentives for which the applicants are eligible. Further, TRC Environmental Corporation, in its capacity as the Program Administrator, also reviewed the applications and submitted its certifications that the incentives were 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 these certifications and the information provided by the Program Managers and Program Administrator, Board Staff recommends that the Board approve the above-referenced applications.

The Board **HEREBY ORDERS** the approval of the aforementioned application for the total estimated incentive amounts of \$629,736.52 for PQ Corporation and \$2,050,000.00 for the US Treasury (Picatinny Arsenal), and **AUTHORIZES** issuance of standard commitment letters to the applicants identified above, setting forth the terms and conditions of these commitments.

The effective date of this Order is June 10, 2017.

DATED: 5/31/17

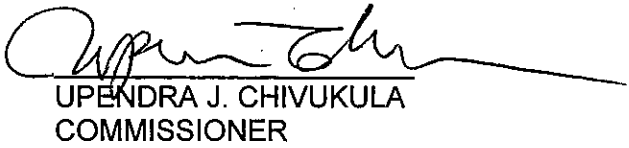
BOARD OF PUBLIC UTILITIES  
BY:

  
RICHARD S. MROZ  
PRESIDENT

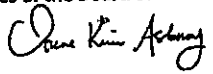
  
JOSEPH L. FIORDALISO  
COMMISSIONER

  
MARY-ANNA HOLDEN  
COMMISSIONER

  
DIANNE SOLOMON  
COMMISSIONER

  
UPENDRA J. CHIVUKULA  
COMMISSIONER

ATTEST:   
IRENE KIM ASBURY  
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: PQ CORPORATION & US TREASURY (PICATINNY ARSENAL)  
DOCKET NOS. QG17040334 & QG17040434

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**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.

*Maura H Watkins*

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

Date: 03-28-2017

**Maura Watkins**

Quality Control – TRC Solutions

Application No.: **NJFCPS1533016264**

Applicant: **PQ Corporation**

Payee: **PQ Corporation**

Committed Amount: **\$629,737.00**

1. Application Number: **NJFCPS1533016264**
2. Program Name: **NJ Clean Energy Program - Combined Heat and Power**
3. Customer Contact (name, title, company, address, phone #):

**Lou Henderson**

**Senior Manager, Strategic Growth Projects**

**PQ Corporation**

**300 Lindenwood Drive**

**Malvern, PA 19355-1740**

**(610) 651-4559**

5. Project Name and Address:

**PQ Corporation**

**2 Paddock St**

**Avenel, NJ 07001**

6. Rebate amount:

**Incentive #1: \$188,920.96**

**Incentive #2: \$314,868.26**

**Incentive #3: \$125,947.30**

**Total: \$629,736.52**

**NOTE: Incentive calculation and estimated electric generation are based on a system capacity of 440 KW and the incentive was capped at 30% of project cost.**

7. Brief description of CHP to be installed:

**Built in 1918, PQ Corporation's plant manufactures silica gels for use in the brewing and edible oil processing industries, as well as a feed stock for silica catalyst manufacturing. The proposed CHP system includes two (2) 360 kW capacity Kohler generators each operating at 220 kW, which are grid-connected**

**and capable of operating and synchronizing with the grid. Controls include paralleling switch gear, and non-reversing relays (one at each connection point) so that if there is a utility outage, generation can continue without back-feed to the grid. Additionally, if the plant demand drops below 440 kW, generator output will self-modulate and will not back-feed the grid. The CHP system has blackstart capability and a system efficiency of 73.1%.**

8. Expected Annual Performance:

**Estimated Electricity Production: 3,665,555.3 kWh**

**Estimated Waste Heat Utilized: 16,191.4 MMBTU**

9. Project Cost: **\$2,099,121.72**

10. Project Funding Type (capital purchase, lease, finance, PPA, other/describe):

**Capital purchase**

11. Financials:

**Simple Payback Period (years) without incentive: 7.34**

**Simple Payback Period (years) with incentive: 5.14**

**Avoided Energy Cost Savings: \$286,090.84**

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 CHP program.

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

Date: 3/27/2017

*Brendan Cassidy, Program Manager*



**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.

*Maura H Watkins*

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

Date: 04-26-2017

**Maura Watkins**

Quality Control – TRC Solutions

Application No.: **NJFCPS1533242452**

Applicant: **US Treasury (Picatinny Arsenal)**

Payee: **US Treasury**

Committed Amount: **\$2,050,000.00**

1. Application Number: **NJFCPS1533242452**
2. Program Name: **NJ Clean Energy Program - Combined Heat and Power**
3. Customer Contact (name, title, company, address, phone #):

**Richard Havrisko**

**Director, Department of Public Works**

**US Treasury**

**Main Road, Building 3002**

**Picatinny Arsenal, NJ 07806**

**973-724-5520**

5. Project Name and Address:

**Picatinny Arsenal**

**Whittemore Drive, Building 505**

**Dover, NJ 07806**

6. Rebate amount:

**Incentive #1: \$615,000.00**

**Incentive #2: \$1,025,000.00**

**Incentive #3: \$410,000.00**

***Total: \$2,050,000.00***


7. Brief description of CHP system to be installed (e.g. capacity and efficiency):

**Picatinny Arsenal is the Joint Center of Excellence for Guns and Ammunition, providing products and services to all branches of the U.S. military. The proposed CHP system is a containerized natural gas-fueled 2 MW combustion engine to be located outside the existing E1 boiler plant, the site's largest steam plant with a consistent year-round steam load. The engine generator will normally be operating in parallel with the grid and will maintain a minimum import from the**

electric utility at all times to prevent exporting. Blackstart capability was not included due to the high cost of modifications that would be required to the existing electrical power distribution grid. Energy Systems Group will operate and maintain the proposed CHP system.

8. System Efficiency: **72.1%**
9. Expected Annual Performance:  
**Estimated Electricity Production: 15,768,000 kWh**  
**Estimated Waste Heat Utilized: 42,658.4 MMBTU**
10. Project Cost: **\$10,426,392.00**
11. Project Funding Type (capital purchase, lease, finance, PPA, other/describe):  
**Financed**
12. Financials:  
**Simple Payback Period (years) without incentive: 11.24**  
**Simple Payback Period (years) with incentive: 9.03**  
**Avoided Energy Cost Savings: \$927,890.72**

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 CHP program.

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

*Brendan Cassidy, Program Manager*

Date: 4/17/2017